





January 16, 2019

APPENDIX A Water Projects



111001 CIP#

Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

✓ Innovation

✓ Water MP Right Sizing

▼ Reliability/Redundancy

☐ NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP \Box

Lake Huron WTP



Project Engineer/Manager Eric Kramp

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/3/2010

Year Project Added to CIP 2010

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Lake Huron

Location Saint Clair County

Fund and Cost Center Water - 5519-882111

Project Significance 111003 RECLASSIFIED INTO THIS PROJECT. Improvements needed to align the existing low lift pumping rate with the Lake Huron WTP production rate per the 2015 WMPU. Currently constant speed pumping forces the WTP to operate in a batch mode. Existing electrical gear for low and high lift pumping units and filter backwash pumps are original to plant, beyond useful service life and need to be replaced to improve reliability, serviceability, maintainability, and efficiency. Replacement of phosphoric acid chemical storage tanks and fill piping. Flocculation moved to new project proposed CIP Project for filter rehabilitation and flocculators.

Scope of Work Currently constant speed pumping forces the Lake Huron WTP to operate in a batch mode as the low lift pump capacities exceed the high lift pump capacities. Improvements needed to align the existing low lift pumping rate with the Lake Huron WTP production rate per the 2015 WMPU. Replace with new:

- 1. High-voltage electrical system
- 2. Replace LL Pumps 3 and 4 with new pumps to meet 2015 WMPU
- 3. Improve HL Pump resilience & flexibility
- 4. Improve WW Pump capability and update as necessary
- 4. Phosphoric acid system upgrades

Challenges Coordination between existing pumping unit and motor required during design. Critical speed analysis may show pump improvements needed to operate at reduced speeds. Uncovering an innovative rehabilitation design to minimize maintenance of existing drives.

Lookup Driver 8 - Efficiency

Other Important Info *Innovation note: Ensure energy efficiency.

Updated project expenses to account for inflation, moved contract start back one year, added GLWA costs.



111001 CIP#

Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

Portions of project were identified in the 2015 Master Plan.

Explanation Not provided.



Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

PM	Weighted
	Score

64.6

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	3	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

71.6

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	1	

Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

hase GLWA Employ	yees Proje	ect manager	ment		Contro	act N	A	Stat	us Future I	Planned Start
itle GLWA Salaries										
Phase Budget Wat	er						Cost Alloc	cation CTA		
Phase Status Futu	ıre Planne	ed Start			Funding Source			ource Bono	l Proceeds	
Start Date								Fund Cons	truction Bor	nd Fund
End Date						U	seful Life >2	OYrs? No		
Cost Es	stimation	Information			То	t. Fede	eral Loan An	nount		\$0
	5	Cost Est. C	Class			Prog	gram/Allow	ance Task	Information	
1/1/2	2015	Cost Est. D	ate	Pı	roject Mar	nager				
CDM Smith		Cost Est. S	ource	С	IP Numbe	r				
Water Master Plan	n Update	Cost Est. P	repared By	D ₀	escription					
Cost Type		Fiscal Year	Expens	е	Fringe Ber	nefitNoi	nPersonne	C	Comment	
GLWA Salaries CIP20)20 FY	/20		\$18		7	1			
GLWA Salaries CIP20)20 FY	/ 21		\$42		17	2			
GLWA Salaries CIP20)20 FY	(22		\$42		17	2			
GLWA Salaries CIP20)20 FY	/23		\$42		17	2			
GLWA Salaries CIP20)20 FY	′ 24		\$42		17	2			
GLWA Salaries CIP20)20 FY	(25+		\$116		46	62	020CIP		
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY	′23	FY24	FY25+	Total	
		0 26	61		61	61	61	168	438	



Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

Phase Design & Construction Assistance

Contract NA

Status Future Planned Start

Title LH WTP Low and High Lift Pumping Improvements - Design & Constr Assistance

Existing LL Pumps: 2 - 100 mgd and 2 - 200 mgd; firm = 400 mgd Future LL Pumps: 2 - 150 mgd and 2 - 100 mgd: firm = 350 mgd

Future: LL Pumps 1 - 150 mgd pump will have VFD. 1 - 100 mgd pump will have a VFD by the time this project is started via another contract being executed by plant O&M staff.

Phase Budget	Water
Phase Status	Future Planned Start
Start Date	12/30/2018
End Date	1/25/2027

Cost Estimation Information						
5	Cost Est. Class					
1/1/2015	Cost Est. Date					
CDM Smith	Cost Est. Source					
Water Master Plan Upd	ate Cost Est. Prepared By					

Cost Allocation	СТА
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY20	\$375			
Engineering Services	FY21	\$1,550			
Engineering Services	FY22	\$3,108			
Engineering Services	FY23	\$352			
Engineering Services	FY24	\$400			
Engineering Services	FY25+	\$2,600			2020CIP
Other	FY20	\$0			2020CIP
Other	FY21	\$0			2020CIP

Task	Start Date	End Date	Duration
Scope Development	12/30/2018	3/30/2019	90
Procurement	3/31/2019	3/30/2020	365



111001 CIP#

Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

Task		Start Date	End Date	Duration				
Project Execution		3/31/2020	10/26/2026	240	00			
Project Closeout		10/27/2026	1/25/2027	9	00			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 375	1,550	3,108	352	400	2,600	8,385

111001 CIP#

GLWA FY 2020-2024 CIP



Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

Phase Construction Contract NA Status Future Planned Start

Title LH WTP Low and High Lift Pumping Improvements - Construction

Existing LL Pumps: 2 - 100 mgd and 2 - 200 mgd; firm = 400 mgd

Future LL Pumps: 2 - 150 mgd and 2 - 100 mgd: firm = 350 mgd

Future: LL Pumps 1 - 150 mgd pump will have VFD. 1 - 100 mgd pump will have a VFD by the time this project is started via another contract being executed by plant O&M staff.

Phase Budget	Water	
Phase Status	Future Planned Start	
Start Date		1/22/2022
End Date		1/25/2027

Cost Estimation Information						
5	Cost Est. Class					
1/1/2015	Cost Est. Date					
CDM Smith	Cost Est. Source					

Water Master Plan Update

Cost Allocation CTA

Funding Source Bond Proceeds

Fund Construction Bond Fund

Useful Life >20Yrs? Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager
CIP Number

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY23	\$4,037			
Construction	FY24	\$9,539			
Construction	FY25+	\$29,989			2020CIP

Description

Task	Start Date	End Date	Duration
Scope Development	1/25/2022	4/25/2022	90
Procurement	4/26/2022	10/31/2022	188
Project Execution	11/1/2022	10/26/2026	1455
Project Closeout	10/27/2026	1/25/2027	90

Cost Est. Prepared By

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	4,037	9,539	29,989	43,565



111001 CIP#

Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)											
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		200	2,500	3,000					0	0	5,700
2019	0				401	1,611	3,169	4,450	42,757	0	52,388
2020	0	0		0	401	1,611	3,169	4,450	10,000	32,757	52,388

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP $\ \square$

The photo shows the condition of the heating system hot water piping.



Project Engineer/Manager Todd King

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Lake Huron

Location Saint Clair County

Fund and Cost Center Water - 5519-882111

Project Significance	Existing heating, ventilating and air-conditioning systems Lake Huron are 40 years old and are either not operable or energy-inefficient. Thus, replacement with new, energy efficient mechanical HVAC systems is needed.
Scope of Work	The work includes replacement of the existing Natural Gas-Fired hot water boilers, back flow preventers, and dehumidification units with related accessories.
Challenges	Heating system modifications will be seasonally dependent.
Project History	The Lake Huron WTP was placed in service in 1976. The boilers in the admin building, the chiller, and the dehumidification system have surpassed their expected life span and require replacement.
Related Project	This BCE requests augmentation of the construction budget for CIP No. 1280 from \$2.5 million to \$7.14 million based on the preliminary engineering work conducted by Tetratech under project CS-1732.
Lookup Driver	1 - Condition
Other Important Info	Complete analysis and the report are attached below.
Explanation	N/A - Under Procurement

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

PM	Weighted
	Score

66.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	1	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

77

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	3	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	0	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	4	

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Phase not applic	nase not applicable						Contract NA Status Closed Out							
Title Prior Year A	ctual Ex	oense	S											
Phase Budget \	Water								Cost Allo	cation CTA				
Phase Status	Closed C	ot							Funding S	ource				
Start Date										Fund				
End Date								Us	seful Life >	20Yrs?				
Co	st Estima	tion In	formation				Tot. Fe	edei	ral Loan A	mount				
	1		Cost Est. C	lass			F	rog	gram/Allov	vance Task	Informatio	on		
1	1/1/2016		Cost Est. De	ate	Р	roject	Manage	er						
Metco			Cost Est. So	ource	C	IP Nu	mber							
Metco			Cost Est. Pr	epared By	D	escrip	otion							
Cost Typ	oe	Fis	scal Year	Expens	е	Fringe	e Benefit	Nor	nPersonne	C	Comment			
Construction		FY1	8-	\$,594					FY18				
Engineering Servi	ices	FY1	8-		\$98					FY18				
Unknown		FY1	8-		\$309					EndFY17				
GLWA Salaries Cl	IP2020	FY18	8-		\$14		5			FY18				
Prior Yr Actuals	s FY	19	FY20	FY21	FY	22	FY23		FY24	FY25+	Total			
2,0	20										2,02	20		

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Phase GLWA Employees Project management				nent		Contract	NΑ	\	Sto	itus ,	Active		
fle GLWA Salc	aries												
Phase Budget	Water							Cost Allo	cation CTA				
Phase Status	Active							Funding S	Source Bond	d Prod	ceeds		
Start Date									Fund Con	struct	ion Bor	nd Fund	
End Date							Us	seful Life >	20Yrs? Yes				
Co	ost Estim	ation In	formation			Tot. Fe	eder	al Loan A	mount				\$0
	,	5	Cost Est. C	lass		i	Prog	ram/Allov	vance Task	Infor	mation		
	1/1/201	6	Cost Est. De	ate	Р	roject Manage	er						
GLWA			Cost Est. Sc	ource	C	CIP Number							
GLWA			Cost Est. Pr	epared By	D	escription							
Cost Typ	pe	Fis	cal Year	Expens	e	Fringe Benefit	Non	Personne	(Comr	nent		
LWA Salaries C	IP2020	FY19	9		\$21	8		1	CS-1732				
SLWA Salaries C	IP2020	FY20)		\$21	8		1	CS-1732				
LWA Salaries C	IP2020	FY2	l		\$0	0		0	CS-1732				
Prior Yr Actual	ls l	FY19	FY20	FY21	FY:	22 FY23		FY24	FY25+	To	otal		
		30	30	0							60		

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Phase Construction Contract CON-182 Status Future Planned Start

Title CON-182, Miscellaneous Mechanical Improvements at Lake Huron WTP, C1

ackflow Preve	ntor Replace	ement		
Phase Budget	Water		Cost Allocation	CTA
Phase Status	Future Planr	ned Start	Funding Source	Bond Proceeds
Start Date		8/27/2016	Func	Construction Bond Fund
End Date		8/24/2018	Useful Life >20Yrs?	? Yes
C	ost Estimatio	n Information	Tot. Federal Loan Amoun	t
	1	Cost Est. Class	Program/Allowance	e Task Information
	1/1/2016	Cost Est. Date	Project Manager	
TetraTech		Cost Est. Source	CIP Number	
TetraTech		Cost Est. Prepared By	Description	

Task		Start Date	End Date	Duration				
Scope Developmen	n†	8/27/2016	11/25/2016	ç	90			
Procurement		11/26/2016	11/26/2017	36	55			
Project Execution		11/27/2017	5/25/2018	17	79			
Project Closeout		5/26/2018	8/24/2018	9	90			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Phase Study and De	esign an	d C	onstruction	Assistance		Co	ntract	CS	-1732		Stat	us Act	ive			
Title CS-1732, Misce	ellaneou	us M	echanical	Improvemen	nts at	Lake Hu	uron WTF)								
\$155K Projects Cap	italized,	/Exp	ensed @FY	18												
Phase Budget Wa	ter								Cost Allo	cation	СТА					
Phase Status Act	ive				Funding Source Bond Proceeds											
Start Date					Fund Construction Bond Fund											
End Date								Us	seful Life >	20Yrs?	Yes					
Cost E	stimatio	n In	formation				Tot. Fe	der	al Loan A	mount						
	5		Cost Est. C	lass			P	rog	ram/Allov	vance 1	ſask I	Informat	lion			
1/1/	/2016		Cost Est. D	ate	P	roject <i>l</i>	Manage	r								
GLWA							CIP Number									
GLWA			Cost Est. P	repared By		Descript	ion									
Cost Type		Fis	scal Year	Expense		Fringe	Benefith	lon	Personne		С	commer	n†			
Engineering Services	S	FY19	9	9	102											
Engineering Services	S	FY20)	\$	\$109											
Task		St	art Date	End Date	Dui	ration										
Scope Developmen	nt		2/21/2015	5/22/2015		90										
Procurement			5/23/2015	5/22/2016		365										
Project Execution			5/23/2016	4/23/2020		1431										
Project Closeout			4/24/2020	7/23/2020		90										
Prior Yr Actuals	FY19)	FY20	FY21	FY	22	FY23		FY24	FY25	5+	Total				
		102	109	0		0		0	0		0	2	211			



Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Contract CON-212 Status Active **Phase** Construction CON-212, LH WTP Electrical & Mechanical Process Improvements, C2 Misc Mech HVAC Imprvts **Phase Budget** Water Cost Allocation CTA **Phase Status** Active Funding Source Bond Proceeds Start Date 2/15/2018 **Fund** Construction Bond Fund **End Date** 4/23/2020 Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source TetraTech Description Cost Est. Prepared By TetraTech Fringe BenefitNonPersonne Cost Type Fiscal Year Expense Comment Construction FY19 \$4,290 \$1,743 FY20 Construction Task Start Date End Date Duration Scope Development 11/15/2016 2/13/2017 90 365 Procurement 2/14/2017 2/14/2018 **Project Execution** 1/14/2020 699 2/14/2018 Project Closeout 1/14/2020 5/14/2020 121 FY21 FY22 FY23 Prior Yr Actuals FY19 FY20 FY24 FY25+ Total 4,290 1.743 0 0 0 0 0 6.033 Phase Total Expenses By FY (All figures are in \$1,000's)

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		270	1,030	3,130	3,050	422			0	0	7,902

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	C	309	781	3,666	3,873	13				0	8,642
2020	C	C	2,020	4,422	1,882	0	0	0	0	0	8,324

Explanation Not provided.

GLWA FY 2020-2024 CIP

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	Lake Huron WTP Electrical Tunnel	
Project Engineer/Ma	nager Jorge Nicolas	Budget Wate	er
Ma	nager Grant Gartrell	Class LvI 1 Wate	er
Managing	Dept Water Eng	Class Lvl 2 Trea	tment Plants and Facilities
Date Original Busines	ss Case Prepared 6/26/2014	Class LvI 3 Lake	Huron
Year Proj	ect Added to CIP 2014	Location Saint	Clair County
		Fund and Cost Center Wate	er - 5519-882111
Project Significance	Existing electrical tunnel concrete has failed in permanent concrete and structural improven entire plant.		
	permanent concrete and structural improven	ents to this tunnel that carries the	e primary electrical feed to the
	permanent concrete and structural improven entire plant. Repairing electrical tunnel to prevent intrusion banks and cable trays.	ents to this tunnel that carries the	e primary electrical feed to the
Scope of Work	permanent concrete and structural improven entire plant. Repairing electrical tunnel to prevent intrusion banks and cable trays. None.	ents to this tunnel that carries the	e primary electrical feed to the
Scope of Work Challenges	permanent concrete and structural improven entire plant. Repairing electrical tunnel to prevent intrusion banks and cable trays. None.	ents to this tunnel that carries the	e primary electrical feed to the
Scope of Work Challenges Project History	permanent concrete and structural improven entire plant. Repairing electrical tunnel to prevent intrusion banks and cable trays. None. n/a none	ents to this tunnel that carries the	e primary electrical feed to the



Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

PM Weighted Score

46.8

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

RC Weighted Score

38.6

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

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Phase Design & Co	on Assistance		Contract CS-245 Status Active								
Title CS-245 LH WT	P Electric	cal Tunnel Reho	abilitation								
Benesch											
Phase Budget Wo	ater						Cost Allo	cation CTA	١		
Phase Status Ac	tive			Funding Source Bond Proceeds							
Start Date				Fund Construction Bond Fund							
End Date							Useful Life >	20Yrs? Yes			
Cost I	Estimatic	on Information				Tot. Fed	deral Loan A	mount			
	3 Cost Est. Class						ogram/Allo	wance Tasl	Information	1	
12/1	Cost Est. D	ate	Pre	oject N	Nanage	r					
consultant	ource	CIP Number									
consultant Benes	sch	Cost Est. P	repared By	De	escripti	on			_		
Cost Type		Fiscal Year	Expense	e F	ringe E	BenefitN	lonPersonne		Comment		
Engineering Service	es	FY19		\$16							
Engineering Service	es	FY20		\$34							
Task		Start Date	End Date	Durc	ation						
Scope Developme	nt	10/31/2016	1/29/2017		90						
Procurement		1/30/2017	1/30/2018		365						
Project Execution	roject Execution 1/31/2018 4/1/202				791						
Project Closeout 4/2/2020 7/1/202					90						
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23	FY24	FY25+	Total		
		16 34	0		0	() () (50		

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

hase GLWA Em	ase GLWA Employees Project management						ontract N	Status	Future F	Planned S	Start			
itle GLWA Sala	ıries													
Phase Budget	Water							Cost Allo	cation CTA					
Phase Status	Future Planned Start					Funding Source Bond Proceeds								
Start Date									Fund Constru	ction Bor	nd Fund			
End Date					Useful Life >20Yrs? Yes									
Со	Cost Estimation Information						Tot. Fede	eral Loan A	mount			\$0		
	5 Cost Est. Class						Program/Allowance Task Information							
1	1/1/2017		Cost Est. De	ate	Project Manager									
GLWA	,		Cost Est. So	ource	CIP Number									
GLWA			Cost Est. Pr	epared By	D	escrip	otion							
Cost Typ	oe De	Fis	cal Year	Expens	е	Fringe	e BenefitNo	nPersonne	Cor	nment				
GLWA Salaries C	IP2020	FY20)		\$21		8	1	CS-245					
GLWA Salaries C	IP2020	FY2			\$4		2	0	CS-245					
Prior Yr Actuals	s FY	9	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total				
			30	6		0	0	0	0	36				

111004 CIP#

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Phase not applic	cable			(Contract $$ $$	IA	Statu	s Closed	Out	
Title Prior Year A	ctual Expe	enses								T
Phase Budget	Water					Cost Alloc	cation CTA			
Phase Status	Closed Ou	ıt				Funding S	ource			
Start Date							Fund			
End Date					l	Jseful Life >2	OYrs?			
Со	st Estimatio	on Information		Tot. Fed	eral Loan Ar	nount	\$0			
	1	Cost Est. C	lass		Pro	gram/Allow	ance Task Ir	formation		
	1/1/2018	Cost Est. D	ate	Projec	t Manager					
GLWA		Cost Est. So	ource	CIP No	ımber					
GLWA		Cost Est. Pi	repared By	Descri	ption					
Cost Typ	oe	Fiscal Year	Expens	e Fring	e BenefitNo	nPersonne	C	omment		
Engineering Serv	ices	FY18-		\$63		F	Y18			
Prior Yr Actual	s FY1	9 FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	63							63		

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Phase Construction					Co	ntract	NA		;	Status	Future I	Planned	Start
Title LH WTP Electric	cal Tunnel	l Rehabilitatio	n										
Phase Budget Wa	ter							Cost Alloc	cation C	TA			
Phase Status Futu	ure Planne	ed Start						Funding S	ource Bo	ond P	roceeds		
Start Date				Fund Construction Bond Fund									
End Date		Useful Life >20Yrs? Yes											
Cost E		Tot. Federal Loan Amount											
	1	Cost Est. C	lass			P	rog	ram/Allow	ance To	sk In	ormation		
1/1/	ate	Р	roject <i>N</i>	\anage	r								
Benesch	ource	C	CIP Num	ber									
Benesch		Cost Est. Pi	repared By	Description									
Cost Type		Fiscal Year	Expense		Fringe	Benefith	lon	Personne		Со	mment		
Construction	FY	/19		368									
Construction	FY	/ 20	\$4	,232									
Task		Start Date	End Date	Dur	ation								
Scope Developmen	nt	5/2/2018	7/31/2018		90								
Procurement		8/1/2018	2/5/2019		188								
Project Execution		2/6/2019	4/1/2020		420								
Project Closeout		4/2/2020	7/1/2020		90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25+		Total		
	36	4,232	0		0		0	0		0	4,600		
		P	hase Total Ex	pense	es By FY	(All figu	Jres	are in \$1,	000's)				
Proje	ct Total	l Expenses	By FY Cor	npa	red to	Prior (CIP	s (All fig	ures a	re in	\$1,000'	s)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,000	3,000	1,600				0	0	5,600
2019	0		116	414	4,296	6				0	4,832

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

111004 CIP#

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	63	384	4,296	6	0	0	0	0	4,749



Explanation N/A - Under Procurement

GLWA FY 2020-2024 CIP

111006 CIP#

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	Raw Water Flow Met	rer
Project Engineer/Ma	nager Todd King	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class LvI 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 6/26/2014	Class LvI 3	Lake Huron
Year Proj	ect Added to CIP 2014	Location	Saint Clair County
		Fund and Cost Center	Water - 5519-882111
Project Significance	The filter instrumentation and raw water meter replacement. Replacement of this equipmer	_	_
Scope of Work	Replacement of the filter instrumentation and	d raw water metering equipn	nent.
Challenges	The existing raw water venturi meters do not difficult.	nave standard dimensions ar	nd determining accuracy may be
Project History	n/a		
Related Project	none		
Lookup Driver	N/A - Under Procurement		
Other Important Info	Design is in progress by TetraTech under CS-1	771	

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

PM	Weighted
	Score

64.2

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	2	
Financial	1	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	5	

RC Weighted Score

62.2

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

111006 CIP#

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

Phase not applice	able				Contract	NA	\	Sta	lus Closed	tuO k	
Title Prior Year A	ctual Expe	enses									
Phase Budget V	Vater						Cost Allo	cation CTA			
Phase Status	Closed Ou	ıt					Funding S	Source			
Start Date								Fund			
End Date						Us	seful Life >	20Yrs?			
Cos	st Estimatio	on Information			Tot. F	ede	al Loan A	mount			
	1	Cost Est. C	lass			Prog	ram/Allo	wance Task	Information	1	
1,	/1/2016	Cost Est. D	ate	P	roject Manag	er					
GLWA		Cost Est. So	ource	C	CIP Number						
GLWA		Cost Est. P	repared By	D	escription						
Cost Typ	e	Fiscal Year	Expense		Fringe Benefi	1Nor	Personne		Comment		
Engineering Servi	ces	FY18-		\$482				FY18			
Unknown		FY18-		\$1				FY16			
Unknown		FY18-		\$252				FY17			
Prior Yr Actuals	FY1	9 FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
73	35								735		

GLWA Salaries CIP2020

GLWA Salaries CIP2020

Prior Yr Actuals

FY24

FY25+

30

FY20

FY19

GLWA FY 2020-2024 CIP

111006 CIP#

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

hase GLWA En	nployees P	roject manager	nent		Contract	NA	Status	Active
itle GLWA Salo	aries							
Phase Budget	Water					Cost Allo	cation CTA	
Phase Status	Active					Funding S	ource Revenu	e Financed Capital
Start Date							Fund Improve	ement & Extension F
End Date						Useful Life >	20Yrs? No	
C	ost Estimati	ion Information			Tot. Fed	deral Loan A	mount	4
	1	Cost Est. C	lass		Pr	rogram/Allov	vance Task Info	ormation
	1/1/2016	Cost Est. D	ate	P	Project Manage	r		
GLWA		Cost Est. S	ource	C	CIP Number			
GLWA		Cost Est. P	repared By		Description			
Cost Ty	ре	Fiscal Year	Expens	е	Fringe Benefit	IonPersonne	Cor	nment
GLWA Salaries C	CIP2020	FY19		\$21	8	1	CS-1771	
GLWA Salaries C	CIP2020	FY20		\$21	8	1	CS-1771	
GLWA Salaries (CIP2020	FY21		\$21	8	1	CS-1771	
GLWA Salaries (CIP2020	FY22		\$21	8	1	CS-1771	
GLWA Salaries (CIP2020	FY23		\$0	0	Ο	CS-1771	

 30
 30
 30
 0
 0
 0
 120

FY24

FY23

0

0 2020CIP 0 2020CIP

FY25+

Total

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

\$0

\$0

FY22

FY21

111006 CIP#

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

Phase Constructi	on					Со	ntract	NA			Statu	s Fu	ıture F	lanned	Start
itle LH WTP Rep	laceme	nt of	Filter Instrum	entation and	d Raw	Water	Flow M	ete	ring Impro	vemer	nts				
Phase Budget \	Water								Cost Allo	cation	СТА				
Phase Status	uture Pl	anne	ed Start						Funding S	ource	Reven	iue Fi	nance	ed Capi	tal
Start Date										Fund	Improv	veme	ent & E	Extensio	n Fun
End Date								Us	eful Life >2	20Yrs?	No				
Co	st Estimo	ıtion	Information				Tot. Fe	eder	al Loan Ar	nount					
	5		Cost Est. C	lass			i	rog	ram/Allow	vance	Task In	form	ation		
1	/1/2016		Cost Est. D	ate	Р	roject A	\anage	er							
GLWA		'	Cost Est. S	ource		CIP Num	ber								
GLWA			Cost Est. P	repared By	D	escripti	ion								
Cost Typ	е	F	Fiscal Year	Expense		Fringe	Benefit	Non	Personne		Сс	omme	ent		
Construction		FY	20	\$3	,248										
Construction		FY	21	\$3	,248										
Construction		FY	22	\$3	,220										
Task			Start Date	End Date	Dur	ation									
Scope Developm	nent		3/5/2018	6/3/2018		90									
Procurement			6/4/2018	6/2/2019		363									
Project Executior	1		6/3/2019	11/26/2021		907									
Project Closeout			11/27/2021	2/25/2022		90									
Prior Yr Actuals	FY	119	FY20	FY21	FY:	22	FY23		FY24	FY2	5+	Tot	al		
		(3,248	3,248		3,220		0	0		0	9	7,716		



Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

Phase Study and Des	sign and	l Construction	Assistance		Со	ntract	CS	S-1771		Stat	us Active			
itle CS-1771 LH WTF	P Replac	ement of Filte	r Instrumento	ation	and Ra	w Wate	r Fl	ow Meteri	ng Impr	oven	nents			
Phase Budget Wate	er							Cost Allo	cation	СТА				
Phase Status Activ	ve							Funding S	ource	Reve	nue Financ	ced Capi	tal	
Start Date									Fund	Impro	ovement &	Extensio	n Fun	
End Date							U	seful Life >	20Yrs?	No				
Cost Es	timation	Information				Tot. Fe	de	ral Loan A	mount					
	5	Cost Est. C	lass			P	rog	gram/Allov	vance 1	īask I	nformation	1		
1/1/2	2016	Cost Est. D	ate	P	roject <i>N</i>	Nanage	r							
GLWA		Cost Est. So	ource		CIP Num	ber								_
GLWA		Cost Est. Pr	epared By		escript	ion								
Cost Type	E	Fiscal Year	Expense		Fringe	Benefith	Vor	Personne		С	comment			
Engineering Services Engineering Services		Y19 Y20		\$25										
Engineering Services		Y21		\$55 \$55										
Engineering Services Engineering Services		Y22		\$83										
-	ļ ,			•										
Task		Start Date	End Date		ation									
Scope Development	ŀ	7/26/2016	10/24/2016		90									
Procurement		10/25/2016	10/25/2017		365									
Project Execution		10/26/2017	11/26/2021		1492									
Project Closeout		11/27/2021	3/26/2022		119									
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY25	5+	Total			
	2	25 55	55		83		0	0		0	218			
		PI	nase Total Ex	penso	es By FY	(All fig	ure	s are in \$1	,000's)					
Project	ct Tota	I Expenses	By FY Cor	mna	red to	Prior (Pe (All fic	IIII'AS 4	are i	n \$1 000	'c)		

FY21

A-30

FY22

FY23

FY24

FY25

Total

FY18

FY19

FY20

FY17

FY16

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

111006 CIP#

Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0	253	643	43	8,647	9,816	6,909	4		0	26,315
2020	0	0	735	55	3,333	3,333	3,333	0	0	0	10,789

Explanation Not provided.

GLWA FY 2020-2024 CIP

111007 CIP#

Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

☐ Innovation	Project Status Active	Raw sludge clarifier a Lake Huron WT	(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
☐ Water MP Right Si	zing CIP Type Project	Ediko Horom Wi	
☐ Reliability/Redund			
□ NEWTP Repurposi	Project New To CIP		
Project Engineer/Ma	nager Todd King	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 8/7/2015	Class LvI 3	Lake Huron
Year Proj	ect Added to CIP 2016	Location	Saint Clair County
		Fund and Cost Center	Water - 5519-882111
Project Significance	This project will provide a study and design on to pumps and piping to meet maximum design flocal clarifiers and sludge pumping and conveyance raw sludge to the existing lagoons.	he structural integrity, capo ws. The construction service	acity and performance requirements for es will re-construct the raw sludge
, ,	pumps and piping to meet maximum design floclarifiers and sludge pumping and conveyance	he structural integrity, capo ws. The construction service e system to meet the plant of water treatment system and fier and backwash tank fail	acity and performance requirements for es will re-construct the raw sludge demands for pumping and conveying. If the walls of the clarifiers are severely the ability to backwash the Lake
Scope of Work	pumps and piping to meet maximum design floc clarifiers and sludge pumping and conveyance raw sludge to the existing lagoons. The sludge clarifier is integral to the backwash we bowed and in the process of failing. If the clari- Huron WTP filters will be lost and result in the loss	he structural integrity, capo ws. The construction service system to meet the plant of vater treatment system and fier and backwash tank fail, of the Lake Huron WTP to the	acity and performance requirements for es will re-construct the raw sludge demands for pumping and conveying the walls of the clarifiers are severely the ability to backwash the Lake ne system until a temporary bypass can
Scope of Work Challenges	pumps and piping to meet maximum design floc clarifiers and sludge pumping and conveyance raw sludge to the existing lagoons. The sludge clarifier is integral to the backwash who bowed and in the process of failing. If the clarifier Huron WTP filters will be lost and result in the loss be arranged.	he structural integrity, capa ows. The construction service e system to meet the plant of water treatment system and fier and backwash tank fail, of the Lake Huron WTP to the ant operations (filter backwash)	acity and performance requirements for es will re-construct the raw sludge demands for pumping and conveying. If the walls of the clarifiers are severely the ability to backwash the Lake ne system until a temporary bypass can ashing).
Scope of Work Challenges Project History	pumps and piping to meet maximum design floc clarifiers and sludge pumping and conveyance raw sludge to the existing lagoons. The sludge clarifier is integral to the backwash who bowed and in the process of failing. If the clarifluron WTP filters will be lost and result in the loss be arranged. Improvements will require coordination with plants of the clarifier/backwash structure is original to the	he structural integrity, capa bws. The construction service e system to meet the plant of water treatment system and fier and backwash tank fail, of the Lake Huron WTP to the ant operations (filter backwash) e plant. The tank walls appearations of the surround soils	acity and performance requirements for es will re-construct the raw sludge demands for pumping and conveying. If the walls of the clarifiers are severely the ability to backwash the Lake ne system until a temporary bypass can ashing).

Other Important Info This project should be completed prior to cessation of treatment at the Northeast WTP.



Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

PM	Weighted	
	Score	

62.2

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	3	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

53.2

Score	Comment
5	
1	
4	
2	
5	
1	
2	
1	
	Score 5 1 4 2 5 1 2 1

111007 CIP#

Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

hase GLWA Emplo	oyees Pr	ojec	t manager	nent		C	Contract NA	4	Sta	tus Active		
tle GLWA Salarie	S											
Phase Budget Wo	ater							Cost Allo	cation CTA			
Phase Status Ac	tive							Funding S	Source Bond	Bond Proceeds		
Start Date									Fund Cons	struction Bor	nd Fund	
End Date							U	seful Life >	20Yrs? No			
Cost I	Estimati	on In	formation				Tot. Fede	ral Loan A	mount		\$(O
	5		Cost Est. C	lass			Prog	gram/Allov	vance Task	Information		
1/1	/2016		Cost Est. D	ate	Project Manager							
GLWA			Cost Est. So	ource	ce CIP Number							
GLWA			Cost Est. Pi	epared By	D	escrip	otion					
Cost Type		Fis	scal Year	Expens	е	Fringe	e BenefitNor	nPersonne		Comment		
SLWA Salaries CIP2	2020	FY19	9		\$15		6	1	CS-171			
SLWA Salaries CIP2	2020	FY20	0		\$15		6	1	CS-171			
SLWA Salaries CIP2	2020	FY2	1		\$15		6	1	CS-171			
SLWA Salaries CIP2	2020	FY2	2		\$0		0	0	CS-171			
Prior Yr Actuals	FY1	9	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total		
		22	22	22		0	0	0	0	66		

Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

 Phase
 Contract
 NA
 Status
 Future Planned Start

 Title
 LH WTP - Raw Sludge Clarifier and Raw Sludge Pumping System Improvements

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

Cost Estimation Information							
5	Cost Est. Class						
1/1/2016	Cost Est. Date						
GLWA	Cost Est. Source						
GLWA	Cost Est. Prepared By						

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	
Program/Allowance	Task Information
Acronor	

Program/Allowance Task Information								
Project Manager								
CIP Number								
Description								

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne		Comment
Construction	FY19	\$0			2020CIP	
Construction	FY20	\$4,450				
Construction	FY21	\$4,450				
Construction	FY22	\$0				
Task	Start Data	End Data Dur	ation			

Task	Start Date	End Date	Duration
Scope Development	9/3/2018	12/2/2018	90
Procurement	12/3/2018	9/2/2019	273
Project Execution	9/1/2019	12/24/2020	480
Project Closeout	12/24/2020	3/24/2021	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	4,450	4,450	0	0	0	0	8,900

GLWA Great Lakes Water Authority

Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

Phase Study and Design and Construction Assistance Contract CS-171 Status Under Procurement

Title CS-171, Brown & Caldwell, LH WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements

CS-171 is almost awarded as of 9/18/2017.

Phase Budget Water
Phase Status Under Procurement
Start Date 10/2/2017
End Date

Cost Estimation Information

5 Cost Est. Class

1/1/2016 Cost Est. Date

GLWA Cost Est. Source

GLWA Cost Est. Prepared By

Cost Allocation CTA

Funding Source Revenue Financed Capital

Fund Improvement & Extension Fun

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit NonPersonne	Comment
Engineering Services	FY19	\$172		
Engineering Services	FY20	\$188		
Engineering Services	FY21	\$189		
Engineering Services	FY22	\$0		

Task	Start Date	End Date	Duration
Scope Development	8/1/2016	10/30/2016	90
Procurement	10/31/2016	10/31/2017	365
Project Execution	11/1/2017	6/30/2021	1337
Project Closeout	8/31/2021	11/29/2021	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	172	188	189	0	0	0	0	549

Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

hase not applica	able				C	Contract N	Α	Stat	us Closed	Out	
itle Prior Year Ac	ctual Expe	enses									
Phase Budget W	get Water					Cost Allocation CTA					
Phase Status C	losed Ou	†		Funding Source							
Start Date				Fund							
End Date				Useful Life >20Yrs?							
Cost	Cost Estimation Information			Tot. Federal Loan Amount							
	5	Cost Est. C	lass			Pro	gram/Allov	vance Task	Information		
1/	1/2016	Cost Est. D	Cost Est. Date		rojec	Manager					
GLWA	Cost Est. Source		ource	CIP Number							
GLWA	GLWA Cost Est. Prepared By		repared By	By Description							
Cost Type	Cost Type Fiscal Year Expense		e	e Fringe BenefilNonPersonne Comme			Comment				
Engineering Servic	ces	FY18-		\$275				FY18			
Jnknown		FY18-		\$9				FY17			
Prior Yr Actuals	FY19	9 FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
28-	4								284		
		P	nase Total Ex	(pens	es By	FY (All figur	es are in \$1	,000's)			
Dro	io et Tet	al Evnanças	Dv EV Co	mpa	rod t	o Prior C	Do / All fie	ALLICO CICO	in \$1 000'	٥)	

	i i Ojc	ci ioidi i	.xpciisc.	, , , , , ,	ompare			ii iigoics	are iii y	1,000 3)	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			50	920	6,163				0	0	7,133
2019	0	9	422	212	1,612	3,608	1,221			0	7,084
2020	0	0	284	194	4,660	4,661	0	0	0	0	9,799

111008 CIP#

Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ☐

Lake Huron Water Treatment Plant



Project Engineer/Manager TBD

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/27/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Lake Huron

Location Saint Clair County

Fund and Cost Center Water - 5519-882111

Project Significance Existing laboratory and admin. Building interior is original to the plant and is in need of modernization.

Scope of Work Modernize lab and admin building offices, common areas, conference room, lunch room, lobby, entry-way, locker rooms, showers, and bathrooms.





Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

PM	Weighted
	Score

47.2

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

RC Weighted Score

40.6

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

111008 CIP#

Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

ase GLWA Empl		t managem	ent	(Contract N	4	Statu	s Future F	Planned Start	
e GLWA Salarie	es									
Phase Budget W	'ater			Cost Allocation CTA						
Phase Status Fu	uture Plannec	l Start		Funding Source Revenue Financed Capital						
Start Date				Fund Improvement & Extension Fu						
End Date				Useful Life >20Yrs? No						
Cost	Tot. Federal Loan Amount									
	5 Cost Est. Class			Program/Allowance Task Information						
1/	1/2016	Cost Est. Da	te	Projec	Project Manager					
GLWA		Cost Est. So	urce	CIP Number						
GLWA Cost Est. Prepared		epared By	Description							
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		

Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

Phase Study					Co	ntract N	A	Sto	itus Future	Planned	Start
Title LH WTP Archite	ectural F	rogramming -	Laboratory o	ınd Ac	dmin Bu	ilding Arc	hitectural Im	proveme	ents Study		
Phase Budget Wa	ter			Cost Allocation CTA							
Phase Status Fut	Jre Plan	ned Start		Funding Source Revenue Financed Capital						al	
Start Date				Fund Improvement & Extension Fu						ı Fun	
End Date						U	seful Life >20	Yrs? Yes			
Cost E	stimatio	n Information				Tot. Fede	eral Loan Am	ount			
	5	Cost Est. C	Class	Program/Allowance Task Information							
1/1,	/2016	Cost Est. D	ate	Pı	roject A	Nanager					
GLWA		Cost Est. S	ource	С	IP Num	ber					
GLWA Cost Est. Prepared By			repared By	D	escripti	on					
Cost Type Fiscal Year Expens		Expense	ense Fringe BenefitNonPersonne Comment								
Engineering Service	S	FY25+	·	\$300		2020CIP					
Task		Start Date	End Date	Dur	ation						
Scope Developmer	nt	8/1/2025	12/29/2025		150						
Procurement		12/29/2025	7/27/2026		210						
Project Execution		7/27/2026	7/27/2027		365						
Project Closeout		7/27/2027	10/25/2027		90						
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total		
		0 0	0		0	0	0	300	300		
		Р	hase Total Ex	pense	s By FY	(All figure	es are in \$1,0	00's)			
Dua!a	al Tal	al Francisco	D. FV Cor			Daile a Cl	D. / All Co.		:- ¢1 000	I-X	

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0								300	0	300
2020	0	0		0	0	0	0	0	0	300	300

Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter,

	Innovation
	Water MP Right Sizing
~	Reliability/Redundancy
	NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP ✓



Project Engineer/Manager Brian VanHall

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/26/2018

Year Project Added to CIP 2018

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Lake Huron

Location Saint Clair County

Fund and Cost Center

Project Significance	P	ro	je	ct	Si	gn	ifi	C	aı	nc	E
----------------------	---	----	----	----	----	----	-----	---	----	----	---

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

Scope of Work Design and install a new flow meter and isolation valve to the north high lift header, a new bypass line from the south high lift header, two new 35 MGD high lift pumps.

Challenges Adding the high lift header bypass and new isolation valve requires the existing valve to adequately seat.

Project History This job includes the flow meter and bypass that was originally part of CS-1771 under CIP 111006 and was removed due to poor Consultant performance.

> The additional high lift pumps are needed to support the 96in relocation by allowing for reduced plant capacity. The pumps will be used after to better match the required plant demand and add redundancy to the system.

Lookup Driver 6 - Public Benefit

Explanation This project is a predecessor project to relocating the 96-inch transmission main outside the closed G&H Industrial landfill.



Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter,

PM	Weighted Score

68

Criteria	Score	Comment
Condition	4	Adds new pumps that can supplement older (
Efficiency and Innovation	5	Allows flexibility to run pump capacity at dem
Financial	2	Project is expensive for added permanent val
O&M	2	Adds bypass and isolation of north header wh
Performance (Service Level/Reliability)	4	Adds redundancy
Public Benefit	5	Adds meter to measure finished water flow
Public Health & Safety	3	Allows for relocation of 96in main
Regulatory (Environmental/Legal)	3	Allows for relocation of 96in main

RC Weighted Score

62.2

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

Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter,

Phase Design and B						ntract			tus Future F	Planned St	art	
Title LH-WTP Two 35	LH-WTP Two 35-MGD High Lift Pumps, Watase Budget Water				low M	leters ar	d Yard Pipin	g Improven	nents			
Phase Budget Wa	ter						Cost Allo	cation CTA				
Phase Status Futu	re Planr	ned Start		Funding Source Bond Proceeds								
Start Date								Fund Cons	struction Bor	nd Fund		
End Date							Useful Life >	20Yrs? Yes				
Cost E	stimatio	n Information				Tot. Fed	leral Loan A	mount			\$0	
	5	Cost Est. C	lass	Program/Allowance Task Information								
9/26/	′2018	Cost Est. D	ate	Pro	oject M	/\anage	,					
		Cost Est. S	ource	CI	P Num	ber						
		Cost Est. P	repared By	De	escript	ion						
Cost Type		Fiscal Year	Expense	e F	ringe	BenefitN	onPersonne	(Comment			
Design-Build		Y20	·	,000				2020CIP				
Design-Build		FY21	·	,000				2020CIP				
Design-Build	F	Y22	\$7,	,000				2020CIP				
Task		Start Date	End Date	Dura	ıtion							
Scope Developmer	n†	11/20/2018	3/1/2019		101							
Procurement		3/1/2019	6/30/2019		121							
Project Execution		7/1/2019	4/1/2022		1005							
Project Closeout		4/1/2022	6/30/2022		90							
Prior Yr Actuals	FY19	FY20	FY21	FY22	2	FY23	FY24	FY25+	Total			
		9,000	10,000	7,	000				26,000			

111009 CIP#

GLWA FY 2020-2024 CIP 111009 CIP# Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter,

Phase Budget Water Phase Status Active Start Date End Date Start Date Cost Estimation Information Start Date Start													
Phase Status	Phase GLWA Emp	oloyees Pr	oject mar	nagem	ent		Co	ntract N	Ą	Sta	itus Activ	е	
Phase Status	Title GLWA Salari	ies											
Cost Estimation Information Tot. Federal Loan Amount \$0	Phase Budget W	Vater							Cost Alloc	cation CTA			
Cost Estimation Information	Phase Status A	ctive							Funding S	ource Bond	d Proceed	S	
Tot. Federal Loan Amount \$0	Start Date									Fund Con	struction B	ond Fund	
Cost Est. Class	End Date							U	seful Life >2	20Yrs? Yes			
Cost Est. Class	Cos	t Estimati	on Inform	ation				Tot. Fede	ral Loan Ar	mount			\$0
Total Project Manager Cost Est. Source CIP Number Description	Cos												40
Cost Type		5	Cost	Est. Clo	ass	_			gram/Allow	ance Task	Intormatio	on	
Cost Type	1,	/1/2016	Cost	Est. Da	te		-			1			
Cost Type	GLWA		Cost	Est. So	urce	С	IP Num	ber					
GLWA Salaries CIP2020 FY19 \$11 4 1 2020CIP GLWA Salaries CIP2020 FY20 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY21 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP Task Start Date End Date Duration Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	GLWA		Cost	Est. Pre	epared By	D	escripti	on					
GLWA Salaries CIP2020 FY19 \$11 4 1 2020CIP GLWA Salaries CIP2020 FY20 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY21 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP Task Start Date End Date Duration Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)													
GLWA Salaries CIP2020 FY20 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY21 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP Task Start Date End Date Duration Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)			Fiscal Y	'ear	Expense)	Fringe I	BenefilNo	nPersonne	(Comment		
GLWA Salaries CIP2020 FY21 \$21 8 1 2020CIP GLWA Salaries CIP2020 FY22 \$21 8 1 2020CIP Task Start Date End Date Duration Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)						\$11		4	1 2	2020CIP			
Start Date End Date Duration						•		8					
Task Start Date End Date Duration Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)								-					
Scope Development 11/20/2018 3/1/2019 101 Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	GLWA Salaries CIF	P2020	FY22			\$21		8	1 2	2020CIP			
Project Execution 3/1/2019 4/1/2022 1127 Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	Task		Start D	ate	End Date	Dur	ation						
Project Closeout 4/1/2022 6/30/2022 90 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	Scope Developm	ent	11/20/	/2018	3/1/2019		101						
Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	Project Execution		3/1/	/2019	4/1/2022		1127						
16 30 30 30 106 Phase Total Expenses By FY (All figures are in \$1,000's)	Project Closeout		4/1/	/2022	6/30/2022		90						
Phase Total Expenses By FY (All figures are in \$1,000's)	Prior Yr Actuals	FY1	9 F	1 20	FY21	FY2	22	FY23	FY24	FY25+	Total		
			16	30	30		30				10	6	
				Pho	ase Total Ex	pense	s By FY	(All figure	es are in \$1,	000's)			
Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)	Pro	iect Tot	al Expe	nses	By FY Cor	npai	ed to	Prior CI	Ps (All fig	ures are	in \$1.00	0's)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		16	9,030	10,030	7,030				26,106

Phase 1 WWP to NE Transmission - Flow Control Station at NE WTP

□ Innovation	Project Status Reclassified	
✓ Water MP Right Si	CIP Type Project	
✓ Reliability/Redun	dancy	
✓ NEWTP Repurposi	ng Project New To CIP	
Project Engineer/Ma	nager Timothy Kuhns	Budget Water
Ма	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 Treatment Plants and Facilities
Date Original Busine	ss Case Prepared 6/26/2014	Class Lvl 3 Northeast
Year Proj	ect Added to CIP 2014	Location City of Detroit
		Fund and Cost Center Water - 5519-882111
Project Significance		minus of the proposed 81-inch Waterworks Park to Northeast finish water I to control flow rates from Waterworks Park to the re-purposed
Scope of Work	The work includes providing and installing	new flow control station at the NE WTP site.
Challenges	existing piping and/or reservoirs will require	re-over of Northeast WTP becoming a booster station. Connecting to e reservoir shut and isolation, requiring close coordination with
	operations.	
Lookup Driver	2 - Performance	



Phase 1 WWP to NE Transmission - Flow Control Station at NE WTP

PM	Weighted
	Score

46

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	2	
Financial	3	
O&M	1	
Performance (Service Level/Reliability)	4	
Public Benefit	2	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

62.2

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

Phase 1 WWP to NE Transmission - Flow Control Station at NE WTP

nase GLWA Em	nployees Proje	ect managen	nent	(Contract N	A	Statu	s Cance	lled
le GLWA Salo	aries								
Phase Budget	Water					Cost Alloc	ation CTA		
Phase Status	Cancelled					Funding Sc	ource Bond I	Proceeds	
Start Date							Fund Consti	ruction Bor	nd Fund
End Date	Cost Estimation Information				U	seful Life >2	OYrs? Yes		
Co	ost Estimation	Information			Tot. Fede	eral Loan An	nount		\$0
	5	Cost Est. Cl	ass		Pro	gram/Allow	ance Task Ir	formation	
	1/1/2016	Cost Est. Do	ate	Projec	t Manager				
GLWA		Cost Est. Sc	ource	CIP Nu	ımber				
GLWA		Cost Est. Pr	epared By	Descri	ption				
Prior Yr Actua	ls FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0	0	0	0	0	0	0	



Phase 1 WWP to NE Transmission - Flow Control Station at NE WTP

Phase Design and B	Build				Co	ontract	NA		St	atus (Cance	elled	
Title Phase 1 WWP	to NE Tro	ansmission - Flo	w Control Sto	ation (at NE V	VTP							
Phase Budget Wa	ter							Cost Alloc	cation CT/	4			
Phase Status Car	ncelled							Funding S	ource Bor	nd Proc	ceeds		
Start Date									Fund Co	nstruct	ion Boı	nd Fund	
End Date							Us	eful Life >2	OYrs? Yes	5			
Cost E	stimatio	n Information				Tot. Fe	der	al Loan Ar	nount				
	4	Cost Est. C	lass			P	rog	ram/Allow	ance Tas	k Inforr	nation		
1/1,	/2017	Cost Est. D	ate	P	roject	Manage	er						
Jacobs		Cost Est. So	ource		CIP Nun	nber							
Jacobs		Cost Est. Pi	epared By	D)escrip	tion							
Cost Type		Fiscal Year	Expense	;	Fringe	Benefit	Von	Personne		Comn	nent		
Design-Build		FY21	·	\$0									
Design-Build		FY22		\$0									
Task		Start Date	End Date	Dur	ation								
Scope Developmer	nt	4/1/2019	6/30/2019		90)							
Procurement		7/1/2019	6/30/2020		365	5							
Project Execution		7/1/2020	6/28/2022		727	7							
Project Closeout		6/29/2022	9/27/2022		90)							
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY25+	To	otal		
		0 0	0		0		0	0		0	0		
		P	nase Total Ex	pense	es By F	Y (All fig	ures	are in \$1,	000's)				
Proje	ect Toto	al Expenses	By FY Cor	npa	red to	Prior (CIP	s (All fig	ures are	e in \$	1,000'	's)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			800						0	0	800
2019	0					700	1,988	112		0	2,800

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

112001 CIP#

Phase 1 WWP to NE Transmission - Flow Control Station at NE WTP

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		0	0	0	0	0	0	0	0



112002 CIP#

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
	NEWTP Repurposing
Pro	piect Engineer/Manager (

Project Status Active

CIP Type Project

Project New To CIP \Box

Low Lift Pumping Plant at Northeast WTP



Govind Patel

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Northeast

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance	Preventing further degradation of steel and concrete structure of the Low Lift Pumps Caisson at the Northeast WTP
	The work includes design and repair of concrete cracks and concrete restoration to stop leakage on the concrete covers of the encased steel beams and along the inner surfaces of the caisson wall.
Related Project	CS-1744 is the engineering services contract associated with this project. CON -215A is the construction contract.
Lookup Driver	1 - Condition
Other Important Info	The project is currently under construction and is on schedule to be completed by November 2019.

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

PM	Weighted
	Score

51.4

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

RC Weighted Score

51.6

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	1	
O&M	2	
Performance (Service Level/Reliability)	3	
Public Benefit	1	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	2	

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

Phase GLWA Employees Project management				nent		Co	ontract N	٧A		Stat	us Active		
Fitle GLWA Salo	aries												
Phase Budget	Phase Budget Water						Cost Allocation CTA						
Phase Status	Active							Funding	Source	3ond	Proceeds		
Start Date									Fund	Cons ⁻	truction Bor	nd Fund	
End Date								Useful Life >	>20Yrs?	Yes			
Co	ost Estim	nation Ir	formation				Tot. Fed	leral Loan <i>A</i>	Amount				\$0
		1	Cost Est. C	ass	Program/Allowance Task Information								
	1/1/201	6	Cost Est. Do	ate	Project Manager								
GLWA			Cost Est. Sc	ource	CIP Number								
GLWA			Cost Est. Pr	epared By	D	escript	ion						
Cost Typ	pe	Fi	scal Year	Expens	е	Fringe	BenefitNo	onPersonne		С	omment		
GLWA Salaries C	IP2020	FY1	9		\$20		8	1	CS-1744	1			
GLWA Salaries C	IP2020	FY2	0		\$10		4	C	CS-1744	1			
GLWA Salaries C	IP2020	FY2	1		\$0		0	C	CS-1744	1			
GLWA Salaries C	IP2020	FY2	2		\$0		0	C	CS-1744	1			
Prior Yr Actual	ls	FY19	FY20	FY21	FY	22	FY23	FY24	FY25	5+	Total		
		29	14	0		0	0)	0	43		

112002 CIP#

86

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

Contract CS-1744 **Phase** Study and Design and Construction Assistance Status Active CS-1744, FKE, NE WTP Low Lift Pumping Plant Caisson Rehabilitation FKE Phase Budget Water Cost Allocation CTA **Phase Status** Active Funding Source Bond Proceeds Start Date **Fund** Construction Bond Fund **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Program/Allowance Task Information Cost Est. Class **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By **GLWA** Fiscal Year Fringe Benefit NonPersonne Cost Type Expense Comment **Engineering Services** FY19 \$60 **Engineering Services** \$26 FY20 Task Start Date **End Date** Duration Scope Development 8/18/2015 11/16/2015 90 11/16/2016 365 Procurement 11/17/2015 **Project Execution** 1/31/2020 1325 6/15/2016 Project Closeout 1/1/2020 3/31/2020 90 FY20 FY21 FY22 Prior Yr Actuals FY19 FY23 FY24 FY25+ Total 0 0 0 0

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

0

26

60

112002 CIP#

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

Phase Constructio		Co	ontract	CO	N-215A		Statu	us Act	tive						
Title NE WTP Low	Lift Pumpi	ng Plant Caiss	on Rehabilita	ition											
Phase Budget W	Phase Budget Water						Cost Allocation CTA								
Phase Status A	ctive							Funding S	ource	Bond	Procee	eds			
Start Date									Fund	Const	ruction	n Bon	id Fund	k	
End Date							Use	eful Life >2	20Yrs?	Yes					
Cost	Estimatio	n Information				Tot. Fed	der	al Loan A	mount						
	1	Cost Est. C	lass			Pı	rogr	ram/Allov	vance '	Task Ir	nforma	tion			
		Cost Est. D	ate	Р	roject l	Manage	r								
	Cost Est. Source				CIP Number										
		Cost Est. P	repared By	D	escript	ion									
Cost Type)	Fiscal Year	Expense)	Fringe	Benefit	lonf	Personne		С	ommer	nt			
Construction	ŀ	FY19	Ç	\$800											
Construction	Ī	FY20	9	\$163											
Task		Start Date	End Date	Dur	ation										
Scope Developme	ent	8/17/2017	11/15/2017		90										
Procurement		11/16/2017	5/23/2018		188	3									
Project Execution		5/1/2018	11/1/2019		549										
Project Closeout		1/1/2020	3/31/2020		90)									
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Tota	I			
	8	300 163	0		0	(0	0		0	9	963			

Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

Phase not applic	not applicable Contract NA Status Closed C									Out		
Title Prior Year A	Actual Exp	enses	S									
Phase Budget	Vater Cost Allocation CTA											
Phase Status	Closed O	ut						Funding	Source			
Start Date									Fund			
End Date								Useful Life	>20Yrs?			
Co	st Estimat	ion In	formation				Tot. Fe	deral Loan A	Amount			
	1		Cost Est. C	lass			P	rogram/Allo	wance Task	Information		
	1/1/2016		Cost Est. D	ate	P	roject	Manage	r				
GLWA			Cost Est. So	ource	C	CIP Nun	nber					
GLWA			Cost Est. Pi	repared By)escrip	tion					
Cost Typ	oe De	Fis	scal Year	Expens	e	Fringe	Benefit	lonPersonne)	Comment		
Construction		FY18	3-		\$257				2020CIP			
Engineering Serv	rices	FY18	3-		\$42				2020CIP			
Unknown		FY18			\$11				FY16			
Unknown		FY18			\$152 FY17							
GLWA Salaries C	LWA Salaries CIP2020 FY18- \$8 3 02020CIP											
Prior Yr Actual	s FY	19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
2	173									473		
			P	nase Total Ex	(pens	es By F	Y (All figu	res are in \$	1,000's)			

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		150	1,183						0	0	1,333
2019	0	163	70	831	619	30	4			0	1,717
2020	0	0	473	889	203	0	0	0	0	0	1,565

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP $\ \Box$

Northeast Water Treatment Plant



Project Engineer/Manager Jorge Nicolas

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/27/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Northeast

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Upgrade the existing medium voltage and low voltage electrical systems for the high-lift pumping station only.

Scope of Work Electrical system improvements for high-lift pumping equipment only.

Other Important Info Identified in the 2015 WMPU



Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

PM	Weighted
	Score

53.4

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

RC Weighted Score

50.8

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

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Phase Design & Cor	Design & Construction Assistance			Contract NA					r us Future	Planned Start
Title NE WTP High-Lift Pumping Station Electrical Impro					nts					
Phase Budget Wa	ase Budget Water				Cost Allocation CTA					
Phase Status Futu	ure Planne	ed Start					Funding S	Source Bond	Proceeds	
Start Date								Fund Cons	truction Bo	and Fund
End Date						L	Jseful Life >	20Yrs? Yes		
Cost E	stimation	Information				Tot. Fede	eral Loan A	mount		
	5	Cost Est. C	lass			Pro	gram/Allov	wance Task	Information	1
1/1/	′2016	Cost Est. D	ate	Pi	roject <i>l</i>	Nanager				
GLWA		Cost Est. So	ource	С	CIP Number					
GLWA		Cost Est. P	repared By	D	escript	ion				
Cost Type		Fiscal Year	Expense)	Fringe	BenefitNo	nPersonne	C	Comment	
Engineering Service	s F	′ 24		\$0						
Engineering Service	s F	(25+	\$6	,223				2020CIP		
Task		Start Date	End Date	Dur	ation					
Scope Developmer	n†	8/18/2025	11/16/2025		90					
Procurement		11/17/2025	10/1/2026		318					
Project Execution		12/15/2026	12/11/2030		1457					
Project Closeout		12/12/2030	3/28/2031		106					
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total	
		0 0	0		0	0	0	6,223	6,223	

112003 CIP#

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Contract NA **Status** Future Planned Start **Phase** Construction NE WTP High-Lift Pumping Station Electrical Improvements 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? Yes Tot. Federal Loan Amount **Cost Estimation Information** 5 Cost Est. Class Program/Allowance Task Information **Project Manager** 11/16/2018 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By **GLWA** Cost Type Fiscal Year Fringe Benefil NonPersonne Expense Comment \$54,766 Construction FY25+ 2020CIP End Date Task Start Date Duration Scope Development 8/18/2025 11/16/2025 90 11/17/2025 5/24/2026 188 Procurement Project Execution 5/25/2026 5/17/2030 1453 Project Closeout 5/18/2030 8/16/2030 90 Prior Yr Actuals FY20 FY21 FY22 FY23 FY24 FY25+ Total FY19 0 0 0 0 0 0 54,766 54,766

CIP

2019

2020

FY16

FY17

0

0

0

GLWA FY 2020-2024 CIP

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

hase GLWA Empl	lovees P	rojec	t manager	nent		C	ontract N	Δ	Stati	IS Futural	Planned Start	
itle GLWA Salarie		TOJCC	rmanager	ПОП		Ο.	omider in	<i>,</i> (olali	1010101	Tannea stan	
Phase Budget W	daet Water						Cost Allocation CTA					
Phase Status Fu	uture Pla	nned	Start					Funding S	ource Bond	Proceeds		
Start Date									Fund Const	ruction Bor	nd Fund	
End Date							U	seful Life >2	20Yrs? Yes			
Cost	t Estimati	ion In	formation				Tot. Fede	eral Loan Ar	mount		\$0	
	5		Cost Est. C	lass	Program/Allowance To				ance Task I	nformation		
1/	1/2016		Cost Est. D	ate	Project Manager							
GLWA			Cost Est. So	ource	CIP Number							
GLWA			Cost Est. P	repared By	Des	scrip	tion					
Cost Type		Fis	scal Year	Expens	e Fr	inge	BenefitNo	nPersonne	С	omment		
GLWA Salaries CIP	2020	FY2	5+		\$861		341	43 2	2020CIP			
Prior Yr Actuals	FY1	19	FY20	FY21	FY22		FY23	FY24	FY25+	Total		
		0	0	0								
			P	hase Total Ex	kpenses	By F	Y (All figure	es are in \$1,	.000's)			
Pro	iect To	tal F	xpenses	By FY Co	mpare	d to	Prior CI	Ps (All fig	ures are i	n \$1 000'	(s)	

FY21

0

FY22

0

FY23

0

FY24

62,265

0

FY25

62,234

Total

62,265

62,234

FY19

0

FY20

0

FY18



NE - WTP Relocation of 12" service line at front of plant

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redunct☐ NEWTP Repurposir	lancy Project New To CIP							
Managing Date Original Busines	nager Govind Patel nager Grant Gartrell Dept Water Eng s Case Prepared 1/4/2018 ect Added to CIP	Class Lvl 1 Class Lvl 2 Class Lvl 3	Treatment Plants and Facilities Northeast City of Detroit					
Scope of Work	GLWA is charged by DWSD for use of this wo disconnecting from the DWSD 12" main and supply. Disconnect service water feed for plant fror	connect service water feed for plant from the existing 12" water main owned by DWSD and connect it via new vice water piping to an existing GLWA transmission main existing the plant grounds. Work involves site civil and						
Challenges	Coordinating with DWSD on the disconnect	on from its 12" water main.						

GLWA FY 2020-2024 CIP

GLWA FY 2020-2024 CIP Sept Lakes Water Authority NE - WTP Relocation of 12" service

NE - WTP Relocation of 12" service line at front of plant

PM Weighted Score

24

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

RC Weighted Score

22

Score	Comment
1	
1	
2	
1	
1	
1	
1	
1	
	Score 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1



NE - WTP Relocation of 12" service line at front of plant

hase GLWA Em fle GLWA Salo		ect managen	nent	(Contract N.	A	Status	Cancelled	d
Phase Budget						Cost Allocation	n CTA		
Phase Status	Cancelled					Funding Source	Bond Pro	oceeds	
Start Date						Fund	Constru	ction Bond	Fund
End Date					U	seful Life >20Yrs	? Yes		
Co	ost Estimation	Information			Tot. Fede	eral Loan Amoun	t		\$0
	5	Cost Est. CI	ass	Program/Allowance Task Information					
	1/1/2016	Cost Est. Do	ate	Projec	t Manager				
GLWA		Cost Est. So	urce	CIP Nu	ımber				
GLWA		Cost Est. Pr	epared By	Descri	ption				
Prior Yr Actua	ls FY19	FY20	FY21	FY22	FY23	FY24 FY	25+	Total	
		0	0	0	0	0	0	0	



NE - WTP Relocation of 12" service line at front of plant

Phase Design and B	se Design and Build				ontract N	4	Statu	s Cance	lled
Title NE - WTP Reloc	cation of	12" service lin	e at front of p	olant					
Phase Budget Wat	ter			Cost Allocation CTA					
Phase Status Car	ncelled					Funding S	ource Bond F	Proceeds	
Start Date		6/23/	′2018				Fund Constr	uction Bor	nd Fund
End Date		6/22/	′2021		U	seful Life >2	20Yrs? Yes		
Cost E	stimation	Information			Tot. Fede	ral Loan Ar	nount		
	5	Cost Est. C	lass		Prog	gram/Allow	ance Task In	formation	
12/26/	′2017	Cost Est. D	ate	Project Manager					
GLWA Engineering	g	Cost Est. So	ource	CIP Nur	mber				
G. Gartrell		Cost Est. Pi	repared By	Descrip	tion				
Task		Start Date	End Date	Duration					
Scope Developmen	ıt	6/23/2018	9/21/2018	90	0				
Procurement		9/22/2018	9/22/2019	36	5				
Project Execution		9/23/2019	3/23/2021	547	7				
Project Closeout		3/24/2021	6/22/2021	90)				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	0	0	
	Phase Total Expenses By FY (All figures are in \$1,000's)								

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				1,023	1,437				0	2,460
2020	0	0		0	0	0	0	0	0	0	0



112005 CIP#

Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy

NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ✓



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/1/2018

Year Project Added to CIP 2018

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Northeast

Location City of Detroit

Fund and Cost Center

Project Significance The existing steel covers that cover equipment and entry openings into settled water and filtered water conduits at the plant are significantly deteriorated to the point where they are not water-tight and require replacement. Therefore, these covers are unsafe and have been identified by the MDEQ in the most recent sanitary survey as requiring replacement. Temporary barricades are in place to prevent injury and further damage.

Scope of Work Replace steel covers, frames and associated structural support beams over the settled water and filtered water conduits.

Challenges Temporary support of sluice gate operators and partial shutdown of certain portions of the plant to facilitate replacement of embedded frames and structural supports that are located immediately above settled water and filtered water flows.

Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits

PM	Weighted
	Score

72

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

RC Weighted Score

61

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	2	
O&M	1	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	3	

112005 CIP#

Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits

hase GLWA Employe tle GLWA Salaries	es Projec	t managen	nent		Contract N	IA	Sto	atus Future I	Planned Sto	art
Phase Budget Water	-					Cost Alloc	cation CTA	\		
Phase Status Future	se Status Future Planned Start			Funding Source Bond Proceeds						
Start Date							Fund Cor	nstruction Bor	nd Fund	
End Date					l	Jseful Life >2	20Yrs? Yes			
Cost Esti	mation In	formation			Tot. Fed	eral Loan Ar	mount		9	\$O
	5	Cost Est. C	ass		Pro	gram/Allow	ance Task	c Information		
1/1/20	18	Cost Est. De	ate	P	Project Manager					
GLWA		Cost Est. So	ource		CIP Number					
GLWA		Cost Est. Pr	epared By		Description					
Cost Type	Fis	scal Year	Expense		Fringe Benefit No	nPersonne		Comment		
LWA Salaries CIP2020) FY20)		\$4	2	02	2020CIP			
LWA Salaries CIP2020) FY2	l		\$5	2	02	2020CIP			
Prior Yr Actuals	FY19	FY20	FY21	FY:	22 FY23	FY24	FY25+	Total		
		6	7					13		

112005 CIP#

Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits

Phase Construction					Co	ontract	TBD	Sta	tus Future I	Planned	Start	
Title NE Steel Cove	r Replac	ement										
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? Yes								
Cost E	Cost Estimation Information				Tot. Federal Loan Amount \$0							
	5	Cost Est. C	lass			Pı	ogram/Allov	vance Task	Information			
1/1	1/1/2018 Cost Est. Date			P	roject l	Manage	,					
GLWA Cost Est. Source			ource	CIP Number								
GLWA Cost Est. Prepare			repared By	d By Description								
• •			Expense				onPersonne		Comment			
Construction FY20		•	\$160				2020CIP					
Construction	F	Y21	9	640				2020CIP				
Task		Start Date	End Date	Dur	ation							
Scope Developmer	nt	7/1/2019	8/15/2019		45							
Procurement		8/16/2019	2/17/2020		185							
Project Execution		2/18/2020	2/19/2021		367							
Project Closeout		2/22/2021	5/23/2021		90							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total			
		160	640						800			
		P	hase Total Ex	pense	es By F	(All figu	res are in \$1	,000's)				
Droid	act Tota	al Expenses	By EV Cor	nna	rod to	Prior (TIDe (All fie	TUROS GRO	in \$1 000'	٥)		

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
2020	0	0			166	647					813	



Northeast Water Treatment Plant Flocculator Replacements

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP

✓



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/1/2018

Year Project Added to CIP 2018

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Northeast

Location City of Detroit

Fund and Cost Center

	Most of the existing flocculators are not operable and are beyond repair, which reduces sedimentation effectiveness and creates a greater load on the filtration process.
Scope of Work	Replace 1/2 of the existing flocculators, including drives, motors, shafts, and paddles with new.
Challenges	Water production during construction
Lookup Driver	1 - Condition
	Only 1/2 of the existing flocculators will be replaced under this CIP because the treatment works at Northeast are slated for decommissioning.
Explanation	Most of the existing flocculators are not operating and are beyond repair.



GLWA FY 2020-2024 CIP Northeast Water Treatment Plant Flocculator Replacements

PM Weighted Score

65

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

RC Weighted Score

67.4

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	3	
Regulatory (Environmental/Legal)	3	



Northeast Water Treatment Plant Flocculator Replacements

0
i.

FY16

CIP

2020

FY17

0

0

FY18

FY19

3

FY20

1,356

GLWA FY 2020-2024 CIP

Total

2,718

Northeast Water Treatment Plant Flocculator Replacements

Phase GLWA Em	ployees P	roject	manager	ment		С	Contract N	A		Status	Active	
Title GLWA Sala	ıries											
Phase Budget	Water				Cost Allocation CTA							
Phase Status	Active				Funding Source						roceeds	
Start Date									Fund	Constr	uction Bo	nd Fund
End Date							U	seful Life >2	20Yrs?	Yes		
Co	st Estimat	ion Inf	ormation				Tot. Fede	eral Loan Ar	mount			\$(
	5		Cost Est. C	lass			Prog	gram/Allow	vance '	Task In	formation	1
	1/1/2018		Cost Est. D	ate	Р	roject	Manager					
GLWA			Cost Est. S	ource	C	IP Nu	mber					
GLWA			Cost Est. P	repared By	D	escrip	otion					
Cost Typ	oe	Fise	cal Year	Expense		Fringe	e BenefitNoi	nPersonne		Со	mment	
GLWA Salaries C	IP2020	FY19			\$2		1	02	2020CII)		
GLWA Salaries C	IP2020	FY20			\$4		2	02	2020CII)		
GLWA Salaries C	IP2020	FY21			\$4		2	02	2020CII)		
GLWA Salaries C	IP2020	FY22			\$2		1	02	2020CII)		
Prior Yr Actual	s FY1	19	FY20	FY21	FY2	22	FY23	FY24	FY2	5+	Total	
		3	6	6		3					18	
			P	hase Total Ex	pense	es By F	FY (All figure	es are in \$1	,000's)			
Pr	oject To	tal E	xpenses	By FY Co	mpai	ed t	o Prior CI	Ps (All fig	ures	are in	\$1,000	's)

A-	7	3

FY21

1,356

FY22

3

FY23

FY24

FY25

Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

☐ Innovation☑ Water MP Right Sizing☐ Reliability/Redundancy☐ NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP $\ \Box$

Oil hydraulic valve actuators leaking oil



Project Engineer/Manager Shakil Ahmed

Manager Terry Daniel

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class LvI 2 Treatment Plants and Facilities

Class LvI 3 Southwest

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance
Existing oil hydraulic high lift valve actuators are leaking oil and at the end of service life. The leaking actuators pose safety concerns and replacement of valve actuators is needed.

This project involves replacement of the valve actuators at the high lift pump system as the existing oil hydraulic actuators are leaking and at the end of their service life.

Challenges
Sequencing the demolition and replacement of the existing oil hydraulic power system will require shutdown of individual high lift pumping units.

Related Project Contract No. CS-1653, Study Phase

Contract No. CS-034, Design and Construction Administration Services

Lookup Driver 1 - Condition

Other Important Info
The construction contract, CON-281, for this CIP project was awarded to Weiss Construction and the notice to proceed issued on October 1, 2018. The project is scheduled for completion by November 2021.



Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

PM Weighted	
Score	

64

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

53.2

, , ,		
Efficiency and Innovation 3 Financial 1 O&M 5 Performance (Service Level/Reliability) 2 Primary difference between PM & RC - No	Criteria	Comment
Financial 1 O&M 5 Performance (Service Level/Reliability) 2 Primary difference between PM & RC - No	Condition	4
O&M 5 Performance (Service Level/Reliability) 2 Primary difference between PM & RC - No	Efficiency and Innovation	3
Performance (Service Level/Reliability) 2 Primary difference between PM & RC - No	Financial	1
	O&M	5
	Performance (Service Level/Reliability)	2 Primary difference between PM & RC - No addi
Public Benefit 1	Public Benefit	1
Public Health & Safety 2	Public Health & Safety	2
Regulatory (Environmental/Legal) 3	Regulatory (Environmental/Legal)	3

Procurement

Project Execution

Project Closeout

Prior Yr Actuals

7/2/2016

7/3/2017

12/1/2020

FY20

FY19

46

7/2/2017

3/1/2021

11/30/2020

FY21

GLWA FY 2020-2024 CIP

Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

Phase Design &	Construction	on Assistance			Co	ntract	CS-034		Status	Active		
Title CS-034, Te	tra Tech, Hi	gh Lift Pump Di	scharge Valv	e Ac	tuators F	Replace	ement at Sou	thwest '	WTP			
Design contrac	t is CS-034 T	etra Tech										
Phase Budget	Water						Cost Alloc	cation	СТА			
Phase Status	Active						Funding \$	ource	Bond Pro	oceeds		
Start Date								Fund	Constru	ction Bon	d Fund	
End Date	End Date						Useful Life >2	20Yrs?	Yes			
Co	ost Estimatio	on Information				Tot. Fe	deral Loan Ar	mount				
	5	Cost Est. C	lass			Р	rogram/Allow	vance T	ask Info	rmation		
	1/1/2016 Cost Est. Date			P	roject N	lanage	er					
GLWA		Cost Est. S	ource		CIP Num	ber						
GLWA		Cost Est. P	repared By)escripti	on						
Cost Ty	pe	Fiscal Year	Expense		Fringe E	Benefit	NonPersonne		Con	nment		
Engineering Ser	vices	FY19		\$46								
Engineering Ser	vices	FY20		\$65								
Engineering Sen	vices	FY21		\$33								
Task	(Start Date	End Date	Dur	ration							
Scope Develop	ment	4/2/2016	7/1/2016		90							

365

1246

FY22

90

65 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | Phase Total Expenses By FY (All figures are in \$1,000's)

FY23

FY24

FY25+

Total

144

Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

hase Construction						ntract				Statu	s Active		
tle Construction, S	W WTP F	ligh Lift Pump	Discharge V	alve A	Actuato	ors Repl	ace	ement					
Phase Budget Wate	er							Cost Allo	cation C	TA			
Phase Status Activ	/e							Funding S	ource Bo	ond I	Proceeds		
Start Date									Fund C	onsti	ruction Bor	nd Fund	
End Date							Us	seful Life >	20Yrs? Ye	es			
Cost Es	timation	Information				Tot. Fe	dei	ral Loan A	mount				
	3	Cost Est. C	lass			P	rog	gram/Allov	vance To	ısk Ir	formation		
1/1/2	2017	Cost Est. D	ate	Р	roject A	Manage	er						
TetraTech		Cost Est. So	ource	C	IP Num	ber							
TetraTech		Cost Est. P	repared By	D	escript	ion							
			, ,										
Cost Type		Fiscal Year	Expense	€	Fringe	Benefill	Vor	Personne		Co	omment		
Construction		Y19	·	,100									
Construction		Y20	·	,800									
Construction	F'	Y21	\$1	,100									
Task		Start Date	End Date	Dur	ation								
cope Development		11/30/2017	2/28/2018		90								
		3/1/2018	12/3/2018		277								
rocurement		0/1/2010	12,0,2010										
		12/4/2018	11/30/2020		727								
Procurement Project Execution Project Closeout					727 90								
roject Execution	FY19	12/4/2018	11/30/2020		90	FY23		FY24	FY25+		Total		

113002 CIP#

Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

Phase GLWA Em	nployee	s Projec	ct manager	nent		C	Contract	NA	\	Sta	tus	Active		
itle GLWA Salo	aries													
Phase Budget	Water					Cost Allocation CTA								
Phase Status	Active								Funding So	ource Bond	d Pro	oceeds		
Start Date										Fund Cons	struc	ction Bor	nd Fund	
End Date					Useful Life >20Yrs? Yes									
Co		Tot. Federal Loan Amount \$0								\$0				
		5	Cost Est. C	lass			P	rog	ram/Allow	ance Task	Info	rmation		
	1/1/201	Cost Est. Date			Р	roject	Manage	er						
GLWA			Cost Est. S	ource	C	IP Nu	mber							
GLWA			Cost Est. P	repared By	D	escrip	otion							
Cost Ty	pe	Fi	scal Year	Expens	e	Fringe	e Benefit	Von	Personne	(Com	ment		
GLWA Salaries C	CIP2020	FY1	9		\$8		3		0					
GLWA Salaries C	CIP2020	FY2	.0		\$8		3		0					
GLWA Salaries C	CIP2020	FY2	.1		\$8		3		0					
GLWA Salaries C	CIP2020	FY2	2		\$4		2		0					
Prior Yr Actua	ıls	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25+	1	Total		
		11	11	11		4		Λ	Λ	0		30		

Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

hase not applica	ıble				Contract	NA		Stat	us Closed	tuO k	
itle Prior Year Ac	tual Expe	enses									
Phase Budget W	ater			Cost Allocation CTA							
Phase Status C	losed Ou	†									
Start Date								Fund			
End Date						Usef	ul Life >	20Yrs?			
Cost	Estimatio	on Information			Tot. Fe	ederal	Loan A	mount			
	5	Cost Est. C	lass		i	Progra	m/Allov	wance Task	nformation	1	
1/	1/2016	Cost Est. D	ate	P	roject Manage	er					
GLWA	Cost Est. Source				CIP Number						
GLWA		Cost Est. P	repared By	D	escription						
Cost Type)	Fiscal Year	Expens	e	Fringe Benefit	NonPe	ersonne	C	omment		
ngineering Servic	es	FY18-		\$106				FY18			
Jnknown		FY18-		\$112				FY17			
Jnknown		FY18-		\$3				FY16			
GLWA Salaries CIP	2020	FY18-		\$20	8			FY18			
Prior Yr Actuals	FY1	9 FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
24	9								249	1	
	'	P	hase Total Ex	(pense	es By FY (All fig	gures c	are in \$1	,000's)		-	
_											

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		160	160	900	900				0	0	2,120
2019	0	115	186	1,157	2,876	1,144	6			0	5,484
2020	0	0	249	1,157	2,876	1,144	6	0	0	0	5,432

113003 CIP#

Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and

☐ Innovation✓ Water MP Right Si	Project Status Future Planned	Example of a butterl	
	CIP Type Project		
☐ Reliability/Redund			
☐ NEWTP Repurposi	Project New To CIP		
Project Engineer/Ma	nager Shakil Ahmed	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class LvI 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 8/19/2014	Class LvI 3	Southwest
Year Proje	ect Added to CIP 2014	Location	Wayne County - Outside Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	Replacing improperly functioning as well as crace concerns. Low and High Lift Pumping Improvement motors, switchgear, controls, gates, valves, etc., projected system water demands for at least the difficult and costly to maintain and have reduce market. Large size and age of pumps and motor Existing filter media, auxiliary scour, backwash, a construction (circa 1962) and need to be replaced equipment upgrades were identified in the 2015	ents: Existing pumping sta are all original to the plan e next 20 years. The station ed reliability due to age a rs are inefficient. Floccula and related appurtenance ced for reliability and effic	Ition equipment including pumps, at and are over-sized for the current and in's electrical system and controls are and lack of available parts on the lition & Filtration System Improvements: es are all original to the plant
Scope of Work	The work includes study, design, and construction 4 motorized sluice gates, 7 potable sluice gates, motors, motor controls, medium-voltage switch a equipment and components as well as floccula	and 1 - 36" flag valve. Re gear, and MCCs. Replace	eplacement of high and low lift pumps, e and improve filtration system
Lookup Driver	4 - O&M		
-	This work is included in the 2015 water master pla	an un data	



Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and

PM	Weighted
	Score

66.6

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	2	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	2	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

67.6

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

113003 CIP#

Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and

Phase Design & Construction Assistance						Contract NA					Statu	Js Future	Planne	d Start
Fitle SW WTP Low E2, E3, E2B, I	_	n Lift	Pumping 8	Rapid Mix C	Chamb	oer BFV	/s, Sluice	Go	ates, Floco	culation	& Filt	ration Syst	em Imp	rovements (E
Phase Budget V	Water				Cost Allocation CTA									
Phase Status F	se Status Future Planned Start					Funding Source Bond Proceeds								
Start Date										Fund	Const	ruction Bc	nd Fund	k
End Date								Us	eful Life >	20Yrs?	es/			
Cos	st Estimatio	on Ir	nformation				Tot. Fe	der	al Loan A	mount				
	5		Cost Est. C	lass			P	rog	ram/Allov	wance T	ask Ir	nformation	1	
1/1/2016 Cost Est. Date					P	roject	Manage	r						
GLWA			Cost Est. S	ource	CIP Number									
GLWA			Cost Est. P	repared By	d By Description									
Cost Typ	е	Fi	scal Year	Expense	e Fringe BenefitNonPersonne				С	omment				
Engineering Servi	ces	FY2	24		\$0									
Engineering Servi	ces	FY2	25+	\$15	5,000					2020CIP	1			
Task		S	tart Date	End Date	Dur	ation								
Scope Developm	nent													
Procurement														
Project Execution)													
Project Closeout														
Prior Yr Actuals	FY1	9	FY20	FY21	FY2	22	FY23		FY24	FY25	+	Total		
		0	0	0		0		0	0	15,	000	15,000		

113003 CIP#

Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and

Phase Construction	hase Construction							Contract NA						Start
Title SW WTP Low	and High	Lift	Pumping 8	Rapid Mix (Cham	ber BF\	/s, Sluice	e G	ates (C, C2	2)				
Phase Budget W	/ater				Cost Allocation CTA									
Phase Status Fu	uture Plan	ned	Start		Funding Source Bond Proceeds									
Start Date										Fund Cor	struc	tion Bor	nd Fund	
End Date								U	seful Life >2	OYrs? Yes				
Cost	t Estimatio	n In	formation				Tot. Fe	ede	ral Loan An	nount				
5 Cost Est. Class							ı	rog	gram/Allow	ance Task	Info	rmation		
1/	1/1/2016 Cost Est. Date				Project Manager									
GLWA	GLWA Cost Est. Source			ource	CIP Number									
GLWA	WA Cost Est. Prepared By			repared By	Description									
Cost Type	9	Fis	cal Year	Expens	e	Fringe	Benefit	Nor	nPersonne		Com	ment		
Construction		FY25	5+	\$132	2,563 2020CI					020CIP				
Task		St	art Date	End Date	Dui	ation								
Scope Developme	ent													
Procurement														
Project Execution														
Project Closeout														
Prior Yr Actuals	FY19		FY20	FY21	FY	22	FY23		FY24	FY25+		Total .		
		0	0	0		0		0	0	132,563		132,563		

113003 CIP#

Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and

Phase GLWA Empl	oyees Proj	ect managen	nent	C	Contract N	A	Statu	s Future Pl	lanned Start		
Title GLWA Salarie	es										
Phase Budget Wo	ater				Cost Allocation						
Phase Status Fu	ture Plann	ed Start				Funding Sou	rce Bond F	Proceeds			
Start Date						F	und Constr	ruction Bond	d Fund		
End Date				Useful Life >20Yrs? Yes							
Cost Estimation Information Tot. Federal Loan Amount									\$0		
	5	Cost Est. C	lass	Program/Allowance Task Information							
1/	1/2016	Cost Est. D	ate	Project Manager							
GLWA		Cost Est. So	ource	CIP Number							
GLWA		Cost Est. Pr	repared By	Descrip	ption						
Cost Type		Fiscal Year	Expens	e Fringe	e BenefilNoı	nPersonne	Сс	mment			
GLWA Salaries CIP:	2020 F	Y24		\$0	0	0					
GLWA Salaries CIP:	2020 F	Y25+		\$500	198	25 202	20CIP				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
		0 0	0	0	0	0	723	723			
		PI	hase Total Ex	cpenses By	FY (All figure	es are in \$1,00	00's)				
Proj	ect Tota	I Expenses	By FY Co	mpared t	o Prior CI	Ps (All figu	res are ir	\$1,000's			

	Troject foldi Expenses by 11 Compared to Filor Cir's (Air lightes die in \$1,000 s)													
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total			
2018								2,940	0	0	2,940			
2019	0								148,286	0	148,286			
2020	0	0		0	0	0	0	0	0	148,286	148,286			

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP $\ \square$

Access manhole



Project Engineer/Manager Shakil Ahmed

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class LvI 2 Treatment Plants and Facilities

Class LvI 3 Southwest

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

, ,	Existing raw water sampling location include recycled decant flows from residual handling facilities and do not represent a true raw water sample. A new sample pump system located upstream of the recycled decant flows is needed to obtain a true raw water
•	This project will design the modifications necessary to eliminate the decant and recycle of solid handling flows from the raw water sample location serving the Southwest WTP. This project will provide for a representative raw water only sample that will improve process monitoring and associated chemical usage.

Challenges Improvements may require another tap to the existing raw water tunnel requiring a plant shutdown (low lift pumping as a minimum). Coordination with operations required.

Project History n/a

Related Project Contract No. CS-1730 with FTC&H, is the design and construction administration services contract.

Contract No. CON-247 with Z-Contractors, is the construction contract.

Lookup Driver 3 - Regulatory

Other Important Info
The construction contract, CON-247, was awarded and the notice to proceed issued to the contractor on May 1, 2018. The project is scheduled for completion in January 2019.

Explanation Raw water samples must represent true source water conditions. Raw water samples collected with the existing system are comingled with residuals dewatering recycle flows, which are not representative of source water

composition.



Southwest Water Treatment Plant, Raw Water Sampling Modifications

GLWA FY 2020-2024 CIP

PM Weighted Score

53.2

Criteria	Score	Comment		
Condition	2			
Efficiency and Innovation	0			
Financial	0			
O&M	3			
Performance (Service Level/Reliability)	4			
Public Benefit	1			
Public Health & Safety	3			
Regulatory (Environmental/Legal)	5			

RC Weighted Score

44.8

Score	Comment
1	
0	
0	
2	
5	
1	
1	
5	
	Score 1 0 0 2 5 1 1 5

Southwest Water Treatment Plant, Raw Water Sampling Modifications

hase GLWA Emplo	rojec	t manager	ment		C	Contract N	A	Stat	Status Active					
itle GLWA Salaries	5													
Phase Budget Wa	ter				Cost Allocation CTA									
Phase Status Act	ive					Funding Source Bond Proceeds								
Start Date									Fund Cons	truction Bor	nd Fund			
End Date							U	seful Life >2	20Yrs? No					
Cost Estimation Information							Tot. Fede	eral Loan Ar	nount			\$0		
	5		Cost Est. C	Class		Program/Allowance Task Information								
1/1,	/2016		Cost Est. D	ate	Р	Project Manager								
GLWA			Cost Est. S	ource	C	CIP Number								
GLWA			Cost Est. P	repared By	D	Description								
Cost Type		Fis	scal Year	Expens	e	Fring	e BenefitNo	nPersonne	C	Comment				
GLWA Salaries CIP20	020	FY19	9		\$4		2	0						
GLWA Salaries CIP20	020	FY20)		\$7		3	0						
GLWA Salaries CIP2020 FY21					\$1		0	0						
Prior Yr Actuals	FY1	9	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total				
		6	10	1		0	0	0	0	17				

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Contract NA **Status** Future Planned Start **Phase** Construction SW WTP Residual Handling Facility's Decant Flow Modifications near procurement **Phase Budget** Water Cost Allocation CTA **Phase Status** Future Planned Start Funding Source Bond Proceeds **Fund** Construction Bond Fund Start Date **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2017 Cost Est. Date **CIP Number** Cost Est. Source FTC&H Description Cost Est. Prepared By FTC&H Cost Type Fiscal Year Fringe BenefitNonPersonne Expense Comment Construction FY19 \$293 Construction \$340 FY20 FY21 \$0 Construction

Task	Start Date	End Date	Duration	
Scope Development	1/2/2018	4/2/2018	90	
Procurement	4/3/2018	10/8/2018	188	
Project Execution	10/9/2018	9/21/2020	713	
Project Closeout	9/22/2020	12/21/2020	90	

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	293	340	0	0	0	0	0	633

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Phase Study and Design and Construction Assistance

Contract CS-1730

Status Active

Title CS-1730, FTC&H, SW WTP Residual Handling Facility's Decant Flow Modifications

FTC&H is the consu	ultant								
Phase Budget Wo	ater		Cost Allocation	on CTA					
Phase Status Ac	ctive		Funding Source	e Bond Proceeds					
Start Date			Fun	d Construction Bond Fund					
End Date			Useful Life >20Yrs	Yes					
Cost	Estimation I	nformation	Tot. Federal Loan Amount						
	5	Cost Est. Class	Program/Allowand	e Task Information					
1/1	1/2016	Cost Est. Date	Project Manager						
GLWA		Cost Est. Source	CIP Number						
GLWA		Cost Est. Prepared By	Description						

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$20			
Engineering Services	FY20	\$30			
Engineering Services	FY21	\$0			

Task	Start Date	End Date	Duration
Scope Development	6/26/2016	9/24/2016	90
Procurement	9/25/2016	9/25/2017	365
Project Execution	9/26/2017	9/21/2020	1091
Project Closeout	9/22/2020	12/21/2020	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	20	30	0	0	0	0	0	50

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Phase not applicab	le				Contrac	:t N/	4	Stat	tus Closed	Out		
Title Prior Year Actu	Jal Expe	enses										
Phase Budget Wa	ter											
Phase Status Clo	sed Out	<u> </u>										
Start Date				Fund								
End Date				Useful Life >20Yrs?								
Cost E	stimatio	n Information			Tot.	Fede	ral Loan Ar	nount				
	5	Cost Est. C	lass			Prog	gram/Allow	ance Task	Information			
1/1/	1/1/2016 Cost Est. Date					ger						
GLWA		Cost Est. S	ource	CIP Number								
GLWA		Cost Est. P	repared By	Description								
Cost Type		Fiscal Year	Expens	se Fringe BenefitNonPersonne				C	Comment			
Engineering Service	S	FY18-		\$37			F	Y18				
Unknown		FY18-		\$135			F	:Y17				
Unknown		FY18-		\$7			F	:Y16				
GLWA Salaries CIP20	GLWA Salaries CIP2020 FY18-					5	F	Y18				
Prior Yr Actuals	Prior Yr Actuals FY19 FY20 FY21		FY21	FY2	22 FY2	3	FY24	FY25+	Total			
198	198						198					
		P	hase Total Ex	(pense	es By FY (All	figure	es are in \$1,	000's)				

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		100	3,100	2,309					0	0	5,509
2019	0	142	165	1,054	1,785	206				0	3,352
2020	0	0	198	319	380	1	0	0	0	0	898

Southwest Water Treatment Plant Residuals Management

	GLWA Great Lakes Water Authority
□ Ir	nnovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

NEWTP Repurposing

Project Status Reclassified

CIP Type Project

Project New To CIP \Box

Southwest Water Treatment Plant



Project Engineer/Manager Shakil Ahmed

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/27/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Southwest

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance The current system is too limited with regard to the plant's ability to quickly discharge and otherwise dispose of water plant residuals from the sedimentation basins, flocculator chambers, associated channels, and the residuals handling facility raw solids storage tanks, thickeners, and associated channels to the local sewer system in instances where the plant needs to free the water treatment process from excess solids that inhibit effective water treatment.

Scope of Work Study the existing design and construction of the plant facilities, determine hydraulic and treatment bottlenecks, develop alternative solutions, and identify the best alternative to quickly discharge water plant residuals from plant processes, tanks, channels, etc. to the local sewer system so that water treatment and quality problems are avoided.

Lookup Driver 2 - Performance



Southwest Water Treatment Plant Residuals Management

PM Weighted Score

59.4

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	1	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

58

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	1	
Financial	4	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	2	



Southwest Water Treatment Plant Residuals Management

Phase GLWA Em	. ,	roject	managem	ent		Co	ontract N	A		Statu	s Future	Planned	Start
itle GLWA Salc									[
Phase Budget	Water							Cost Allo	cation (СТА			
Phase Status	Future Pla	nned	Start		Funding Source						Proceeds		
Start Date	Start Date								Fund (Constr	uction Bo	nd Fund	
End Date							U	seful Life >2	20Yrs?	10			
Co	ost Estimati	on Inf	ormation		Tot. Federal Loan Amount						\$0		
	5		Cost Est. Cl	ass	Program/Allowance Task Information								
	1/1/2016		Cost Est. Do	ıte	Proj	ect	Manager						
GLWA			Cost Est. So	urce	CIP Number								
GLWA			Cost Est. Pre	epared By	Des	crip	lion						
Cost Typ	Expense	pense Fringe BenefitNonPersonne						Comment					
GLWA Salaries C	CIP2020	FY24			\$0		0	0					
Prior Yr Actua	ls FY1	9	FY20	FY21	FY22		FY23	FY24	FY25	+	Total		
		0	0	0		0	0	0		0	0		



Southwest Water Treatment Plant Residuals Management

Phase Study						Co	ontract N	A		Statu	s Future	Planned	Start	
Title SW WTP Re	esidual	s Manc	gement											
Phase Budget	Water	-			Cost Allocation CTA									
Phase Status	Phase Status Future Planned Start						Funding Source Revenue Finance							
Start Date	Start Date						Fund Improvement & Extension Fund							
End Date							L	seful Life >2	20Yrs?	No				
Co	ost Esti	mation	Information				Tot. Fede	eral Loan Ar	mount					
		5	Cost Est. C	Class			Pro	gram/Allow	vance	Task In	formation			
	1/1/2016 Cost Est. Date					Project Manager								
GLWA			Cost Est. S	ource	CIP Number									
GLWA			Cost Est. P	repared By	d By Description									
Cost Typ	ре		Fiscal Year	Expense	ense Fringe BenefitNonPersonne					Сс	mment			
Engineering Serv	/ices	FY	′24		\$0									
Task			Start Date	End Date	Dui	ration								
Scope Developr	ment		12/4/2017	2/1/2018		59								
Procurement			2/2/2018	8/31/2018		210)							
roject Execution 8/31/2018 6/27/20				6/27/2019	19 300									
Project Closeout	oject Closeout 6/27/2019 9/25/2					90)							
Prior Yr Actual	ls	FY19	FY20	FY21	FY	22	FY23	FY24	FY2	5+	Total			
	0 0						0	0		0	0			

113005 CIP#

Southwest Water Treatment Plant Residuals Management

Phase Budget	Water		Cost Alloco	ation CTA			
Phase Status	Future Planr	ned Start	Funding So	urce Bond Proceeds			
Start Date			1	Fund Construction Bond Fund			
End Date			Useful Life >20	Yrs? Yes			
Cost Estimation Information			Tot. Federal Loan Am	ount			
	5 Cost Est. Class		Program/Allowance Task Information				
	1/1/2016	Cost Est. Date	Project Manager				
GLWA		Cost Est. Source	CIP Number				
GLWA		Cost Est. Prepared By	Description				

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

		<u> </u>		, , , , , , , , , , , , , , , , , , , 		<u></u>	311 3 (7 11		<u> </u>	, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0								1,145	0	1,145
2020	0	0		0	0	0	0	0	0	0	0



Lookup Driver 5 - Public Health & Safety

GLWA FY 2020-2024 CIP

113006 CIP#

Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	Southwest Water Treatment Plant					
Project Engineer/Ma	nager Shakil Ahmed	Budget Water					
Ma	nager Grant Gartrell	Class Lvl 1 Water					
Managing	Dept Water Eng	Class Lvl 2 Treatment Plants and Facilities					
Date Original Busines	ss Case Prepared 9/27/2017	Class Lvl 3 Southwest					
Year Proj	ect Added to CIP 2017	Location Wayne County - Outside Detroit					
		Fund and Cost Center Water - 5519-882111					
Project Significance	Existing chlorine gas scrubber needs to be replaced for reliability and safety reasons. Related improvements include ventilation, alarms, instruments, and controls. The existing raw water screens are original to the plant, do not operate and are needed to protect the low lift pumps.						
Scope of Work	Replace the existing gas chlorine scrubber wit as well as replacement of the existing raw wat	h new unit plus related ventilation, alarms, instruments, and controls er screens.					

Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related

PM	Weighted
	Score

46.6

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

RC Weighted Score

46.6

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

113006 CIP#

Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related

Phase Design and B	Build			C	Contract N	IA	Stat	tus Future	Planned Start
Title SW WTP Chlori	ine Scrub	ber, Raw Wa	ter Screens &	Related Im	provemen	ts			
Phase Budget Wa	iter					cation CTA			
Phase Status Fut	ure Plann	ned Start			l Proceeds				
Start Date							Fund Cons	struction Bo	nd Fund
End Date					ı	Useful Life >2	20Yrs? Yes		
Cost E	stimation	n Information		Tot. Federal Loan Amount					
	5	Cost Est. (Class		Pro	gram/Allow	ance Task	Information	
1/1,	/2016	Cost Est. [ate	Project Manager					
GLWA		Cost Est. S	ource	CIP Number					
GLWA		Cost Est. F	repared By	Descrip	otion				
Cost Type	Cost Type Fiscal Year Exp		Expense	pense Fringe BenefilNonPersonne			C	Comment	
Design-Build	F	Y25+	\$7	7,000		2	2020CIP		
Task		Start Date	End Date	Duration					
Scope Developmer	nt .	5/11/2027	8/9/2027	9	0				
Procurement		8/10/2027	8/9/2028	28 365					
Project Execution		8/10/2028	12/26/2029	50	03				
Project Closeout		12/27/2029	3/27/2030	9	O				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 (0	0	0	0	7.000	7.000	

113006 CIP#

Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related

Phase GLWA Employ Title GLWA Salaries	ees Pr	oject manager	ment		C	Contract N	A	Stat	us Future	Planned Start
Phase Budget Water							Cost Alloc	ation CTA		
Phase Status Futur	re Plar	nned Start					Funding So	ource Bond	Proceeds	
Start Date								Fund Cons	truction Bo	nd Fund
End Date						U	seful Life >2	OYrs? No		
Cost Estimation Information						Tot. Fede	eral Loan Ar	nount		\$0
	5 Cost Est. Class				Program/Allowance Task Information					
1/1/2	2016	Cost Est. Date		Project Manager						
GLWA		Cost Est. Source		CIP Number						
GLWA	VA Cost Est. Prepared By			escrip	otion					
Cost Type	t Type Fiscal Year Expens		e	Fringe	e BenefitNoi	nPersonne	C	omment		
GLWA Salaries CIP202	20	FY24				0	0			
GLWA Salaries CIP2020 FY25+		\$22		9	1 2	020CIP				
Prior Yr Actuals	FY1	9 FY20	FY21	FY:	22	FY23	FY24	FY25+	Total	
		0 0	0		0	0	0	32	32	
		P	hase Total Ex	kpens	es By F	FY (All figure	es are in \$1,	000's)		
Project	ct Tot	al Evpenses	By EV Co	mna	rod t	o Prior CI	De (All fig	uros aro	n \$1 000	'c)

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

								3	γ	, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0								7,032	0	7,032
2020	0	0		0	0	0	0	0	0	7,032	7,032

113007 CIP#

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP \Box

Southwest Water Treatment Plant



Project Engineer/Manager Shakil Ahmed

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/27/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Southwest

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance | The existing building mechanical equipment (HVAC, dehumidification, plumbing) and architectural features (doors, windows, flooring, furnishings, etc.) throughout the facility are over 50 years old. They are beyond their useful service life and need to be replaced with more reliable, energy efficient systems. The architectural improvements will be limited to the administration and high/low lift buildings on this project. Existing filter media, auxiliary scour, backwash, and related appurtenances are all original to the plant construction (circa 1962) and need to be replaced for reliability and efficiency improvements. Flocculator equipment upgrades were identified in the 2015 WMPU project.

Scope of Work Replace the dehumidification, HVAC and selected plumbing system equipment with new as well as replacing exterior and interior doors and windows with new. Renovate the existing laboratory. FROM FORMER 113008: Replace and improve filtration system equipment and components as well as flocculator equipment upgrades.

Other Important Info CS-1528 water master plan update included these improvements.



Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

PM	Weighted
	Score

46.6

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

RC Weighted Score

36

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

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase Design & Construction Assistance Title SW WTP Architectural and Building Mechanica						ontract N.	us Future I	Planned Start		
Phase Budget Wo		aria bollaling	viceriarilearii	Cost Allocation CTA						
Phase Status Fu	ture Plan	ned Start					Funding S	Source Bond	Proceeds	
Start Date								Fund Const	truction Bor	nd Fund
End Date						U	seful Life >	20Yrs? Yes		
Cost	Estimatio	n Information				Tot. Fede	eral Loan A	mount		
	5	Cost Est.	Class			Pro	gram/Allov	wance Task I	nformation	
1/1	/2016	Cost Est.	Date	Project Manager						
GLWA		Cost Est.	Source	CIP Number						
GLWA		Cost Est.	Prepared By	D	escrip ¹	ion				
Cost Type		Fiscal Year	Expense		Fringe	BenefitNo	nPersonne	С	omment	
Engineering Service	es	FY24		\$0						
Engineering Service	∋s	FY25+	\$6	5,100				2020CIP		
Task		Start Date	End Date	Dur	ation					
Scope Developme	nt	5/11/2027	8/9/2027	,	90					
Procurement		8/10/2027	8/9/2028	3	365					
Project Execution		8/10/2028	8/2/2033	3	1818					
Project Closeout		8/3/2033	11/1/2033	8	90					
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total	
		0	0 0		0	0	0	6,100	6,100	

113007 CIP#

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Contract NA **Status** Future Planned Start **Phase** Construction SW WTP Architectural and Building Mechanical Improvements 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? Yes Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By **GLWA** Cost Type Fiscal Year Fringe Benefit NonPersonne Expense Comment \$31,000 2020CIP Construction FY25+ End Date Task Start Date Duration Scope Development 11/12/2029 2/10/2030 90 2/11/2030 8/18/2030 188 Procurement Project Execution 8/19/2030 8/2/2033 1079 Project Closeout 8/3/2033 11/1/2033 90 Prior Yr Actuals FY20 FY21 FY22 FY23 FY24 FY25+ Total FY19 0 0 0 0 0 0 31,000 31,000

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase GLWA Emplo	oyees Pro	oject manager	ment		Со	ntract NA	4	Stat	us Future I	Planned Start
itle GLWA Salaries	S									
Phase Budget Wo	ater			Cost Allocation CTA						
Phase Status Fut	ure Plan	ned Start					Funding Sc	Durce Bond	Proceeds	
Start Date								Fund Cons	truction Bor	nd Fund
End Date						U	seful Life >2	OYrs? No		
Cost Estimation Information						Tot. Fede	ral Loan An	nount		\$0
	5	Cost Est. C	lass			Prog	gram/Allow	ance Task I	nformation	
1/1	/2016	Cost Est. D	ate	Project Manager						
GLWA		Cost Est. So	ource	CIP Number						
GLWA		Cost Est. P	repared By	Des	scripti	ion				
Cost Type		Fiscal Year	Expens	e Fr	ringe	BenefitNor	nPersonne	С	omment	
GLWA Salaries CIP2	2020	FY24		\$0		0	0			
GLWA Salaries CIP2	2020	FY25+		\$163		65	8 2	020CIP		
Prior Yr Actuals	FY19	P FY20	FY21	FY22)	FY23	FY24	FY25+	Total	
		0 0	0		0	0	0	236	236	
		P	hase Total Ex	cpenses	By FY	' (All figure	s are in \$1,	000's)		
Proje	act Tot	al Expenses	By FY Co	mnare	od to	Prior CI	Ps (All fin	ures are i	n \$1 000'	<u>'c)</u>

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

		.								, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0								37,336	0	37,336
2020	0	0		0	0	0	0	0	0	37,336	37,336

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy ☐ NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP \Box

Springwells filter building



Project Engineer/Manager Khader Hamad

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/29/2004

Year Project Added to CIP 2002

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Reconstruction of the 40 filters and 19 filters at the Springwells 1958 and 1930 filter plants, respectively has provided 295 MGD of reliable filtration capacity at the Springwells Water Treatment Plant. The existing mechanical HVAC, dehumidification, electrical, instrumentation, and controls systems serving the 1958 filters have also been upgraded to make them more reliable and efficient. Likewise, the existing mechanical HVAC and dehumidification system serving the 1930 filter building was replaced with new again to provide reliability and efficiency. The existing elevators at the facility have been replaced with new and upgraded to bring them into compliance with current building codes and safety standards. The administration building offices and laboratory have been improved architecturally, including new HVAC and lighting systems.

Scope of Work This project includes the study, design (CS-1425) and construction assistance (CS-1425 and CS-200) of improvements to the Springwells WTP that includes the replacement of Phosphoric Acid Feed System, rehabilitation of the 1958 Filters, rehabilitation of failed 1930s Filters, Update of Operation and Maintenance Manuals, and addition of polymer systems and controls. Provide construction services to furnish and install new filter media, underdrains, filter valves, and rate controllers; replace the existing filter control consoles, hydraulic control valves with electric control valves, enclosures; add appurtenances to enable automatic backwashing of the filters; provide a Filter Aid Polymer System to the 1930 and 1958 filter complexes; Programmable Logic Controller-based controls for automatic control of the polymer system; install a local instrumentation and controls system.

Challenges Completion of the

Related Project Contract Nos. CS-1425 and CS-200 with CDM Smith for the Design and Construction Administration Services Contract No. SP-563 with Walsh for construction.



114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Lookup Driver	1 - Condition
-	t

Other Important Info There are a total of 108 filters at the Springwells Water Treatment Plant. This project has reconstructed 59 of these filters, including all 40 filters at the 1958 filter building and 19 filters at the 1930 filter building. The 19 filters at the 1930 filter building were previously equipped with plastic-block underdrains with porous plates. These underdrains failed and were replaced with low-profile type 316 stainless steel, slotted direct-media retaining underdrains.

Explanation The existing 1958 filtration system equipment, including filter media, surface wash sweeps, filter piping, filter control valves, valve operators, electrical, lighting, and controls were original 1958 construction all well beyond their useful service life

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

PM	Weighted
	Score

62.2

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

RC Weighted Score

62.2

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	3	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	3	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	3	
		I .

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase GLWA Emplo Fitle GLWA Salaries	,	ct manager	ment		C	Contract N.	A	Stat	tus Active		
Phase Budget Wo	iter						Cost Alloc	cation CTA			
Phase Status Ac	tive						Funding S	ource Bono	l Proceeds		
Start Date								Fund Cons	truction Bor	nd Fund	
End Date						U	seful Life >2	20Yrs? Yes			
Cost E			Tot. Fede	eral Loan Ar	nount	\$0					
	1	Cost Est. C	Class	Program/Allowance					Information		
1/1,	/2013	Cost Est. D	ate	Project Manager							
CDM Smith		Cost Est. S	ource	C	CIP Nu	mber					
CDM Smith		Cost Est. P	repared By	Description							
Cost Type		iscal Year	Expens	se Fringe BenefitNonPersonne			C	Comment			
GLWA Salaries CIP2	020 FY	19		\$74 29							
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23	FY24	FY25+	Total		
	10	7 0	0		0	0	0	0	107		

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase Design and Build Contract SP-563 Status Active

Title SP-563, Walsh, SPW WTP 1958 Filter Rehabilitation and Auxiliary Facilities ©

31 338, 118	5 31-300, Walsh, 31 W WHI 1730 File Rehabilitation and Abaliary Facilities								
Walsh Construc	tion Group	- per Scott Sch	ultz: Serial Cap	italiz	zation of 30s filt	er beds, 58 se	erv bld	g items	
Phase Budget	Water					Cost Alloc	cation	СТА	
Phase Status	Js Active			Funding Source			Bond Proceeds		
Start Date	7/8/2013			Fund				Construction Bond Fund	
End Date	12/14/2018			Useful Life >20Yrs? Yes			Yes		
Cost Estimation Information				Tot. Federal Loan Amount					
	1	1 Cost Est. Class		Program/Allowance Task Information					
	1/1/2013	Cost Est. D	ate	Pr	Project Manager Todd King				
CDM Smith		Cost Est. S	ource	CIP Number					
CDM Smith	Cost Est. Prepared By		repared By	Description					
Cost Typ	ре	Fiscal Year	Expense		Fringe Benefit	Non Personne		Comment	
Design-Build		FY19	\$7,00	OC		(constru	uction	

Cost Type		Fiscal Year	Expense	Frir	Fringe BenefitNonPersonne		ersonne	С	omment	
Design-Build	F`	Y19	\$7,	000			C	construction		
Task		Start Date	End Date	Duratio	on					
Scope Developmen	t	10/9/2012	1/7/2013		90					
Procurement		1/8/2013	7/7/2013		180					
Project Execution		7/8/2013	4/1/2019	2	2093					
Project Closeout		4/2/2019	7/2/2019		91					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23		FY24	FY25+	Total	
	7,00	0 0	0		0	0	0	0	7,000	

0

GLWA FY 2020-2024 CIP

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Contract CS-1425 Status Closed Out **Phase** Study and Design and Construction Assistance CS-1425, CDM, SPW WTP 1958 Filter Rehabilitation and Auxiliary Facilities (E1 & E2) CDM - per Scott Schultz: Serial Capitalization of 30s filter beds, 58 serv bldg items **Phase Budget** Water Cost Allocation CTA Phase Status Closed Out Funding Source Bond Proceeds Start Date 1/18/2008 **Fund** Construction Bond Fund 12/14/2018 Useful Life >20Yrs? Yes **End Date** Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2013 Cost Est. Date **CIP Number** CDM Smith Cost Est. Source Description Cost Est. Prepared By CDM Smith Cost Type Fiscal Year Fringe BenefitNonPersonne Expense Comment **Engineering Services** FY19 \$0 Task Start Date **End Date** Duration Scope Development 10/8/2010 1/6/2011 90 1/7/2011 1/7/2012 365 Procurement 11/12/2018 2500 **Project Execution** 1/8/2012 90 Project Closeout 11/13/2018 2/11/2019 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total

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

0

0

0

0

0

0

0

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

nase Construction		Contract CS	-073	Statu	s Active					
tle CS-073, Lake E	rie Electric	Inspection S	ervices (2nd	d C)						
Phase Budget Wa	ter					Cost Alloc	ation CTA	СТА		
Phase Status Act	ive					Funding So	ource Bond F	Proceeds		
Start Date							Fund Constr	ruction Boi	nd Fund	
End Date					U	OYrs? Yes				
Cost E	Tot. Federal Loan Amount									
	1	Cost Est. Cl	ass	Program/Allowance Task Information						
1/1/	2013	Cost Est. Do	ıte	Projec	l Manager					
CDM Smith		Cost Est. So	urce	CIP Nu	mber					
CDM Smith	CDM Smith Cost Est. Prepared		epared By	Descri	otion					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Contract CS-200 Status Active Phase Construction Assistance CS-200, CDM, SPW WTP 1958 Filter Rehabilitation and Auxiliary Facilities (E3) Add CS-200 CDM **Phase Budget** Water Cost Allocation CTA Funding Source Bond Proceeds **Phase Status** Active Start Date **Fund** Construction Bond Fund **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2013 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description CDM Smith Cost Est. Prepared By Cost Type Fiscal Year Fringe Benefit NonPersonne Expense Comment **Engineering Services** FY19 \$871 Task Start Date **End Date** Duration Project Execution 6/5/2017 12/18/2018 561 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total

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

0

0

0

871

0

0

871

0

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase not applicable						NA	Sta	tus Closed	Out	
itle Prior Year Actu		enses								
Phase Budget Wat	er				Cost Allocation CTA					
Phase Status Closed Out						Funding	Source			
Start Date							Fund			
End Date						Useful Life	>20Yrs?			
Cost Estimation Information					Tot. Fe	ederal Loan A	Amount			
	1 Cost Est. Class				Program/Allowance Task Information					
1/1/2	2013	Cost Est. Date			Project Manager					
CDM Smith		Cost Est. S	Source	CIP Number						
CDM Smith		Cost Est. I	Prepared By	Description						
Cost Type		Fiscal Year	Expens	se Fringe Benefit		NonPersonne Comment				
Construction		FY18-	\$3	5,333			FY18			
Engineering Services	;	FY18-		\$868			FY18			
Unknown		FY18-	\$82	2,885			FY16-17			
GLWA Salaries CIP20	20	FY18-		\$89	35	100	FY18			
Prior Yr Actuals	FY1	9 FY20	FY21	FY:	22 FY23	FY24	FY25+	Total		
89,310								89,310		
			Phase Total Ex	(pense	es By FY (All fig	ures are in \$	1,000's)			
									_	

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	56759	20,353	310						0	0	77,422
2019	0	82,682	7,281	3,501						0	93,464
2020	0	0	89,310	7,978	0	0	0	0	0	0	97,288

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

☐ Innovation	- Troject statos /\cityo		High Lift Station viewe				
✓ Water MP Right Si.	izing	CIP Type Project	operating floor showir				
☐ Reliability/Redund	dancy	- · · · · · - · · · ·	high lift pump pits ar				
□ NEWTP Repurposi	ng	Project New To CIP $\;\Box$	windows to b replace				
Project Engineer/Ma	nager E	rich Klun	Budget	Water			
Ma	nager G	Grant Gartrell	Class Lvl 1	Water			
Managing	g Dept ∨	Vater Eng	Class Lvl 2	Treatment Plants and Facilities			
Date Original Busines	ss Case	Prepared 3/29/2004	Class LvI 3	Springwells			
Year Proj	ect Add	ed to CIP 2004	Location	Wayne County - Outside Detroit			
			Fund and Cost Center	Water - 5519-882111			
Project Significance	service the exis case of in poor	life. This switchgear is unsafe, not relia ting pumping units are a mix of 1930s the pumps rehabilitation. The exterior	able and is oversized for curre and 1950s units and are also r windows on the pumping p As a result, all of the exterior	(1930s) and are well beyond their useful ent and projected demands. In addition, in need of either replacement or in the lant building are also original (1930s), are windows on the pumping plant building			
Scope of Work	outdate	ctrical gear at the Springwells WTP hig ed equipment also poses safety issues t pumping systems.		and parts are no longer available. The ay be right-sized to provide more			
Challenges	Complicated sequence of construction required to replace electrical gear while maintaining system demands throughout construction. During construction, new costly equipment will be operating next to existing equipment/facilities to be demolished						
Related Project	Contra	ct No. CS-103 with CDM Smith Design	and Construction Administra	tion Services			
Lookup Driver	1 - Con	dition					
Explanation	Not pro	vided.					



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

PM	Weighted
	Score

78.6

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

69.2

Score	Comment
5	
3	
1	
5	
5	
2	
5	
1	
	5 3 1 5 5 2 5 1 1

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

Phase not applied	ase not applicable					ct N	A	Sta	tus Closed	l Out		
Title Prior Year Ad	ctual Expe	enses										
Phase Budget W	Vater			Cost Allocation CTA								
Phase Status C	Phase Status Closed Out						Funding S	ource				
Start Date	Start Date							Fund				
End Date	End Date					U	seful Life >2	20Yrs?				
Cost Estimation Information					Tot.	Fede	eral Loan Aı	mount				
	5 Cost Est. Class				Program/Allowance Task Information							
1/	/1/2016	Cost Est. D	ate	Project Manager								
GLWA		Cost Est. So	ource	CIP Number								
GLWA		Cost Est. Pi	epared By	Description								
Cost Type	9	Fiscal Year	Expense		Fringe Bene	efitNo	nPersonne	(Comment			
Engineering Servic	ces	FY18-		\$468			F	Y18				
Unknown		FY18-		\$22			F	-Y17				
GLWA Salaries CIP2020 FY18-			\$7		1	0	-Y18					
Prior Yr Actuals	FY1	9 FY20	FY21	FY2	22 FY2	23	FY24	FY25+	Total			
49	98								498			

114002 CIP#

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

Phase Construction Contract NA Status Future Planned Start

Title SPW WTP - Low Lift and High Lift Pump Station

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

Cost Estimation Information								
5	Cost Est. Class							
1/1/2016	Cost Est. Date							
GLWA	Cost Est. Source							
GLWA	Cost Est. Prepared By							

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	
Program/Allowance	Task Information
Project Manager	
CIP Number	
Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne		Comment
Construction	FY20	\$3,590			2020CIP	
Construction	FY21	\$8,157			2020CIP	
Construction	FY22	\$13,079				
Construction	FY23	\$13,079				
Construction	FY24	\$25,000				
Construction	FY25+	\$40,000			2020CIP	

Task	Start Date	End Date	Duration
Scope Development	9/29/2020	12/28/2020	90
Procurement	12/29/2020	7/2/2021	185
Project Execution	7/6/2021	6/1/2026	1791
Project Closeout	6/2/2026	8/31/2026	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	3,590	8,157	13,079	13,079	25,000	40,000	102,905



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

Phase	Study and Des	ian and Construction Assistance	Contract CS-103	Status Under Procurement	

Title CS-103, SPW WTP - Low Lift and High Lift Pump Station

Phase Budget	Water
Phase Status	Under Procurement
Start Date	
End Date	

Cost Estimation	Information
5	Cost Est. Class
1/1/2016	Cost Est. Date
GLWA	Cost Est. Source
GLWA	Cost Est. Prepared By

	Cost Allocation	CTA
	Funding Source	Bond Proceeds
	Fund	Construction Bond Fund
Us	seful Life >20Yrs?	Yes
Tot. Feder		
Prog	ram/Allowance	Task Information
Project Manager		
CIP Number		
Description		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$2,462			
Engineering Services	FY20	\$2,250			
Engineering Services	FY21	\$1,000			
Engineering Services	FY22	\$500			
Engineering Services	FY23	\$500			
Engineering Services	FY24	\$1,000			
Engineering Services	FY25+	\$2,686			2020CIP

Task	Start Date	End Date	Duration
Scope Development	11/2/2016	1/31/2017	90
Procurement	2/1/2017	2/1/2018	365
Project Execution	2/2/2018	6/1/2026	3041
Project Closeout	6/2/2026	8/31/2026	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	2,462	2,250	1,000	500	500	1,000	2,686	10,398



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

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

Phase GLWA Em itle GLWA Salo	. ,	rojec	t managen	nent		Contract	NA	St	atus Active)
Phase Budget Water					Cost Allocation CTA					
Phase Status	Active					Funding	Source Bor	nd Proceeds		
Start Date								Fund Co	nstruction Bc	and Fund
End Date							Useful Life >	20Yrs? No		
Cost Estimation Information						Tot. Fe	deral Loan A	mount		\$0
	5		Cost Est. C	ass		P	rogram/Allo	wance Tasl	k Informatior	า
	1/1/2016		Cost Est. Do	ate	P	roject Manage	er			
GLWA			Cost Est. Sc	ource	CIP Number					
GLWA			Cost Est. Pr	epared By	Description					
Cost Typ	pe	Fis	scal Year	Expens	e	Fringe Benefil	NonPersonne		Comment	
GLWA Salaries C	CIP2020	FY19	9		\$100	40	5			
GLWA Salaries C		FY20	0		\$100	40	5			
GLWA Salaries C		FY2			\$100	40	5			
GLWA Salaries C		FY2			\$100	40	5			
GLWA Salaries C		FY2	3		\$100	40	5			
GLWA Salaries C		FY2	4		\$100	40	5			
GLWA Salaries CIP2020 FY25+					\$100	40	5	2020CIP		
Prior Yr Actua	ls FY	19	FY20	FY21	FY2	22 FY23	FY24	FY25+	Total	
		145	145	145		145 14	5 145	5 14	5 1,015	
			Pł	nase Total Ex	kpense	es By FY (All fig	ures are in \$1	l,000's)		1

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,500	2,000	12,500	22,000	21,500	26,500	0	0	86,000



114002 CIP#

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0	22	463	1,433	2,481	1,453	11,228	8,675	59,748	0	85,503
2020	0	C	498	2,607	5,985	9,302	13,724	13,724	26,145	42,831	114,816

plants.

GLWA FY 2020-2024 CIP

114003 CIP#

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

☐ Innovation☐ Water MP Right Size☐ Reliability/Redund☐ NEWTP Repurposit	dancy Project New To CIP	Water production flow metering devic	
Project Engineer/Mar	nager Jorge Nicolas	Budget	Water
Mai	nager Grant Gartrell	Class LvI 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 6/26/2014	Class LvI 3	Springwells
Year Proje	ect Added to CIP 2014	Location	Multiple Counties
		Fund and Cost Center	Water - 5519-882111
Project Significance	Existing water production flow meters need Once completed, accurate flow measurer		
Scope of Work	Water production metering is needed at the estimates of usage for non-wholesale custo		anage non-revenue and provide
Challenges	Removing and replacing existing meters in Condition of existing pipe and valves need coordinated with operations.		
Project History	n/a		
Related Project	Contract No. CS-1656 with Applied Science	e, Inc. for Design and Constructi	on Administration
Lookup Driver	7 - Financial		
Other Important Info	n/a		

Explanation New water production flow metering will provide better accuracy no measuring finished water flows from these



Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

PM	Weighted
	Score

59.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	3	
Financial	3	
O&M	2	
Performance (Service Level/Reliability)	5	
Public Benefit	4	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	2	

RC Weighted Score

50.6

Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	4	
Financial	2	
O&M	1	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

thase GLWA Emploitible GLWA Salaries	Employees Project management Salaries					C	Contract N	A	Stat	tus Active		
Phase Budget Wa	Water				Cost Allocation CTA							
Phase Status Act	ive							Funding So	ource Bono	l Proceeds		
Start Date									Fund Cons	truction Bor	nd Fund	
End Date							U	seful Life >2	OYrs? No			
Cost E	Cost Estimation Information					Tot. Fede	eral Loan An	nount			\$0	
	5 Cost Est. Class			Program/Allowance Task Information								
1/1/	′2016		Cost Est. Do	ate	P	rojec	Manager					
GLWA			Cost Est. So	ource	CIP Number							
GLWA			Cost Est. Pr	epared By	0)escri _l	otion					
Cost Type		Fis	cal Year	Expens	e	Fring	e BenefitNo	nPersonne	C	Comment		
GLWA Salaries CIP20	020	FY19)		\$21		8	1				
GLWA Salaries CIP20	020	FY20)		\$21		8	1				
GLWA Salaries CIP20	020	FY21			\$13		5	1				
Prior Yr Actuals	FY1	9	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
		30	30	19		0	0	0	0	79		

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

Contract CON-133 Status Active **Phase** Construction CON-133, Water Production Flow Metering Improvements at NE, SW, and SPW WTP LCG Global is contractor **Phase Budget** Water Cost Allocation CTA **Phase Status** Active Funding Source Bond Proceeds Start Date 7/31/2017 **Fund** Construction Bond Fund 10/29/2019 Useful Life >20Yrs? Yes **End Date** Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** Cost Est. Date **CIP Number** Cost Est. Source consultant Description Consultant Applied Science Cost Est. Prepared By Cost Type Fiscal Year Fringe BenefitNonPersonne Expense Comment Construction FY19 \$3,531 \$50 Construction FY20 \$0 Construction FY21 Task Start Date **End Date** Duration Scope Development Procurement **Project Execution** 7/31/2017 3/31/2020 974 **Project Closeout** 4/1/2020 6/30/2020 90 Prior Yr Actuals FY19 FY21 FY20 FY22 FY23 FY24 FY25+ Total 3,531 50 0 0 0 0 0 3,581

114003 CIP#

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

Phase not applicab	ole				Contract	NA	Sta	itus Closed	Out	
Title Prior Year Act	ual Exp	enses								
Phase Budget Wo	ater			Cost Allocation CTA						
Phase Status Clo	osed Ou	J†				Funding	Source			
Start Date							Fund			
End Date				Useful Life >20Yrs?						
Cost I	Estimati	on Informatic	n		Tot. Fe	ederal Loan	Amount			
5 Cost Est. Class					ı	Program/All	owance Task	Information		
1/1	1/1/2015 Cost Est. Date			P	Project Manag	er				
GLWA	Cost Est. Source		. Source	CIP Number						
GLWA	Cost Est. Prepared By				Description					
Cost Type		Fiscal Yea	- Expens	e.	Fringe Benefit	NonPersonn	e (Comment		
Construction		FY18-	· ·	3,020	rinige zerrem		FY18			
Engineering Service	es	FY18-		\$186			FY18			
Jnknown		FY18-		\$14			FY17			
Jnknown		FY18-		\$141			FY16			
Unknown		FY18-		\$30			Pre-Bifurcat	ion		
GLWA Salaries CIP2	2020	FY18-		\$40	14		FY18			
Prior Yr Actuals	FY1	9 FY20	FY21	FY	22 FY23	FY24	FY25+	Total		
3,445								3,445		
		'	Phase Total E	xpens	es By FY (All fig	jures are in S	\$1,000's)			
Proje	act Io	tal Evnens	as Ry FY Co	mna	red to Prior	CIPe (All f	igures gre	in \$1 000'	(c)	

										,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		1,000	8,800	2,100	1,000				0	0	12,900
2019	0	186	704	2,506	2,506	1,257				0	7,159
2020	0	0	3,445	3,561	80	19	0	0	0	0	7,105



Springwells Water Treatment Plant, Administration Building Improvements & Underground

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP \Box

Outdated electrical outlets



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Existing administration building is over 80 years old with many of its facilities being original. The building needs architectural, plumbing and electrical improvements. Improvements will provide reliable fire protection to all plant facilities, replace non-functioning isolation valves and hydrants, provide fire system backflow protection, and bring the fire system into conformance with the requirements of the Dearborn Fire Marshal.

Scope of Work The work includes, but not necessarily limited to, removal and replacement of the existing plumbing piping, fittings, valves, plumbing fixtures, and any other necessary accessories. The work also includes relocating the electrical gear from basement to first floor locker room.

> The existing underground fire protection line loops the Pump, Switch, Boiler and Turbine houses and is supplied water off the high lift headers in the Pump House Header Vault. The supply does not currently have backflow prevention and several branches off the loop used to feed an irrigation system serving the grassy areas covering the reservoirs, 1930 Sed. Basin and 1958 Sed. Basin. Isolation valves and fire hydrants are non-functioning and are beyond their useful life, and the old cast iron piping is susceptible to frequent breaks.

Challenges Major component of this project includes the relocation/replacement of existing electrical gear located in the basement, and switchover to the new gear and location will need to be seamless. All plumbing needs to be replaced, the majority of which is conc The underground facilities (e.g., electrical duct banks, gas service mains, fiber optic, tunnels, conduits, major pipelines, etc.) at Springwells have been modified several times since initially being commissioned around 1930. The new fire loop will cross a lot of buried utilities and structures, and identification of these facilities and showing them accurately in Contract Documents will be critical to minimizing interruptions/complications during construction. Even then, with all of the underground utilities between the Pump House and Administration Building, and between the Machine Shop/Garage and the 1930 Mixing Chamber, surprises during construction will be difficult to avoid.

114005 CIP#

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Proje	ct History
-------	------------

The fire loop and appurtenances are original to the existing plant commissioned around 1930. The loop crosses the construction staging area (blue tarps shown in the Project Map from Contract SP-563) in the northeast corner of the site and has been exposed to heavy construction traffic over the years.

Related Project Depending on when the project gets underway, this project may need to be coordinated with current on-going contracts SP-563, SCP-SP-009 and construction contracts resulting from the designs being completed under contracts CS-1671 and SCP-CS-1656. Other planned projects that may be related to this project include paving improvements, underground structure rehabilitation and 72" yard piping improvements/replacement.

Lookup Driver 1 - Condition

Other Important Info The project was first identified in the November 2002 Needs Assessment completed by Hazen & Sawyer under CS-1304. The opinion of probable construction at that time for just replacing the existing piping was \$1,076,400.00.

Explanation Not provided.



Springwells Water Treatment Plant, Administration Building Improvements & Underground

PM	Weighted
	Score

63.8

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

RC Weighted Score

67.4

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

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Phase GLWA Emplo	oyees P	rojec	t managen	nent		С	ontract NA	4	Stat	tus Active	
Title GLWA Salaries	es .										
Phase Budget Wa	ater							Cost Alloc	cation CTA		
Phase Status Act	Active							Funding S	ource Bono	l Proceeds	
Start Date									Fund Cons	truction Bor	nd Fund
End Date							U	seful Life >2	20Yrs? No		
Cost E	Cost Estimation Information						Tot. Fede	ral Loan Ar	mount		\$0
	5 Cost Est. Class					Prog	gram/Allow	ance Task	Information		
1/1,	1/1/2018 Cost Est. Date			Project Manager							
GLWA			Cost Est. So	ource	C	CIP Nui	mber				
GLWA			Cost Est. Pr	epared By)escrip	otion				
Cost Type		Fis	scal Year	Expens	e	Fringe	e BenefitNor	nPersonne	C	Comment	
GLWA Salaries CIP2	2020	FY19	9		\$7		3	0			
GLWA Salaries CIP2	2020	FY2	0		\$21		8	1			
GLWA Salaries CIP2	2020	FY2	1		\$21		8	1			
GLWA Salaries CIP2	2020	FY2	2		\$21		8	1			
GLWA Salaries CIP2	2020	FY2	3		\$17		7	1			
Prior Yr Actuals	FY	19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total	
		10	30	30		30	25	0	0	125	

GLWA Great Lakes Water Authority

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Phas	e Study and	Design	and	Construction	Assistance		Co	ntract	٧A	;	Status	Active		
Title	SPW WTP A	dministr	ation	Building Imp	rovements &	Unde	rgroun	d Fire Pro	otection Loo	p				
Ph	ase Budget	Water							Cost Allo	cation C	TA			
P	hase Status	Active							Funding S	Source Bo	ond Pro	oceeds		
	Start Date									Fund C	onstru	ction Bo	nd Fund	
	End Date								Useful Life >					
	Со	st Estimo	ation	Information				ioi. rec	leral Loan A	mount				
		5)	Cost Est. C	lass			Pr	ogram/Allov	wance Ta	sk Info	rmation	1	
		1/1/2018	3	Cost Est. D	ate	Pı	roject <i>I</i>	Manager						
G	LWA			Cost Est. So	ource	С	IP Num	nber						
G	LWA			Cost Est. Pi	repared By	D	escript	ion						
Ŀ														
	Cost Typ	е		Fiscal Year	Expense	€	Fringe	BenefitN	onPersonne		Con	ment		
	neering Serv			19		\$20								-
	neering Serv			'20		383								-
	neering Serv			′21	-	186								
Engi	neering Serv	ices	FY	′22	(\$290								
Engi	neering Serv	ices	FY	'23	(121								
	Task			Start Date	End Date	Dur	ation							
Scop	oe Developr	nent		2/24/2018	6/7/2018		103							
Proc	urement			6/8/2018	5/26/2019		352							
Proje	ect Execution	n		5/27/2019	12/23/2022		1306							
Proje	ect Closeout			12/24/2022	3/24/2023		90							

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

290

186

20

383

121

0

0

1,000



Springwells Water Treatment Plant, Administration Building Improvements & Underground

Phase Construction			(Contract N	ΙA	Statu	s Future I	Planned Start	
Title SPW WTP Administration Bu	uilding Improv	ements & l	Undergro	und Fire Pro	tection Loop				
Phase Budget Water			Cost Allocation CTA						
Phase Status Future Planned	Start				Funding S	ource Bond F	roceeds		
Start Date						Fund Constr	uction Bor	nd Fund	
End Date				ı	Useful Life >2	OYrs? Yes			
Cost Estimation Inf	ormation			Tot. Fed	eral Loan Ar	nount			
5	Cost Est. Class	s		Pro	ogram/Allow	ance Task In	formation		
1/1/818				t Manager					
	Cost Est. Source			umber					
GLWA	Cost Est. Prep	ared By	d By Description						
	1.7	_	<u> </u>	- m.	_				
7 1	cal Year	Expense	_	je BenefilNo	onPersonne	Со	mment		
Construction FY21		\$2,0							
Construction FY22		\$3,5							
Construction FY23		\$1,4	458						
Task Sta	art Date En	nd Date	Duration	1					
Scope Development 2	2/24/2020	5/24/2020		90					
Procurement 5	5/25/2020 11	/29/2020	1	88					
Project Execution 1	1/30/2020 12	2/23/2022	7	53					
Project Closeout 12	2/24/2022	3/24/2023		90					
Prior Yr Actuals FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
0	0	2,042	3,500	1,458	0	0	7,000		
	Phas	e Total Exp	enses By	FY (All figur	es are in \$1,	000's)			
Project Total E	xpenses By	FY Com	npared	to Prior C	IPs (All fig	ures are in	\$1.000'	s)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018				300	1,700	A 121			0	0	2,000

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

114005 CIP#

Springwells Water Treatment Plant, Administration Building Improvements & Underground

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			30	413	2,258	3,820	1,604		0	8,125
2020	0	0		30	413	2,258	3,820	1,604	0	0	8,125

114006 CIP#

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP $\ \Box$

Springwells WTP



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2017

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

	Existing rapid mixing units at the 1958 treatment train are not operable and are needed for effective water treatment at Springwells.
Scope of Work	The work includes removal and replacement of all of the four rapid mixers including electrical, mechanical and structural components.
	Work requires treatment trains to be shut down to complete the installation/replacement, so coordination with operations and overall system demands required.
Project History	n/a
Related Project	Contract No. CS-045 with Hazen & Sawyer for Design and Construction Administration Services Contract No. CON-251 with J.F. Cavanaugh for Construction
Lookup Driver	1 - Condition
Other Important Info	The construction contract, CON-251, was awarded and the notice to proceed issued to J.F. Cavanaugh on May 15, 2018. CON-251 is scheduled for completion in July 2019.
Explanation	Existing rapid mix units are not operational at the 1958 treatment train.

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

PM	Weighted
	Score

72

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

RC Weighted Score

69.4

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

177

GLWA FY 2020-2024 CIP

177

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Phase not applic	cable				Contract NA					tus Clo	sed Out		
Title Prior Year A	Actual Exp	ense	s										
Phase Budget	Water							Cost Allo	cation CTA				
Phase Status	Closed O	J†			Funding Source								
Start Date					Fund								
End Date					Useful Life >20Yrs?								
Co	st Estimat	ion Ir	nformation		Tot. Federal Loan Amount								
	1		Cost Est. C	lass	Program/Allowance Task Information								
	1/1/2018	Cost Est. D	ate	Project Manager									
Hazen & Sawy	er er		Cost Est. So	ource	CIP Number								
Hazen & Sawy	⁄er		Cost Est. Pr	epared By	ed By Description								
Cost Typ	ne	Fi	scal Year	Expens	se Fringe BenefitNonPersonne					Commer	nt		
Construction		FY1	8-		\$30				FY18				
Engineering Serv	ices	FY1	8-		\$33				2020CIP				
n/a	/a FY18-				\$0	\$0		FY18					
Inknown FY18-				\$104		FY17		FY17					
GLWA Salaries C	GLWA Salaries CIP2020 FY18-				\$7	3		0	FY18				
Prior Yr Actuals FY19 FY20 FY21						22 FY23		FY24	FY25+	Tota	I		

114006 CIP#

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Contract CON-251 Status Active **Phase** Construction SPW WTP Replacement of Rapid Mix Units WTP 1958 Process Train Phase Budget Water Cost Allocation CTA **Phase Status** Active Funding Source Bond Proceeds Start Date Fund Construction Bond Fund Useful Life >20Yrs? Yes **End Date** Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2018 Cost Est. Date **CIP Number** Cost Est. Source Hazen & Sawyer Description Cost Est. Prepared By Hazen & Sawyer Cost Type Fiscal Year Fringe BenefilNonPersonne Expense Comment Construction \$750 FY19 FY20 \$54 Construction Start Date Fnd Date Task Duration Scope Development 9/21/2017 12/20/2017 90 12/21/2017 5/14/2018 144 Procurement Project Execution 5/15/2018 7/14/2019 425 92 **Project Closeout** 7/15/2019 10/15/2019 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 750 54 0 00 0 804

114006 CIP#

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Phase Design & Construction Assistance

Contract SCP-CS-045

Status Active

Title SCP-CS-045, Hazen & Sawyer, SPW WTP Replacement of Rapid Mix Units WTP 1958 Process Train

Hazen and Saw	/yer											
Phase Budget	Water					Cost Allo	cation	СТА				
Phase Status	Active					Funding S	ource	Bond Proceeds				
Start Date		2/6	/2017				Fund	Construction Bond Fund				
End Date		5/9	/2019			Useful Life >2	20Yrs?	Yes				
Co	ost Estimatio	on Information			Tot. Federal Loan Amount							
	5	Cost Est. C	lass			Program/Allov	vance	Task Information				
	1/1/2018	Cost Est. D	ate	P	roject Manag	er						
Hazen & Saw	yer	Cost Est. S	ource	С	CIP Number							
Hazen & Saw	yer	Cost Est. P	repared By	D	escription							
Cost Ty	pe	Fiscal Year	Expense	Э	Fringe Benefit	NonPersonne		Comment				
Engineering Serv	vices	FY19		\$122								
Task	<u> </u>	Start Date	End Date	Dur	ation	<u> </u>						

Engineering Services	FY	19	\$	122					
Task		Start Date	End Date	Duration					
Scope Development		5/3/2016	8/1/2016	90					
Procurement		8/2/2016	1/23/2017	174					
Project Execution		1/24/2017	5/19/2019	845					
Project Closeout		5/20/2019	8/18/2019	90					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	12:	2 0	0	0	0	0	0	122	

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Phase GLWA Emplo	yees Pr	oject manage	ment		Co	ntract NA	4	State	Status Active				
itle GLWA Salaries	;												
Phase Budget Wa	ter						Cost Alloc	ation CTA					
Phase Status Act	ive			Funding Source Bond Proceeds									
Start Date				Fund Construction Bond Fund									
End Date				Useful Life >20Yrs? No									
Cost E	stimati	on Information		Tot. Federal Loan Amount									
	1	Cost Est. (Class	Program/Allowance Task Information									
1/1/	ate	Project Manager											
Hazen & Sawyer		Cost Est. S	ource	C	CIP Num	ber							
Hazen & Sawyer		Cost Est. F	repared By	0)escripti	ion							
Cost Type		Fiscal Year	Expens	e	Fringe I	BenefitNor	nPersonne	С	omment				
GLWA Salaries CIP20	020	FY19		\$10		4	0						
GLWA Salaries CIP2020 FY20				\$5		2	0						
Prior Yr Actuals	FY1	9 FY20	FY21	FY:	22	FY23	FY24	FY25+	Total				
		14 7	0		0	0	0	0	21				
		F	hase Total Ex	(pense	es By FY	(All figure	s are in \$1,0	000's)					

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1.000's)

	Troject foldi Experises by 11 compared to 1 flor on 3 (All lightes die in \$1,000 3)													
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total			
2018		100	875	275					0	0	1,250			
2019	0	104	123	1,284	211					0	1,722			
2020	0	0	177	886	61	0	0	0	0	0	1,124			

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

☐ Innovation	Project Status Future Planned	Springwells WTP	
☐ Water MP Right Sizin	CIP Type Project		- Filmind of
☐ Reliability/Redunda			
□ NEWTP Repurposing	Project New To CIP		E TANGE - TANG
Project Engineer/Mana	iger TBD	Budget Water	
Mana	iger Grant Gartrell	Class Lvl 1 Water	r
Managing D	Dept Water Eng	Class Lvl 2 Treatr	ment Plants and Facilities
Date Original Business	Case Prepared 6/26/2014	Class Lvl 3 Spring	gwells
Year Projec	t Added to CIP 2014	Location Wayn	e County - Outside Detroit
		Fund and Cost Center Water	r - 5519-882111
di Tr m co te sy	when needed for taste and odor control. The PA ifferent design that provides for improved oper the plant is able to feed powdered activated of neasures because the existing PAC feed system ause additional operation and maintenance e erm. Due to the infrequent need to feed PAC, to extern at Springwells. If raw water quality deterion oncentrations steadily increase, then replacements	ration and maintainability. arbon (PAC) when needed but one does not operate as intended expense and inefficiencies that slottere is not an immediate need orates unexpectedly and taste contains the contains and taste conta	only through extraordinary The extraordinary measures hould be corrected in the long to replace the entire existing PAC and odor causing compound
•	eplace the existing PAC system with a new syst naintainability when PAC dosing is needed to c		·
	ayout of piping to correct existing problems and rill require plant shutdowns to complete, so it wi	•	
Project History n	/a		
Related Project	one		
Lookup Driver 2	- Performance		
Other Important Info	/a		
Explanation Th	ne existing PAC system is cumbersome and diffi	icult to operate and maintain.	





Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

PM Weighted Score

46.6

Criteria	Score	Comment
Condition	3	11/28/18 - Gartrell & Caldwell revised scores b
Efficiency and Innovation	1	11/28/18 - Gartrell & Caldwell revised scores b
Financial	1	11/28/18 - Gartrell & Caldwell revised scores b
O&M	4	11/28/18 - Gartrell & Caldwell revised scores b
Performance (Service Level/Reliability)	2	11/28/18 - Gartrell & Caldwell revised scores b
Public Benefit	2	11/28/18 - Gartrell & Caldwell revised scores b
Public Health & Safety	2	11/28/18 - Gartrell & Caldwell revised scores b
Regulatory (Environmental/Legal)	3	11/28/18 - Gartrell & Caldwell revised scores b

RC Weighted Score

46.6

Criteria	Score	Comment
Condition	3	11/28/18 - Gartrell & Caldwell revised scores ba
Efficiency and Innovation	1	11/28/18 - Gartrell & Caldwell revised scores ba
Financial	1	11/28/18 - Gartrell & Caldwell revised scores ba
O&M	4	11/28/18 - Gartrell & Caldwell revised scores ba
Performance (Service Level/Reliability)	2	11/28/18 - Gartrell & Caldwell revised scores ba
Public Benefit	2	11/28/18 - Gartrell & Caldwell revised scores ba
Public Health & Safety	2	11/28/18 - Gartrell & Caldwell revised scores ba
Regulatory (Environmental/Legal)	3	11/28/18 - Gartrell & Caldwell revised scores ba

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

Phase Study and De Title SPW WTP Powe	· ·			iprove		ntract N	A	Statu	s Future I	Planned Start			
Phase Budget Wa	ter						Cost Allo	cation CTA					
Phase Status Futu	ure Plann	ed Start					Funding S	Source Bond	Proceeds				
Start Date				Fund Construction Bond Fund									
End Date				Useful Life >20Yrs? Yes									
Cost E	stimation	Information		Tot. Federal Loan Amount									
	5	Cost Est. C	lass	Program/Allowance Task Information									
1/1/	′2015	Cost Est. D	ate	Project Manager									
CDM Smith	CDM Smith Cost Est. Source					CIP Number							
CDM Smith		Cost Est. P	repared By	D	escript	ion							
Cost Type		Fiscal Year	Expense	Expense Fringe Benefit NonPersonne									
Engineering Services	s F`	′ 24		\$0									
Engineering Services	s F`	(25+	(\$820				2020CIP					
Task		Start Date	End Date	Dur	ation								
Scope Developmen	nt	10/8/2022	1/6/2023		90								
Procurement		1/7/2023	1/7/2024		365								
Project Execution		1/8/2024	4/17/2026		830								
Project Closeout		4/18/2026	7/17/2026		90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total				
	0 0				0	0	0	820	820				

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

Phase GLWA Empl	loyees Pr	ojec	t managen	nent		С	ontract N	Α	Stat	t us Future I	Planned S	start
Title GLWA Salarie	es											
Phase Budget W	'ater							Cost Alloc	cation CTA			
Phase Status Fu	ıture Plar	nned	Start					Funding So	ource Bond	l Proceeds		
Start Date						Fund Construction Bond Fund						
End Date					Useful Life >20Yrs?					No		
Cost	Estimati	on In	formation		Tot. Federal Loan Amount							\$0
	5		Cost Est. C	ass			Pro	gram/Allow	ance Task I	Information		
1/	1/2015		Cost Est. Do	ate	P	roject	Manager					
CDM Smith			Cost Est. Sc	ource	CIP Number							
CDM Smith			Cost Est. Pr	epared By	D	escrip	otion					
Cost Type)	Fis	cal Year	Expens	<u>е</u>	Fringe	BenefitNo	nPersonne	C	Comment		
GLWA Salaries CIP	2020	FY24	1		\$0		0	0				
GLWA Salaries CIP2020 FY25+					\$82		32	42	2020CIP			
Prior Yr Actuals	Prior Yr Actuals FY19 FY20 FY21				FY2	22	FY23	FY24	FY25+	Total		
	0 0 0					0	0	0	118	118		

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

Phase Construction				Contract NA							re Plannec	d Start	
Title SPW WTP Powd	dered Ac	tivated Carb	on System Im	prove	ements								
Phase Budget Wa	ter						Cos	ł Alloc	ation CTA				
Phase Status Futu	ure Planne	ed Start					Func	ding So	burce Bond	Proceed	ds		
Start Date									Fund Cons	truction I	Bond Fund		
End Date				Useful Life >20Yrs? Yes									
Cost E	stimation	Information				Tot. Fed	deral Lo	an An	nount				
	5	Cost Est. C	lass			Pı	ogram/	/Allow	ance Task I	nformati	on		
1/1/	/2015	Cost Est. D	ate	P	roject <i>l</i>	Manage	r						
CDM Smith		Cost Est. S	ource	CIP Number									
CDM Smith		Cost Est. P	repared By	[Descript	ion							
Cost Type		Fiscal Year	Expense		Fringe	Benefit	IonPerso	onne	C	ommen	<u> </u>		
Construction	FY	′24		\$0									
Construction	F١	′25+	\$3	,000				2	020CIP				
Task		Start Date	End Date	Dui	ration								
Scope Developmer	n†	7/15/2024	10/13/2024		90								
Procurement		10/14/2024	4/20/2025		188								
Project Execution		4/21/2025	4/17/2026		361								
Project Closeout		4/18/2026	7/17/2026		90								
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23	FY:	24	FY25+	Total			
		0 0	0		0	()	0	3,000	3,00	00		
		P	hase Total Ex	pens	es By FY	(All figu	res are	in \$1,	000's)				
Proie	ct Total	Expenses	By FY Cor	mpa	red to	Prior C	CIPs (A	All fia	ures are i	n \$1.00	00's)		

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018					900	2,000			0	0	2,900
2019	0					A 142			3,939	0	3,939

A-143

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		0	0	0	0	0	0	3,938	3,938

Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	NO	NE
Project Engineer/Ma	nager Peter Fromm	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 6/26/2014	Class LvI 3	Springwells
Year Proj	ect Added to CIP 2014	Location	Wayne County - Outside Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	Existing sedimentation basin gates, guides and upgrades must result in a safer mode of gate or	· · · · · · · · · · · · · · · · · · ·	are in need of upgrade. Further,
Scope of Work	This project will evaluate and rehabilitate or repat the Springwells Water Treatment Plant. These service life and require rehabilitation and/or repoverall maintenance of various systems at the Scurrent condition of these gates.	gates and appurtenance placement for the isolation	es have surpassed their expected n and operation of the 1930s filters and
Challenges	Work will either require sedimentation basins to either case, portions of the 1930 plant will need		•
Project History	n/a		
Related Project	none		
Lookup Driver	5 - Public Health & Safety		
Other Important Info	n/a		
Explanation	The existing sluice gates are unsafe to operate.	In addition, the condition	of the guides is poor



Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

PM	Weighted
	Score

61.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

52.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	2	
Public Benefit	1	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	1	

Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

Phase Design and E	Build			Contract DB-309			Statu	s Active				
Title 1930 Sedimen	tation Bas	sin Sluice Gat	es, Guides & l	Hoists	Improv	ement:	at Springw	ells WTP				
Phase Budget Wo	ıter			Cost Allocation CTA								
Phase Status Ac	Phase Status Active						Funding	Source	Bond Proceeds			
Start Date	Start Date							Fund	Const	ruction Bor	nd Fund	
End Date							Useful Life	>20Yrs?	Yes			
Cost Estimation Information Tot. Federal Loan Amount												
	5	Cost Est. C	lass			P	rogram/Allo	wance	Task Ir	nformation		
1/1	/2015	Cost Est. D	ate	P	roject A	\anage	r					
GLWA		Cost Est. So	ource	С	IP Num	ber						
GLWA					d By Description							
Cost Type		Fiscal Year	Expense		Fringe I	Benefith	lonPersonne	9	С	omment		
Design-Build	FY	(19	\$	411								
n . n			·									
Design-Build	FY	/20	·	123								
		/20 /21	\$4,	123 800								
Design-Build	FY		\$4, \$6,									
Design-Build Design-Build Design-Build Task	FY	/ 21	\$4, \$6,	800 667	ation							
Design-Build Design-Build Task	F)	(21 (22	\$4, \$6, \$5,	800 667	ation 211							
Design-Build Design-Build Task Scope Developmer	F)	(21 (22 Start Date	\$4, \$6, \$5,	800 667								
Design-Build Design-Build Task Scope Developmer Procurement	F)	(21 (22 Start Date 1/24/2018	\$4, \$6, \$5, End Date 8/23/2018	800 667	211							
Design-Build Design-Build Task Scope Developmer Procurement Project Execution	F)	(21 (22 Start Date 1/24/2018 8/24/2018	\$4, \$6, \$5, End Date 8/23/2018 4/25/2019	800 667	211 244							
Design-Build	F)	721 722 Start Date 1/24/2018 8/24/2018 4/26/2019	\$4, \$6, \$5, End Date 8/23/2018 4/25/2019 4/21/2022	800 667	211 244 1091 90	FY23	FY24	FY2	5+	Total		

GLWA FY 2020-2024 CIP

114008 CIP#

Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

Phase GLWA Employees Project management					Contract NA					atus Active		
itle GLWA Sala	ries											
Phase Budget \	Water				Cost Allocation CTA							
Phase Status	Active Active							Funding S	ource Bo	Bond Proceeds		
Start Date									Fund Co	nstruction Bo	nd Fund	
End Date							Us	eful Life >2	20Yrs? No			
Co			Tot. Fe	eder	al Loan Ar	mount			\$0			
5 Cost Est. Class						ı	rog	ram/Allow	ance Tas	k Information	1	
1	/1/2015	Cos	t Est. De	ate	Project Manager							
GLWA		Cos	t Est. Sc	ource	CIP Number							
GLWA		Cos	t Est. Pr	epared By	D	Description						
Cost Typ	e e	Fiscal	Year	Expens	e	Fringe Benefit	Non	Personne		Comment		
GLWA Salaries Cl	IP2020	FY19			\$9	4		0				
GLWA Salaries CI	IP2020	FY20			\$21	8		1				
GLWA Salaries Cl	IP2020	FY21			\$21	8		1				
GLWA Salaries CI	IP2020	FY22			\$21 8 1							
GLWA Salaries CIP2020 FY23					\$2	1		0				
Prior Yr Actuals	FY1	9 F	Y20	FY21	FY:	22 FY23		FY24	FY25+	Total		

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

GLWA Great Lakes Water Authority

Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

Phase Design					C	ontract C	CS-289	Sta	itus Active			
Title Design 1930 Se	edimenta	tion Basin Slui	ice Gates, G	uides,	. & Hois	sts Improve	ements at Sp	ringwells				
Phase Budget Wa	ter						Cost Alloc	ation CTA				
Phase Status Act	ive			Funding Source					Bond Proceeds			
Start Date								Fund Con	Construction Bond Fund			
End Date	Useful Life >20Yrs? Yes											
Cost Estimation Information Tot. Federal Loan Amount \$0							\$0					
5 Cost Est. Class Program/Allowance Task Information												
1/1/	′2015	Cost Est. D	ate	Р	roject	Manager						
GLWA		Cost Est. So	ource		CIP Nur	mber						
GLWA					d By Description							
Cost Type		Fiscal Year	Expense		Fringe	BenefitNo	onPersonne		Comment			
Engineering Services	s F	/19		\$18			2	020CIP				
Task		Start Date	End Date	Dur	ation							
Scope Developmen	n†	2/28/2018	4/15/2018		40	5						
Procurement		4/16/2018	5/29/2018		43	3						
Project Execution		6/7/2018	8/24/2018		78	3						
Project Closeout		8/24/2018	11/22/2018		90	ס						
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total			
	1	8							18			
		P	hase Total Ex	pense	es By F	Y (All figur	es are in \$1,0	000's)				
Proje	ct Tota	Expenses	By FY Cor	npa	red to	Prior C	IPs (All fig	ures are	in \$1,000	's)		

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,200	2,000	4,000	300			0	0	7,500
2019	0			424	4,153	6,830	5,697	3		0	17,107
2020	0	0		442	4,153	6,830	5,697	3	0	0	17,125

A-149

GLWA Great Lakes Water Authority

Lookup Driver 1 - Condition

Explanation N/A - Under Procurement

GLWA FY 2020-2024 CIP

SPW WTP Service Area Redundancy Study

☐ Innovation☑ Water MP Right Size☑ Reliability/Redund☐ NEWTP Repurposing	dancy Project New To CIP	NON	NE CONTRACTOR OF THE CONTRACTO				
Project Engineer/Mai	nager Timothy Kuhns	Budget	Water				
Mai	nager Grant Gartrell	Class Lvl 1	Water				
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities				
Date Original Busines	ss Case Prepared 6/26/2014	Class Lvl 3	Springwells				
Year Proje	ect Added to CIP 2014	Location Wayne County - Outside Detroit					
		Fund and Cost Center	Water - 5519-882111				
	Hydraulic analysis and Evaluation of options to FROM 132010: Construction of West Service Certhe West Service Center to the Springwells high service for repairs. Construction of active bypas	nter Division Valves is need service area while the Spri	ed to convey Lake Huron flows through ngwells raw water tunnel is out of				
Scope of Work	This study involves hydraulic analyses and evaluater Treatment Plant through the West Service Treatment Plant's high-pressure district. FROM 1 high service area while the Springwells raw wat	e Center in order to provide 32010: Lake Huron WTP nee	e finished water to the Springwells Water eds to provide flows to the Springwells				
	N/A - Under Procurement. FROM 132010: Coord Isolation, shutdown and operation of Lake Huro	·					
Related Project	Springwells WTP Reservoir Fill Line						



GLWA FY 2020-2024 CIP SPW WTP Service Area Redundancy Study

PM Weighted Score

85.6

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

RC Weighted Score

78

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	1	
Financial	5	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	5	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	3	



SPW WTP Service Area Redundancy Study

Phase Study				Coi	ntract CS	5-1772	Status	Pending Close-out		
Title CS-1772 Sp	oringwells Wo	ater Treatmen	t Plant Service	e Area Redur	ndancy St	udy				
Phase Budget				Cost Allocation	СТА					
Phase Status	Pending Clo	ose-out				Funding Source	Revenue	e Financed Capital		
Start Date	Date 11/4/2016					Fund	Improve	ement & Extension Fun		
End Date	nd Date 11/14/2017				Useful Life >20Yrs? No					
Co	n Information		Tot. Federal Loan Amount							
	1	Cost Est. C	lass		Prog	gram/Allowance	Task Info	ormation		
		Cost Est. D	ate	Project N	\anager					
		Cost Est. S	ource	CIP Num	CIP Number					
Cost Est. Prepared By				Description						
Task		Start Date	End Date	Duration						
Scope Developi	ment	10/24/2017	2/26/2018	125						

Task		Start Date	End Date	Duration					
Scope Developmen	nt	10/24/2017	2/26/2018	12	25				
Procurement		2/27/2018	12/19/2018	29	95				
Project Execution		12/20/2018	12/18/2019	36	33				
Project Closeout		7/1/2019	9/26/2019	3	37				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	0	0	

114009 CIP#

SPW WTP Service Area Redundancy Study

hase Budget	Water						Cost Alloc	ation CTA		
Phase Status	Pending C	lose-	out				ource Rev	Revenue Financed Capital		
Start Date								Fund Imp	rovement &	Extension Fun
End Date	End Date Cost Estimation Information					U	seful Life >2	OYrs? No		
Co						Tot. Fede	eral Loan An	nount		\$0
	5		Cost Est. Cl	ass		Pro	gram/Allow	ance Task	Information	
	1/1/2015		Cost Est. Do	ıte	Projec	t Manager				
GLWA			Cost Est. So	urce	CIP Nu	CIP Number				
GLWA			Cost Est. Pro	epared By	Descri	ption				
Prior Yr Actua	ls FY1	9	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0						0			



SPW WTP Service Area Redundancy Study

Phase not applicable				Contract	NA	S	tatus Closed	d Out		
itle Prior Year Actual Exp	penses									
Phase Budget Water					Cost Al	location CT	A			
Phase Status Closed C)ut		Funding Source							
Start Date			Fund							
End Date					Useful Life	>20Yrs?				
Cost Estima	tion Information			Tot. Fe	ederal Loan	Amount				
5	Cost Est. C	Class		F	Program/All	owance Tas	sk Informatio	n		
1/1/2015	Cost Est. D	ate	Pro	oject Manage	er					
GLWA					CIP Number					
GLWA	Cost Est. P	repared By	De	escription						
Cost Type	Fiscal Year	Expense	F	ringe Benefill	NonPersonr	ne	Comment			
Engineering Services	FY18-		\$98			2020CIP				
Unknown	FY18-	\$	193			FY17				
GLWA Salaries CIP2020	FY18-		\$14	6		FY18				
Prior Yr Actuals FY	′19 FY20	FY21	FY22	2 FY23	FY24	FY25+	Total			
311							311			
	P	hase Total Exp	penses	By FY (All fig	ures are in	\$1,000's)				
Project To	otal Expenses	By FY Con	npare	ed to Prior	CIPs (All	figures ar	e in \$1,000)'s)		

Proje	ct Total I	Expense:	s By FY C	ompare	d to Prio	r CIPs (A	II figures	are in \$1	(s'000, l	
-\/1/	EV 1 7	EV/10	EV/10	FVOO	EVO1	FVOO	EV/O2	EVO 4	FVOF	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		450							0	0	450
2019	0	193	145							0	338
2020	0	0	311	0	0	0	0	0	0	0	311

114010 CIP#

Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redund☐ NEWTP Repurposir	dancy Project New To CIP	Springwells WTP
Project Engineer/Mai	nager Erich Klun	Budget Water
Mai	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 Treatment Plants and Facilities
Date Original Busines	s Case Prepared 9/8/2016	Class Lvl 3 Springwells
Year Proje	ect Added to CIP 2012	Location Wayne County - Outside Detroit
		Fund and Cost Center Water - 5519-882111
•	riveted steel pipe material. Main No. 7 is a prestre mains are known to be leaking and are in need of isolation valves associated with the 72-inch main sewers and process piping, need to be assessed	·
·	potential to disrupt service to Springwells Service assessment, cleaning and replacement/rehability	ne early 1930s and has experienced leaks. These leaks have area customers. Scope will also include performing a condition ation of all gravity sewers (including manholes) and other de replacement of access drives, new guard shack, construction llaneous site improvements. Formerly CIP 1248.
	, ,	of existing gate valves for isolation will be critical. Design will as the condition of the existing yard piping being connected to.
Project History	n/a	
Related Project	Low-Lift and High-Lift Station Upgrades, Water Pro	oduction Flow Metering Upgrades at Springwells WTP.
Lookup Driver	1 - Condition	
Other Important Info	n/a	
Explanation	Not provided.	



GLWA Great Lakes Water Authority

Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

PM Weighted Score

53.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	2	
Financial	2	
O&M	1	
Performance (Service Level/Reliability)	2	
Public Benefit	3	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	4	

RC Weighted Score

62.2

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

114010 CIP#

Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

hase GLWA Em	olqr	yees Pr	ojec	t managen	nent		Contro	ict N	Α	Stat	us Future	Planned	Start		
itle GLWA Salo	aries	5													
Phase Budget	Wa	ter							Cost Alloc	cation CTA					
Phase Status	Futu	ure Plar	nnec	l Start		Funding Source Bond Proceeds									
Start Date						Fund Construction Bond Fund									
End Date	End Date							U	Jseful Life >2	OYrs? No	? No				
Co	ost E	stimatio	on In	formation			Tot	. Fede	eral Loan Ar	nount			\$0		
	5 Cost Est. Class							Pro	gram/Allow	ance Task	e Task Information				
	1/1/	/2015		Cost Est. Do	ate	Р	roject Man	ager							
CDM Smith				Cost Est. Sc	ource	C	IP Number								
CDM Smith				Cost Est. Pr	epared By	D	escription								
Cost Typ	эе		Fis	scal Year	Expens	e	Fringe Ben	efitNo	nPersonne	C	Comment				
GLWA Salaries C	IP2	020	FY2	4		\$50		20	2						
GLWA Salaries C	WA Salaries CIP2020 FY25+				\$400	1	58	20 2	2020CIP						
Prior Yr Actual	ls	FY1	9	FY20	FY21	FY2	22 FY	23	FY24	FY25+	Total				
	0 0						0	0	72	578	650				

114010 CIP#

Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Phase Design and B	Build			C	ontract	NΑ	٨		Status	Future	Plannec	d Start	
Title SPW WTP Yard	Piping Ir	mprovemen	ts										
Phase Budget Wa	ter							Cost Allo	cation C	TA			
Phase Status Fut	ure Plann	ned Start		Funding Source Bond Proceeds									
Start Date				Fund Construction Bond Fund									
End Date							Us	seful Life >:	20Yrs? Y	es			
Cost E	stimation	n Informatio	n	1		Tot. Fe	der	ral Loan A	mount				
	5 Cost Est. Class				Program/Allowance Task Information								
1/1,	1/1/2015 Cost Est. Do				Project Manager								
CDM Smith	CDM Smith Cost Est. Sou				CIP Nu	mber							
CDM Smith		Cost Est.	Prepared By		Descrip	otion							
Cost Type		Fiscal Year	Exper	ise	Fringe	e Benefill	Von	Personne		Со	mment		
Design-Build	F	Y25+	\$1	0,000					2020CIP				
Task		Start Date	End Date	Di	uration								
Scope Developmer	nt	3/9/202	4 6/7/202	24	9	0							
Procurement		6/8/202	4 6/8/202	25	36	5							
Project Execution	Project Execution 6/9/2025		5 6/4/200	32	255	2							
Project Closeout	Project Closeout 6/5/2032 9		2 9/3/203	32	9	0							
Prior Yr Actuals	FY19	FY20	FY21	F	Y22	FY23		FY24	FY25+	-	Total		
		0	0 ()	0		0	0	110.0	000	110,000		

114010 CIP#

Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

ase Budget	Water		Cost Allocation	СТА				
Phase Status		ed Start	Funding Source		oceeds			
Start Date			Fund	Constru	ction Bond Fund			
End Date			Useful Life >20Yrs?	Yes				
Co	st Estimation	Information	Tot. Federal Loan Amount					
	5	Cost Est. Class	Program/Allowance Task Information					
	1/1/2015	Cost Est. Date	Project Manager					
CDM Smith		Cost Est. Source	CIP Number					
CDM Smith		Cost Est. Prepared By	Description					

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

	Troject fold Expenses by 11 Compared to Thor Cit's (All lightes die iii \$1,000 s)												
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total		
2018				2,000	7,000	8,000	8,000		0	0	25,000		
2019	0								110,129	0	110,129		
2020	0	0		0	0	0	0	0	72	110,578	110,650		

114011 CIP#

Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

☐ Innovation☐ Water MP Right Size☐ Reliability/Redunct☐ NEWTP Repurposing	dancy Project New To CIP	SP-563 – Rehabilitate 1958 Pipe Gallery (i progres	in .
Project Engineer/Mai	nager Brian VanHall	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	s Case Prepared 3/6/2012	Class Lvl 3	Springwells
Year Proje	ect Added to CIP 2012	Location	Wayne County - Outside Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	These existing mechanical systems are largely b	roken and leaking, creatin	ng an inefficient use of energy.
Scope of Work	This engineering services contract involves designative Springwells Water Treatment Plant, included condensate return pumping stations, steam preserving involves replacing the compressed air piping in provide energy savings by eliminating extensive antiquated system. This project includes design TBD) to replace the leaking steam piping, cond Springwells WTP. The scope of work includes repstations, pressure reducing valves, regulators, are completed, the project will provide energy savicurrently inherent in the antiquated system.	ing all steam unit heaters, sessure reducing valves, and the plant used for service esteam and condensate leand construction administrate return piping and colacing inefficient unit heatend heating system appurted.	steam piping, condensate return piping, dappurtenances. This project also air. Once completed, the project will eaking currently inherent in the ration (CS-1671) and construction (SP-compressed air piping throughout the ters, radiators, condensate return pump enances throughout the plant. Once
Challenges	Many components of the existing system are ori to be demolished/removed. Seasonal work and		· ·
Project History	n/a		

Other Important Info n/a

Related Project none

Explanation N/A - Under Procurement

Lookup Driver N/A - Under Procurement



Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

PM Weighted	
Score	

63.8

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	3	
Financial	3	
O&M	3	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

62.4

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	3	
Regulatory (Environmental/Legal)	1	

Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

Phase not applicable				Contract NA					Stat	tus Close	d Out		
Title Prior Year Actual	Expense	es											
Phase Budget Water								Cost Allo	cation CTA				
Phase Status Closed	d Out			Funding Source									
Start Date									Fund				
End Date							Us	eful Life >	20Yrs?				
Cost Estir	mation lı	nformation				Tot. Fe	der	al Loan A	mount				
	5	Cost Est. C	lass			P	rog	ram/Allov	vance Task	Informatio	n		
1/1/20	17	Cost Est. D	ate	Р	roject	Manage	er						
Metco		Cost Est. S	ource	CIP Number									
Metco		Cost Est. P	repared By	Description									
Cost Type	Fi	scal Year	Expens	е	Fringe	e Benefil	Von	Personne		Comment			
Engineering Services	FY1	8-		\$172					FY18				
Unknown	FY1	8-		\$261					-Y17				
Unknown	FY1	8-		\$19					-Y16				
GLWA Salaries CIP2020) FY1	8-		\$15		6		I	-Y18				
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY25+	Total			
473										473	3		

114011 CIP#

Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

Phase GLWA Emplo	yees Pr	ojec	t manager	nent		(Contract NA	4	Stat	us Active)			
Title GLWA Salaries	5													
Phase Budget Wa	ter							Cost Alloc	cation CTA	CTA				
Phase Status Act	tive							Funding So	burce Bond	Bond Proceeds				
Start Date									Fund Cons	truction Bo	and Fund			
End Date							Us	seful Life >2	OYrs? No					
Cost E	stimati	on In	formation				Tot. Fede	ral Loan An	nount			\$0		
	5		Cost Est. C	lass			Prog	gram/Allow	ance Task I	nformatio	า			
1/1/2017 Cost Est. Date		Project Manager												
Metco			Cost Est. So	ource	(CIP Nu	mber							
Metco			Cost Est. Pi	repared By)escri	otion							
Cost Type		Fis	scal Year	Expens	е	Fring	e BenefilNor	nPersonne	C	omment				
GLWA Salaries CIP20	020	FY19	7		\$21		8	1						
GLWA Salaries CIP20	020	FY20)		\$21		8	1						
GLWA Salaries CIP20	020	FY2	l		\$21		8	1						
GLWA Salaries CIP20	020	FY2	2		\$21		8	1						
Prior Yr Actuals	FY1	9	FY20	FY21	FY	22	FY23	FY24	FY25+	Total				
		30	30	30		30	0	0	0	120				

114011 CIP#

Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

Status Active Contract NA **Phase** Construction Title Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP Phase Budget Water Cost Allocation CTA **Phase Status** Active Funding Source Bond Proceeds Fund Construction Bond Fund Start Date **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2017 Cost Est. Date **CIP Number** Cost Est. Source Metco Description Cost Est. Prepared By Metco Fiscal Year Fringe BenefilNonPersonne Cost Type Expense Comment Construction FY19 \$2,938 FY20 \$5,134 Construction FY21 \$7,526 Construction Construction FY22 \$8,003 2020CIP Task Start Date **End Date** Duration Scope Development 11/30/2017 2/28/2018 90 337 Procurement 3/1/2018 2/1/2019 **Project Execution** 2/1/2019 4/1/2022 1155 Project Closeout 4/1/2022 90 6/30/2022 FY21 Prior Yr Actuals FY19 FY20 FY22 FY23 FY24 FY25+ Total 2,938 5,134 7,526 8,003 0 23,601 0 0

114011 CIP#



GLWA FY 2020-2024 CIP 114011 CIP# Sprinawells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

hase Study and De	sian and	d Construction	Assistance		Co	ntract	CS	-1671		Stat	us Active					
itle CS-1671 Steam	•			essed	Air Pipi	ng Impr	OVE	ements at	Spring	vells \	WTP					
METCO			·		· ·											
Phase Budget Wat	er															
Phase Status Acti	ve			Cost Allocation CTA Funding Source Bond Proceeds												
Start Date					Fund Construction Bond Fund											
End Date	End Date						Useful Life >20Yrs? Yes									
Cost E	stimatio	n Information		Tot. Federal Loan Amount												
	lass			P	rog	ram/Allo	wance	Task I	nformation							
5 Cost Est. Class 1/1/2017 Cost Est. Date				Р	roject <i>l</i>	Manage		•								
Metco Cost Est. Source				CIP Number												
Metco Cost Est. Prepared By				Description												
			,													
Cost Type		Fiscal Year	Expense)	Fringe	Benefill	Von	Personne		С	omment					
Engineering Services	; F	Y19	(\$141												
Engineering Services	; F	Y20	(\$228												
Engineering Services		Y21		198												
Engineering Services	F	Y22	(228					2020CI	Р						
Task		Start Date	End Date	Dur	ation											
Scope Developmen	t	10/1/2016	12/30/2016		90											
Procurement		12/31/2016	12/31/2017		365											
Project Execution		1/1/2018	4/1/2022		1551											
Project Closeout		4/1/2022	6/30/2022		90											
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Total					
	1	41 228	198		228		0	0)	0	795					

114011 CIP#

Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping

	Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)													
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total			
2018		300	3,450	2,500					0	0	6,250			
2019	0	280	450	1,406	4,824	4,654	7			0	11,621			
2020	0	0	473	3,109	5,392	7,754	8,261	0	0	0	24,989			

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

□ Innovation	Pro	oject Status Active	Filter Building ro	pof
☐ Water MP Right Si	izing	CIP Type Project		
☐ Reliability/Redund	dancy	_		
□ NEWTP Repurposi	ing	Project New To CIP \Box		
Project Engineer/Ma	•		Budget	
Ма	inager Paula	Anderson	Class Lvl 1	
Managing	Dept Fleet o	and Facilities	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepo	ared 10/11/2016	Class Lvl 3	Springwells
Year Proj	ect Added to	CIP 2016	Location	Wayne County - Outside Detroit
			Fund and Cost Center	Water - 5519-882111
Project Significance	The existing r	oof over the 1930 filters is le	aking in places and poses water	quality concerns due to roof leaks.
	This project e roofing mate building enve that water d	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going	of the existing 1930 Filter Building nductors and sealing cap stones	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally,
Scope of Work	This project e roofing mate building enve that water d construction	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going traffic under Contract SP-56	of the existing 1930 Filter Building and sealing cap stones amage. Construction activity undo and is causing clerestory window 33 has shown the built-up materic	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally,
Scope of Work	This project e roofing mate building enve that water de construction Seasonal con SP-563.	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going traffic under Contract SP-56	of the existing 1930 Filter Building and sealing cap stones amage. Construction activity undo and is causing clerestory window 33 has shown the built-up materic	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally, all to be blistering and spongy.
Scope of Work Challenges	This project e roofing mate building enve that water d construction Seasonal con SP-563.	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going traffic under Contract SP-56	of the existing 1930 Filter Building and sealing cap stones amage. Construction activity undo and is causing clerestory window 33 has shown the built-up materic	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally, all to be blistering and spongy.
Scope of Work Challenges Project History	This project e roofing mate building enve that water de construction Seasonal con SP-563. n/a none	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going traffic under Contract SP-56 nstruction work, and constru	of the existing 1930 Filter Building and sealing cap stones amage. Construction activity undo and is causing clerestory window 33 has shown the built-up materic	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally, all to be blistering and spongy.
Scope of Work Challenges Project History Related Project	This project e roofing mate building enve that water de construction Seasonal con SP-563. n/a none	encompasses replacement erial, flashing, roof drains/co elop and causing water do amage has been on-going traffic under Contract SP-56 nstruction work, and constru	of the existing 1930 Filter Building and sealing cap stones amage. Construction activity undo and is causing clerestory window 33 has shown the built-up materic	roofing system, including the built-up to prevent water from penetrating the er Contract SP-563 in 2014-2015 revealed lintel deterioration. Additionally, all to be blistering and spongy.



SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

GLWA FY 2020-2024 CIP

PM Weighted Score

70.6

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

RC Weighted Score

61

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

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Phase Design and	l Build					Co	ontract	DB-	Statu	us Active	;				
Title Springwells V	Vater Tre	eatme	ent Plant 19	30 Filter Build	ling-R	oof Rep	olaceme	ent							
DB093															
Phase Budget W	/ater				Cost Allocation CTA										
Phase Status A	ctive				Funding Source Bond Proceeds										
Start Date					Fund Construction Bond Fu									d	
End Date	End Date						Useful Life >20Yrs? Yes								
Cost	t Estimat	ion In	formation				Tot. Fed	der	al Loan A	mount					
4 Cost Est. Cl		lass			Pr	og	ram/Allov	vance I	ask Ir	nformation	1				
1/1/2016 Co:		Cost Est. D	ate	Project Manager											
Testing Enginee	rs & Cor	nsult	Cost Est. So	ource	CIP Number										
Testing Enginee	rs & Cor	nsult	Cost Est. Pi	repared By		Descript	ion								
Cost Type)	Fis	scal Year	Expense	pense Fringe BenefilNonPersonne						Comment				
Design-Build		FY1	9	\$2.	,778										
Task		S	tart Date	End Date	Dur	ration									
Scope Developme	ent		8/15/2017	9/30/2017		46									
Procurement			10/1/2017	3/1/2018		151									
Project Execution			4/12/2018	4/17/2019		370									
Project Closeout			4/18/2019	7/18/2019											
Prior Yr Actuals	FY	19	FY20	FY21	FY:	22	FY23		FY24	FY25	j+	Total			
		2,778	0	0		0	()	0		0	2,778			

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Phase GLWA Emp	oloyees Proje	ct managem	ent	C	Contract N	A	Statu	s Active			
Title GLWA Salar	ries										
Phase Budget \	Water					Cost Alloc	ation CTA	СТА			
Phase Status	Active					Funding Sc	ource Bond F	Bond Proceeds			
Start Date							Fund Constr	uction Bor	d Fund		
End Date											
Cos	st Estimation I	nformation			Tot. Fede	eral Loan An	nount	\$ 0			
	4 Cost Est. Class				Pro	formation					
1	/1/2016	Cost Est. Do	ıte	Project	Manager						
Testing Engine	ers & Consult	Cost Est. So	urce	CIP Nu	mber						
Testing Engine	ers & Consult	Cost Est. Pre	epared By	Descri	otion						
Cost Typ	e F	iscal Year	Expense	e Fringe	e BenefitNo	nPersonne	Сс	mment			
GLWA Salaries CI	P2020 FY	19		\$7	3	0					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	10	0	0	0	0	0	0	10			

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

hase not applicable	е				Contr	act N	A	Stat	tus Clos	sed Out	
itle Prior Year Actu	al Expense	es									
Phase Budget Wate	er						Cost Alloc	cation CTA			
Phase Status Clos	ed Out			Funding Source							
Start Date								Fund			
End Date						U	seful Life >2	20Yrs?			
Cost Es	timation Ir	nformation		Tot. Federal Loan Amount						\$0	
	4 Cost Est. Class					Pro	gram/Allow	vance Task	Informat	ion	
1/1/2	1/1/2016 Cost Est. Date			Project Manager							
Testing Engineers 8	& Consult	Cost Est. Se	ource	CIP Number							
Testing Engineers &	& Consult	Cost Est. Pi	repared By	ed By Description							
Cost Type	Fi	scal Year	Expense	pense Fringe BenefitNonPersonne				C	Commen	t	
Construction	FY1	8-	\$1	,122			F	FY18			
Other	FY1	8-		\$1			FY18				
GLWA Salaries CIP20:	20 FY1	8-		\$1			F	-Y18			
Prior Yr Actuals	FY21	FY2	22 F	/23	FY24	FY25+	Total				
1,124							1,1	24			
		P	hase Total Ex	pense	es By FY (A	ll figure	es are in \$1,	,000's)			
Project	ct Total I	Evnanças	By EV Co	mpar	od to Pi	ior Cl	De (All fic	uros aro	in \$1 0	00'e)	

		.								,,,,,,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		3,000							0	0	3,000
2019	0		486	2,420						0	2,906
2020	0	0	1,124	2,788	0	0	0	0	0	0	3,912

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

□ Innovation Springwells WTP **Project Status** Active ✓ Water MP Right Sizing CIP Type Project ✓ Reliability/Redundancy Project New To CIP \Box ✓ NEWTP Repurposing Project Engineer/Manager Erich Klun **Budget** Water Manager Grant Gartrell Class Lvl 1 Water Managing Dept Water Eng Class Lvl 2 Treatment Plants and Facilities Date Original Business Case Prepared 10/11/2016 Class Lvl 3 Springwells Year Project Added to CIP 2016 **Location** Wayne County - Outside Detroit Fund and Cost Center Water - 5519-882111 Project Significance Reservoir fill line to Springwells is needed to provide finished water to the Springwells high service area from Southwest and Waterworks Park while the Springwells raw water tunnel is out of service for repairs and during times when the Springwells Low Lift Station is taken offline for inspections, repairs or maintenance. Scope of Work Reservoir fill line to Springwells is needed to provide finished water to the Springwells high service area from Southwest and Waterworks Park while the Springwells raw water tunnel is out of service for repairs. **Challenges** Very complicated sequence of construction, and coordination with wholesale customers is required. **Project History** n/a Related Project Contract No. CS-038 with AECOM for design and construction administration services Contract No. CON-253 with Ric-Man for construction **Lookup Driver** 1 - Condition

Other Important Info The construction contract, CON-253, is scheduled to be complete in July 2019.

Explanation Not provided.



Springwells Water Treatment Plant, Reservoir Fill Line Improvements

PM Weighted Score

68.2

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

77.2

Score	Comment
5	
5	
4	
1	
5	
4	
3	
4	
	5 5 4 1 5 4 3 4

GLWA FY 2020-2024 CIP

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

hase GLWA Em	nent	Contract NA Status Active											
tle GLWA Sala	ıries												
Phase Budget	Water							Cost Alloc	cation CTA	4			
Phase Status	Active				Funding Source Bond Proceeds								
Start Date					Fund Construction Bond Fund								
End Date	ate				Useful Life >20Yrs? No								
Со	Cost Estimation Information				Tot. Federal Loan Amount							\$0	
	4 Cost Est. Class				Program/Allowance Task Information								
1/1/2015 Cost Est. Date			ate	Project Manager									
CDM Smith			Cost Est. Sc	ource	C	CIP Number							
CDM Smith			Cost Est. Pr	epared By	ared By Description								
Cost Typ	oe oe	Fi	scal Year	Expens	e	Fringe	BenefitNo	nPersonne		Com	ment		
SLWA Salaries C	IP2020	FY1	9		\$20		8	1					
SLWA Salaries C	IP2020	FY2	0		\$10		4	0					
SLWA Salaries C	IP2020	FY2	1		\$0	0		0					
GLWA Salaries CIP2020 FY22					\$0		0	0					
Prior Yr Actual	Prior Yr Actuals FY19 FY20 FY2			FY21	FY:	22	FY23	FY24	FY25+	-	Total		
	29 14			0		0	0	0	()	43		

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

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Phase Design & Construction Assistance

Contract SCP-CS-038

Status Active

Title SCP-CS-038 Springwells Reservoir Fill Line Improvements

AECOM										
Phase Budget	Water		Cost Allocation CTA							
Phase Status	Active		Funding Source Bond Proceeds							
Start Date		10/11/2016		Fund Construction Bond Fund						
End Date		10/7/2019	Useful Life >20Yrs? Yes							
Co	ost Estimatio	n Information	Tot. Feder	al Loan Amount						
	4	Cost Est. Class	Progr	ram/Allowance Task Information						
	1/1/2015	Cost Est. Date	Project Manager							
CDM Smith		Cost Est. Source	CIP Number							
CDM Smith		Cost Est. Prepared By	Description							

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$0			2020CIP
Construction	FY20	\$0			2020CIP
Engineering Services	FY19	\$70			
Engineering Services	FY20	\$37			

Task	Start Date	End Date	Duration
Scope Development	8/9/2015	11/7/2015	90
Procurement	11/8/2015	11/7/2016	365
Project Execution	11/8/2016	12/31/2019	1148
Project Closeout	7/25/2019	12/31/2019	159

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	70	37	0	0	0	0	0	107

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Phase Construction						ontract	Ne	W		Statu	us Active			
Title SPW WTP Rese	rvoir Fill L	ine Improven	nents											
Phase Budget Wa	ter							Cost Allo	cation	CTA				
Phase Status Act	ive			Funding Source							Bond Proceeds			
Start Date									Fund (Const	ruction Bor	nd Fund	k	
End Date				Useful Life >20Yrs? Yes										
Cost E	stimatio	n Information		Tot. Federal Loan Amount										
	4	Cost Est. C	Class	Program/Allowance Task Information										
1/1/	1/1/2015 Cost Est. Date				roject <i>l</i>	Manage	r							
CDM Smith Cost Est. Source				CIP Number										
CDM Smith					escript)	ion								
Cost Type		Fiscal Year	Expense		Fringe	Benefit	lon	Personne		C	omment			
Construction	F	FY19	\$2	,750										
Construction	F	FY20	\$1	,500										
Task		Start Date	End Date	Dur	ation									
Scope Developmer	n†	10/23/2017	1/21/2018		90									
Procurement		1/22/2018	10/29/2018		280									
Project Execution		4/30/2020	7/29/2020		90									
Project Execution		10/30/2018	4/29/2020		547									
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25	+	Total			
	2,7	750 1,500	0		0	ı	0	0		0	4,250			

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Phase not applicable			Contract	NA	٨	Sta	tus Closed	Out			
itle Prior Year Actu	ıal Expe	nses									
Phase Budget Wat	ter						Cost Allo	cation CTA			
Phase Status Clos	sed Out										
Start Date											
End Date				Useful Life >20Yrs?							
Cost E	stimatio	n Information			Tot. Fe	edei	ral Loan A	mount			
	4 Cost Est. Class				i	Prog	gram/Allo	wance Task	Information		
1/1/	1/1/2015 Cost Est. Date				roject Manage	er					
CDM Smith Cost Est. Source				CIP Number							
CDM Smith		Cost Est. P	repared By	y Description							
Cost Type		Fiscal Year	Expens	pense Fringe BenefilNonPersonne				(Comment		
Construction		FY18-		\$117				FY18			
Engineering Services	S	FY18-		\$88				FY18			
Jnknown		FY18-		\$119				FY17			
GLWA Salaries CIP20	SLWA Salaries CIP2020 FY18-				1			FY18			
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
332	332								332		
		P	hase Total Ex	(pense	es By FY (All fig	jure	s are in \$1	,000's)			

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		200	3,300	4,000					0	0	7,500
2019	0	120	181	2,469	3,656	61	21			0	6,508
2020	0	0	332	2,849	1,551	0	0	0	0	0	4,732



Springwells Water Treatment Plant Emergency Grating Replacement

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP $\ \Box$

Deteriorated support beams holding up Low Lift Station. Dewatering and Sump Pumps at Elev. 42'-0" (left). Deteriorated grating and access ship's ladder in Low Lift Station - Looking down at Elev. 50'-0" and 42'-0" from Elev. 62'-0" (right).



Project Engineer/Manager Erich Klun

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/29/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

	Emergency replacement of original 1930 steel grating and structural steel in the Low Lift Station, Pump House Cable Vault and Garage basement (5 locations total).
	Emergency replacement of original 1930 steel grating and structural steel in the Low Lift Station, Pump House Cable Vault and Garage basement (5 locations total).
•	Maintaining system operations during construction and eliminating the potential for flooding the Low Lift Station during construction. LOTO of low lift pumping units for diver work associated with plugging the suction line to pump Nos. 9 and 10.
• •	Work was originally included in CS-1474, but due to reconsideration of system demands and putting SP-569 on hold, the structural improvements were necessary to protect the safety of operators and others working on-site.
Related Project	Low Lift and High Lift Pumping Improvements at Springwells (CS-103).
Lookup Driver	5 - Public Health & Safety
•	Replacement of structural steel in the Low Lift Station required the demolition of pump Nos. 9 and 10, as well as the replacement of sump pump S1 and S2.



Springwells Water Treatment Plant Emergency Grating Replacement

PM Weighted Score

100

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

RC Weighted Score

100

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

114015 CIP#

Springwells Water Treatment Plant Emergency Grating Replacement

Phase Design and Build				Contract NA				Status Active			
Title Emergency G	rating Re	eplacement a	t Springwells \	WTP							
Contract No. is SCF	P-DB-112	- Projects Cap	italized/Expe	ensed @FY	18 \$2,533K						
Phase Budget Water											
Phase Status Active				Funding Source Bond Proceeds							
Start Date 5/1/20			/2017	Fund Construction Bond Fu					nd Fund		
End Date	8/27,	/2018	Useful Life >20Yrs? Yes								
Cost I	Estimatio	n Information			Tot. Fed	eral Loan Aı	mount				
	5	Cost Est. C	lass	Program/Allowance Task Information							
1/1	1/1/2017 Co		ate	Project Manager							
GLWA		Cost Est. S	ource	CIP Number							
GLWA	Cost Est. P	repared By	Descr	ription							
Cost Type Fiscal Year		Fiscal Year	Expense	Expense Fring		Benefit NonPersonne		Comment			
Design-Build F		=Y19	9	718		2	2020CIP				
Task		Start Date	End Date	Duration	n						
Scope Development		1/30/2016	4/29/2016		90						
Procurement		4/30/2016	4/30/2017	3	365						
Project Execution		5/1/2017	12/27/2018	ć	505						
Project Closeout		10/2/2018	12/27/2018		86						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	7	'18 O	0	0	0	0	0	718			

Springwells Water Treatment Plant Emergency Grating Replacement

hase GLWA Em	ployees	Projec	t managen	nent		C	ontract N	A	St	atus	Active		
fle GLWA Salc	aries												
Phase Budget	Water							Cost Alloc	cation CTA	CTA			
Phase Status	Active							Funding S	ource Bor	nd Pro	oceeds		
Start Date									Fund Co	nstruc	ction Bor	nd Fund	
End Date							U	seful Life >2	20Yrs? No				
Co	ost Estima	tion Ir	nformation				Tot. Fede	eral Loan Ar	nount				\$0
	5		Cost Est. C	lass			Pro	gram/Allow	ance Tasl	k Info	rmation		
	1/1/2017		Cost Est. De	ate	Project Manager								
GLWA			Cost Est. Sc	ource	CIP	Nun	nber						
GLWA			Cost Est. Pr	epared By	Des	crip	tion						
0 17			137	_			D (1)	D					
Cost Typ	oe	Fi	scal Year	Expens	e Fri	nge	BenefilNo	nPersonne		Com	ment		
SLWA Salaries C	IP2020	FY1	9		\$8		3	0					
Prior Yr Actual	ls FY	′19	FY20	FY21	FY22		FY23	FY24	FY25+	-	Total		
		11	0	0		0	0	0	(0	11		

114015 CIP#

Springwells Water Treatment Plant Emergency Grating Replacement

Phase not applicable					Contract	NA		Stat	tus Closed	Out		
Title Prior Year Actual	Expense	es										
Phase Budget Water				Cost Allocation CTA								
Phase Status Closed	d Out						Funding S	Source				
Start Date				Fund								
End Date				Useful Life >20Yrs?								
Cost Estin	mation Ir	nformation			Tot. Fe	eder	al Loan A	mount				
	5	Cost Est. C	lass		J	Prog	ram/Allov	vance Task	Information			
1/1/20	17	Cost Est. D	ate	P	roject Manag	er						
GLWA		Cost Est. S	ource	C	CIP Number							
GLWA		Cost Est. P	repared By	D	escription							
Cost Type	Fi	iscal Year	Expens	e	Fringe Benefit	Non	Personne	C	Comment			
Construction	FY1	8-	\$2	2,430				FY18				
Engineering Services	FY1	8-		\$32				FY18				
Unknown	FY1	8-		\$254				FY17				
GLWA Salaries CIP2020) FY1	8-		\$18	3			FY18				
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY23		FY24	FY25+	Total			
2,737									2,737			
		P	hase Total Ex	(pense	es By FY (All fig	jure	s are in \$1	,000's)				

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		500	2,000						0	0	2,500
2019	0	254	2,507	11						0	2,772
2020	0	0	2,737	729	0	0	0	0	0	0	3,466

114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ✓



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/1/2018

Year Project Added to CIP 2018

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center

Project Significance The existing concrete pavement that covers the 1958 settled water conduits is failing and requires replacement. The existing pavement is severely deteriorated and is crumbling in several areas. This pavement is a service road that provides vehicular access to the 1958 filter building. This paved service road also serves as the roof to the settled water conduit that feeds process water to the 1958 filters.

Scope of Work Remove existing concrete pavement and replace with new concrete pavement around the entire 1958 filter building at the Springwells Water Treatment Plant.

Challenges Equipment limits on the settled water conduit and not damaging the structure concrete of the settled water conduit.



Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

PM Weighted Score

40.6

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

RC Weighted Score

36.6

Score	Comment
4	
1	
1	
1	
3	
1	
2	
1	
	Score 4 1 1 3 1 2

114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

\$0
_

0

2020

0

GLWA FY 2020-2024 CIP

114016 CIP#

862

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

Phase GLWA Emplo	yees Pro	oject manager	ment		C	Contract N	Ą	Statu	s Future Pla	inned Start
Title GLWA Salaries	5									
Phase Budget Wa	ter						Cost Allo	cation CTA		
Phase Status Futi	ure Plani	ned Start					Funding S	ource Bond	Proceeds	
Start Date								Fund Const	ruction Bond	Fund
End Date						U	seful Life >2	20Yrs?		
Cost E	stimatio	n Information				Tot. Fede	ral Loan Aı	mount		\$0
	5	Cost Est. C	lass			Prog	gram/Allov	vance Task Ir	nformation	
1/1,	/2018	Cost Est. D	ate	P	roject	t Manager				
GLWA		Cost Est. S	ource	С	IP Nu	mber				
GLWA		Cost Est. P	repared By	D	escrip	otion				
Cost Type		Fiscal Year	Expens	e	Fringe	e BenefitNoi	nPersonne	Co	omment	
GLWA Salaries CIP20	020	FY20		\$4		2	02	2020CIP		
GLWA Salaries CIP20	020	FY21		\$4		2	02	2020CIP		
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total	
		6	6						12	
		P	hase Total Ex	(pense	es By I	FY (All figure	es are in \$1	,000's)	,	
Proie	ect Toto	al Expenses	By FY Co	mpai	red t	o Prior CI	Ps (All fic	ures are i	n \$1,000's)	
CIP EV14	EV17		EV10	EY20				V23 EV2		Total

656

206

Springwells Water Treatment Plant Flocculator Drive Replacement

Innovation
Water MP Right Sizing
Reliability/Redundancy
NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ✓



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/1/2018

Year Project Added to CIP 2018

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center

	The existing flocculator drives (20 total) are beyond useful service life and required replacement to maintain reliable flocculation.
Scope of Work	Replace flocculator drive units, realign drive shafts, and replace mechanical seals at shaft wall penetrations.
Challenges	Maintenance of plant operations during construction.
Lookup Driver	1 - Condition
Explanation	Existing flocculator drivers are beyond the useful service life



Springwells Water Treatment Plant Flocculator Drive Replacement

PM Weighted Score

43.8

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

RC Weighted Score

47

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

Springwells Water Treatment Plant Flocculator Drive Replacement

'hase GLWA Emplo 'itle GLWA Salaries	•	roject manage	ment		C	ontract N	A	Sta	tus Future f	Planned St	art				
Phase Budget Wa	Phase Budget Water						Cost Allocation CTA								
Phase Status Fut	ure Pla	nned Start			Funding Source Bond Proceeds										
Start Date								Fund Cons	struction Bor	nd Fund					
End Date						U	seful Life >2	20Yrs? Yes							
Cost E	stimati	on Information				Tot. Fede	eral Loan Ar	mount			\$0				
	5 Cost Est. Class				Program/Allowance Task Information										
1/1,	/2018	Cost Est. D	ate	Р	Project Manager										
GLWA		Cost Est. S	ource	C	CIP Number										
GLWA		Cost Est. P	repared By	D	escrip	otion									
Cost Type		Fiscal Year	Expens	е	Fringe	e BenefitNoi	nPersonne	(Comment						
GLWA Salaries CIP2	020	FY22		\$7		3	02	2020CIP							
GLWA Salaries CIP2	020	FY23		\$10		4	02	2020CIP							
GLWA Salaries CIP2	020	FY24		\$3		1	02	2020CIP							
Prior Yr Actuals	FY1	9 FY20	FY21	FY	22	FY23	FY24	FY25+	Total						
					10	14	4		28						



Springwells Water Treatment Plant Flocculator Drive Replacement

Phase Construction					Co	ntract T	BD	Sta	tus Future I	Planned Start		
Title SPW WTP Floc	culator D	rive Replacen	nent									
Phase Budget Wo	ıter						Cost Alloc	cation CTA				
Phase Status Fut	ure Planr	ned Start					Funding S	ource Bond	d Proceeds			
Start Date				Fund Construction Bond Fund								
End Date				Useful Life >20Yrs? Yes								
Cost	: :stimatio	n Information				Tot. Fed	eral Loan Ar	mount		\$0		
	5	Cost Est. C	lass			Pro	gram/Allow	ance Task	Information			
1/1	/2018	Cost Est. D	ate	P	roject <i>N</i>	Nanager						
GLWA		Cost Est. So	ource	C	IP Num	ber						
GLWA		Cost Est. Pi	repared By	D	escript	ion						
					1							
Cost Type		Fiscal Year	Expense	9	Fringe	BenefitNo	nPersonne	(Comment			
Construction	F	-Y23	\$2	,300			2	2020CIP				
Task		Start Date	End Date	Dur	ation							
Scope Developmer	nt	11/1/2019	1/15/2020		75							
Procurement		1/16/2020	7/16/2020		182							
Project Execution		7/17/2020	6/30/2021		348							
Project Closeout		7/1/2021	10/1/2021		92							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total			
						2,300			2,300			
		P	hase Total Ex	pense	es By FY	(All figur	es are in \$1,	.000's)				
Proje	act Tota	al Evnences	By EV Co	mna	rod to	Prior C	IDs (All fig	ures are	in \$1,000'	(c)		

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0					10	2,314	4		2,328



115001 CIP#

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

☐ Innovation✓ Water MP Right Size✓ Reliability/Redund✓ NEWTP Repurposit	dancy Project New To CIP	Pumps and Pipii	ng
Project Engineer/Mar	nager Timothy Kuhns	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 4/23/2007	Class Lvl 3	Water Works Park
Year Proje	ect Added to CIP 2007	Location	City of Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	Most of the existing yard piping is greater the in a more efficient configuration.	an 100 years old and requires	replacement with new piping installed
Scope of Work	Much of the yard piping and valve system of the Water Treatment Plant does not have fu oversized and non-functioning. Replaceme	nctioning production flow me	tering as the existing equipment is
Challenges	Complicated sequence of construction, an with 84" between Water Works Park and Norwork is unknown.		
Lookup Driver	1 - Condition		

Other Important Info | This project is being coordinated with the new Waterworks Park to Northeast Transmission Main

Explanation Yard piping is long past its design service life and there is a history of leaks and breaks.

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

PM Weighted Score

58.6

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

RC Weighted Score

65.4

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

115001 CIP#

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

Phase Construction					Co	ntract	NA	\		Statu	s Future I	Planned Start
Title WWP WTP Yard	Piping,	Valves and V	enturi Meters	Repl	aceme	nt						
Phase Budget Wate	er							Cost Allo	cation	TA		
Phase Status Futur	e Plann	ed Start						Funding S	ource B	ond F	Proceeds	
Start Date		11/19,	/2018						Fund C	Constr	uction Bor	nd Fund
End Date		7/23	/2021				Us	seful Life >2	20Yrs? Y	es		
Cost Est	timatior	n Information				Tot. Fed	der	al Loan Aı	mount			
	4	Cost Est. C	lass			Pı	og	ram/Allov	vance To	ask In	formation	
		Cost Est. D	ate	P	roject <i>l</i>	Manage	•					
		Cost Est. S	ource		CIP Num	ber						
		Cost Est. P	repared By		escript	ion						
Cost Type		Fiscal Year	Expense)	Fringe	BenefitN	on	Personne		Cc	mment	
Construction	F	Y20	\$16	,739								
Construction	F	Y21	\$16	,871								
Construction	F	Y22	\$16	,999								
Task		Start Date	End Date	Dui	ation							
Scope Development		3/26/2016	3/31/2019		1100							
Procurement		4/1/2019	11/17/2019		230							
Project Execution		11/18/2019	11/12/2021		725							
Project Closeout		11/13/2021	2/11/2022		90							
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY25	+	Total	
		0 16,739	16,871	1	5,999	()	0		0	50,609	

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

Phase Study and D Fitle CS-055, AECC	0			nd Ver		intract eters Rep			5	itatus	Active		
Phase Budget Wo	ater	·					(Cost Alloc	cation C	ГА			
Phase Status Ac	tive						F	unding S	ource Bo	nd Pi	roceeds		
Start Date		5/22,	/2017						Fund Co	onstru	uction Bor	nd Fund	
End Date		7/23,	/2021				Use	eful Life >2	20Yrs? Y∈	es			
Cost	Estimatio	n Information				Tot. Fed	dera	ıl Loan Ar	mount				
	1	Cost Est. C	lass			Pr	ogro	am/Allow	vance Ta	sk Inf	ormation		
		Cost Est. D	ate	Pı	oject <i>l</i>	Manager	r						
		Cost Est. S	ource	С	IP Num	ber							
			repared By	D	escript	ion							
Cost Type		Fiscal Year	Expense	Э	Fringe	BenefilN	lonP	'ersonne		Cor	mment		
Engineering Service	es F	-Y19		\$838									_
Engineering Service		Y20		\$533									_
Engineering Service		Y21		\$401									-
Engineering Service	es F	Y22		\$273									
Task		Start Date	End Date	Dur	ation								
Scope Developme	nt	3/26/2016	6/24/2016	•	90								
Procurement		6/25/2016	6/25/2017	,	365								
Project Execution		6/26/2017	11/12/2021		1600								
Project Closeout		11/13/2021	2/11/2022		90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23		FY24	FY25+		Total		
	8	338 533	401		273	()	0		0	2,045		

Prior Yr Actuals

FY19

61

FY20

61

FY21

61

GLWA FY 2020-2024 CIP

115001 CIP#

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

Phase GLWA Employees F	Project manager	nent		Contract N	Status	Active		
Title GLWA Salaries								
Phase Budget Water					Cost Allocation	on CTA		
Phase Status Active					Funding Source	Bond Pro	oceeds	
Start Date			Fund				ction Bond Fund	
End Date				l	Jseful Life >20Yr	s? No		
Cost Estimat	tion Information			Tot. Fede	eral Loan Amou	nt		\$0
4	Cost Est. C	lass		Pro	gram/Allowand	e Task Info	ormation	
1/1/2015	Cost Est. D	ate	P	roject Manager				
CDM Smith	Cost Est. Se	ource		CIP Number				
CDM Smith	Cost Est. P	repared By	D	escription				
Cost Type	Fiscal Year	Expense	;	Fringe BenefitNo	nPersonne	Com	nment	
GLWA Salaries CIP2020	FY19	·	\$42	17	2			
GLWA Salaries CIP2020	FY20		\$42	17	2			
GLWA Salaries CIP2020	FY21		\$42	17	2			
GLWA Salaries CIP2020	FY22		\$42	17	2			
GLWA Salaries CIP2020	FY23		\$0	0	0			

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

FY23

0

FY24

0

FY25+

0

Total

244

FY22

61

Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters

Phase not applica	able				C	Contract N	1A	Sta	tus Closed	Out
Title Prior Year A	ctual Expe	enses								
Phase Budget V	Vater						Cost Allo	cation CTA		
Phase Status C	Closed Ou	ıt					Funding S	ource		
Start Date								Fund		
End Date						ı	Useful Life >:	20Yrs?		
Cos	st Estimatio	on Information				Tot. Fed	eral Loan A	mount		
	4	Cost Est. C	Class			Pro	ogram/Allov	vance Task	Information	
1,	/1/2015	Cost Est. D	ate	Р	rojec	t Manager				
CDM Smith		Cost Est. S	ource	C	IP Nu	ımber				
CDM Smith		Cost Est. P	repared By	D	escri	ption				
Cost Type	е	Fiscal Year	Expens	е	Fring	e BenefitNo	onPersonne	(Comment	
Engineering Servi	ces	FY18-		\$655				FY18		
Unknown		FY18-		\$9				FY17		
GLWA Salaries CIF	P2020	FY18-		\$12		5	1	FY18		
Prior Yr Actuals	FY1	9 FY20	FY21	FY:	22	FY23	FY24	FY25+	Total	
68	82								682	
		P	hase Total E	xpense	es By	FY (All figur	es are in \$1	,000's)		
Desc	to all Tal	lad Even a nage	D. FV Ca			Dullan C	ID. / AII C.		!m ¢1 000!	

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

									T	, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			5,500	27,900	20,500				0	0	53,900
2019	0	9	412	968	20,771	34,466	14,397	28		0	71,051
2020	0	0	682	899	17,333	17,333	17,333	0	0	0	53,580

Explanation Not provided.

GLWA FY 2020-2024 CIP

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

☐ Innovation	Project Status Active	Waterworks Park W	TP
☐ Water MP Right Size	cip Type Project		
☐ Reliability/Redund	dancy		
□ NEWTP Repurposi	Project New To CIP		
Project Engineer/Mar	nager Grant Gartrell	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class LvI 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared 6/26/2014	Class LvI 3	Water Works Park
Year Proje	ect Added to CIP 2014	Location	City of Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	A condition assessment of Waterworks Park Wareconstruction. Condition assessment is needed		
Scope of Work	A condition assessment of Waterworks Park Wareconstruction. Continued and periodic inspector production system, especially given the reliance Service Area.	tion of the Water Treatmer	nt Plant is needed to maintain a reliable
Challenges	Coordinating shutdowns required for condition	assessment inspections.	
Project History	n/a		
Related Project	Yard Piping, Valves and Venturi Meters Replace	ement	
Lookup Driver	1 - Condition		
Other Important Info	Contract No. 147 with Hubbell, Roth & Clark is u	nderway.	

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

C	PM	Weighted
3core		Score

38

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

RC Weighted Score

35.6

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

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

ase Budget Wa	ter					Cost Alloc	ation CTA	CTA				
Phase Status Act	rive				ed Capital							
Start Date				Fund Improvement & Exte								
End Date					U	OYrs? No	? No					
Cost E			Tot. Fede	ral Loan An	nount		\$0					
	5	Cost Est. CI	ass	Program/Allowance Task Information								
1/1,	/2016	Cost Est. Do	ıte	Project	Manager							
GLWA .		Cost Est. So	urce	CIP Nu	mber							
GLWA	VA Cost Est. Prepared By			Description								
GLWA		Cost Est. Pro	epared By	Descrip	Dilon							
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total				

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Phase Study						Co	ontract N	IA		Stat	us Active			
itle Comprehe	nsive	Condi	tion Assessme	ent at Waterw	orks F	Park WT	Р							
CS-147, HRC														
Phase Budget	Water							Cost Allo	СТА					
Phase Status	Active)						nue Financ	ed Capito	ıl				
Start Date			8/2	/2017	Fund Improvement & Extension Fun								Fun	
End Date			8/2	/2019	Useful Life >20Yrs? No									
Со	st Estii	mation	Information		Tot. Federal Loan Amount									
		5	Cost Est. C	Class			Pro	gram/Allov	vance	Task I	nformation			
	Cost Est. Date						Project Manager							
	Cost Est. Source					CIP Number								
			Cost Est. P	repared By	Description					·				
Cost Typ	oe Oe		Fiscal Year	Expense	e Fringe BenefilNonPersonne					С	omment			
Engineering Serv		F	Y19	·	262									
Engineering Serv	ices	F'	Y20	\$	153									
Task			Start Date	End Date	Dur	ation								
Scope Developn	nent													
Procurement														
Project Executior	oject Execution 8/2/2017 8/2/20				9 730									
Project Closeout	ect Closeout 8/5/2019 10/1/20													
Prior Yr Actual	S	FY19	FY20	FY21	FY:	22	FY23	FY24	FY2	5+	Total			
		20	52 153	0		0	0	0		0	415			
			_						0001.					

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Phase not applied	able				C	Contract N	A	Stat	tus Closed (Dut		
itle Prior Year Ac	ctual Expe	enses										
Phase Budget W	/ater						Cost Alloc	cation CTA				
Phase Status C	losed Ou	ıt					Funding S	ource				
Start Date								Fund				
End Date				Useful Life >20Yrs?								
Cost	Cost Estimation Information					Tot. Fede	eral Loan Ar	nount		\$0		
	lass	Program/Allowance Task Information										
1/	1/1/2016 Cost Est. Date				roject	Manager						
GLWA		Cost Est. So	ource	CIP Number								
GLWA		Cost Est. Pi	epared By	Description								
Cost Type)	Fiscal Year	Expens	е	Fringe	e BenefitNo	nPersonne	C	Comment			
ngineering Servic	ces	FY18-		\$430			F	Y18				
GLWA Salaries CIP	2020	FY18-		\$7		3	0 F	Y18				
Prior Yr Actuals	FY1	9 FY20	FY21	FY	22	FY23	FY24	FY25+	Total			
44	0								440			
		P	nase Total E	kpense	es By I	FY (All figure	es are in \$1,	000's)	-			
			D E V/ O							_		

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1.000's)

	rioje	ci ioiai i	-Apenses	, , , , , ,	ompare	a io i iio		n ngores	are in γ	,000 3)		
CIP	FY16 FY17		FY18	FY19	FY20 FY21		FY22	FY23	FY24	FY25	Total	
2018		200	375						0	0	575	
2019	0		131	262	153					0	546	
2020	0	0	440	262	153	0	0	0	0	0	855	

Works Park Water Treatment Plant Chlorine System Upgrade

Great Lakes Water Authority	Water Works Parl
☐ Innovation	Project Status Active
☐ Water MP Right Sizing	CIP Type Project
☐ Reliability/Redundancy	
☐ NEWTP Repurposing	Project New To CIP
Project Engineer/Manager T	odd King
Manager (Grant Gartrell
Managing Dept $^{\lor}$	Vater Eng
Date Original Business Case	Prepared 3/17/2017
Year Project Add	led to CIP 2017

The Water Works Park Chlorine System has experienced several leaks and requires complete replacement. The Water Works Park storage room will have an updated scrubber system to neutralize up to 4000 lbs. of chlorine gas



Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Water Works Park

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance	WWP Chlorine System has experienced numerous leaks and has compromised the safety of plant
·	Demolition and replacement of all mechanical systems, equipment and piping related to chlorine transport, vaporization and application. New chlorine system will be able to meet current dose rates and be able to meet future loadings estimated for WWP after the Northeast WTP treatment system is taken off line.
Challenges	It will be critical for the contractor to phase the work to provide ongoing chlorine application during the retrofit.
. ,	The WWP facility began serving customers with finished water in 2003. More recently, the chlorine system has had one major leak and several minor leaks on a recurring and more frequent basis. Since chlorine is a highly toxic material, yet integral for providing finished water in accordance with the Safe Drinking Water Act, a study and design project was initiated under the CIP allowance as project CS-1721. This construction project will be based on the study and design conducted under that work. In addition, the original design was oversized relative to the current operating conditions and resulted in operational problems due to the turndown required.

Lookup Driver 1 - Condition

WTP treatment process.

completion as of March 2017. Also, this project must be completed prior to the decommissioning of the Northeast

Related Project CS-1721 is the study and design project for this proposed work. It is currently underway and at 50% design



Water Works Park Water Treatment Plant Chlorine System Upgrade

PM Weighted Score

85.8

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

RC Weighted Score

84

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

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

Phase GLWA Emplo	•	rojec	t manager	ment			Contract N.	A	Stat	tus Active						
Title GLWA Salaries																
Phase Budget Wa	ter							Cost Allo	cation CTA							
Phase Status Act	rive															
Start Date						Fund Construction Bond Fund										
End Date	End Date							Useful Life >20Yrs? No								
Cost E	on In	formation		Tot. Federal Loan Amount \$0							0					
	5 Cost Est. Class						Program/Allowance Task Information									
1/1/	/2016		Cost Est. D	ate	Р	Project Manager										
GLWA			Cost Est. S	ource	C	CIP Nu	mber									
GLWA			Cost Est. P	repared By	D	Description										
Cost Type		Fis	cal Year	Expens	e	Fring	e BenefitNo	nPersonne	C	Comment						
GLWA Salaries CIP20	020	FY19)		\$5		2	0								
GLWA Salaries CIP20	020	FY20)		\$5		2	0								
GLWA Salaries CIP20	VA Salaries CIP2020 FY21						0	0								
Prior Yr Actuals	FY1	9	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total						
		7	7	1		0	0	0	0	15						

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

Phase not applicable Contract NA Status Closed Out Prior Year Actual Expenses **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** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By **GLWA** Fiscal Year Fringe BenefitNonPersonne Cost Type Comment Expense Construction FY18-FY18 \$2,013 **Engineering Services** FY18-\$135 FY18 FY18-\$371 FY17 Unknown GLWA Salaries CIP2020 FY18-FY18 \$6 2 Prior Yr Actuals Total FY19 FY20 FY21 FY22 FY23 FY24 FY25+ 2,527 2,527

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

Contract NA **Status** Under Procurement **Phase** Construction Title Water Works Park WTP Chlorine System Upgrade CON-208, **Phase Budget** Water Cost Allocation CTA **Phase Status** Under Procurement Funding Source Bond Proceeds Start Date 9/1/2017 **Fund** Construction Bond Fund **End Date** 6/8/2020 Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2017 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith Cost Type Fiscal Year Fringe BenefitNonPersonne Expense Comment Construction FY19 \$4,051 \$1,940 FY20 Construction Task Start Date End Date Duration Scope Development 7/18/2017 10/16/2017 90 1/9/2018 84 Procurement 10/17/2017 **Project Execution** 4/10/2020 821 1/10/2018 Project Closeout 4/11/2020 7/10/2020 90 FY20 FY21 FY22 FY23 Prior Yr Actuals FY19 FY24 FY25+ Total 4,051 1,940 0 0 0 0 0 5.991

GLWA Great Lakes Water Authority

2018

290

700

8,700

GLWA FY 2020-2024 CIP

Water Works Park Water Treatment Plant Chlorine System Upgrade

Phase Design & C Title CS-1721 Wa			orine Svstem U	parac		ontract	CS	-1721		Statu	s Act	ive			
CDM			,	, 0. 5. 6											
Phase Budget W	/ater			Cost Allocation CT											
Phase Status A	ctive			Funding Source							Bond Proceeds				
Start Date		7/8	3/2016	Fund Construction Bond Fund									und		
End Date		1/2	5/2018	Useful Life >20Yrs? Yes											
Cos	t Estimatio	on Information		Tot. Federal Loan Amount											
	5	Cost Est.		Program/Allowance Task Information											
1,	1/1/2016 Cost Est. Date						_			TOOK III					
			IP Nur	Manage nher											
	GLWA Cost Est. Source						Description								
GLWA		Cost Est.	Prepared By	D	escrip	tion									
Cost Type		Fiscal Year	Expense		Fringe	Benefit	lor	Personne		Сс	ommer	n†			
Engineering Servic	ces	FY19		\$138											
Engineering Servic	ces	FY20		\$100											
Task		Start Date	End Date	Dur	ation										
Scope Developm	ent	4/6/2015	7/5/2015		90	O									
Procurement		7/6/2015	7/5/2016		36	5									
Project Execution		7/6/2016	4/10/2020		1374	4									
Project Closeout		4/11/2020	7/10/2020		90)									
Prior Yr Actuals	FY19	9 FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Total				
		138 10	0 0		0		0	0		0	2	238			
			Phase Total Ex	pense	es By F	Y (All fig	ure	s are in \$1	,000's)						
Pro	ject Tot	al Expense	s By FY Co	mpai	red to	Prior (CIF	Ps (All fig	jures	are ir	1 \$1,0	00's)			
CIP FY16	FY1		FY19	FY20		Y21			Y23	FY2		FY25	T	otal	

0

0

9,690

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0	371	672	3,124	2,878	4				0	7,049
2020	0	0	2,527	4,196	2,047	1	0	0	0	0	8,771

WWP WTP Building Ventilation Improvements

□ Innovation	Project Status Active		
☐ Water MP Right Si	zing CIP Type Project		
☐ Reliability/Redund	dancy Project New To CIP ✓		
☐ NEWTP Repurposi	ng Troject New to Cit 🗷		
Project Engineer/Ma	nager Mike Dunn	Budget	Water
Ма	nager Terry Daniel	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities
Date Original Busines	ss Case Prepared	Class LvI 3	Water Works Park
Year Proj	ect Added to CIP 2018	Location	City of Detroit
		Fund and Cost Center	Water - 5519-882111
Project Significance	Design and construction of ventilation sys generator and destruct rooms at the Wat safety.	•	
Project History	Needs for this project were identified duri	ng the Contract CS-147 conditio	n assessment work.
Lookup Driver	5 - Public Health & Safety		



WWP WTP Building Ventilation Improvements

PM Weighted Score

76

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

RC Weighted Score

76

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



WWP WTP Building Ventilation Improvements

115005 CIP#

GLWA FY 2020-2024 CIP

hase GLWA Em	ployees	Projec	t manager	ment	Contract NA				Stat	rus Active		
itle GLWA Salc	aries											
Phase Budget	Water							Cost Alloc	cation CTA			
Phase Status	Active							Funding So	ource Bond	l Proceeds		
Start Date									Fund Cons	truction Bo	nd Fund	
End Date							U	seful Life >2	OYrs? Yes			
Co	Cost Estimation Information						Tot. Fede	eral Loan An	nount			\$0
	5		Cost Est. C	lass			Pro	gram/Allow	ance Task	Information		
	1/1/2018		Cost Est. D	ate	Р	rojec	t Manager					
HRC		J	Cost Est. S	ource	C	CIP Nu	mber					
HRC			Cost Est. P	repared By	D)escri	ption					
Cost Typ	oe	Fi	scal Year	Expens	е	Fring	e BenefitNo	nPersonne	C	Comment		
GLWA Salaries C	CIP2020	FY1	9		\$5		2	02	2020CIP			
GLWA Salaries C	IP2020	FY2	0		\$5		2	02	2020CIP			
GLWA Salaries C	IP2020	FY2	1		\$5		2	02	2020CIP nev	V		
Prior Yr Actual	ls F	/19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
		7	7	7		0	0	0	0	21		



WWP WTP Building Ventilation Improvements

hase Design and Bu	uild			(Contract T	BD	Sta	tus Active	
itle Emergency WV	WP WTP B	uilding Venti	lation Improv	vements					
Phase Budget Wat	er			Cost Allocation CTA					
Phase Status Acti	ve					Funding S	ource Bond	d Proceeds	
Start Date							Fund Cons	struction Bor	id Fund
End Date					l	Jseful Life >2	20Yrs? Yes		
Cost Es	stimation	Information			Tot. Fed	eral Loan Ar	mount		\$0
	5	Cost Est. C	Class		Pro	gram/Allow	ance Task	Information	
1/1/2	2018	Cost Est. D	ate	Projec	t Manager				
HRC		Cost Est. S	ource	CIP Number					
HRC		Cost Est. P	repared By	ed By Description					
Cost Type		Fiscal Year	Expense	e Fring	e BenefitNo	on Personne		Comment	
Construction		/21	·	3,500	10 DONOMI (0		2020CIP	30111110111	
Construction	FY	(22		\$500		2020CIP			
Engineering Services	; FY	/20		\$500		2	2020CIP		
Engineering Services	F)	/21		\$400		7	2020CIP		
Engineering Services	s F	122		\$150		2	2020CIP		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 500	3,900	650				5,050	
		Р	hase Total Ex	cpenses By	FY (All figur	es are in \$1,	000's)	1	
Proio	ct Tota	Evnenses	RV EV Co	mpared	to Prior C	IDe (All fie	uros aro	in \$1 000'	e)

Project Total Expenses By	/ FY Com	pared to P	rior CIPs (All figures are	in S	1.000's)
----------------------------------	----------	------------	-------------	-----------------	------	----------

				,						.,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		7	507	3,907	650	0	0	0	5,071

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
✓	NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP \Box

Crown cracks are especially concerning in the Springwells Raw Water Tunnel



Project Engineer/Manager Todd King

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/11/2015

Year Project Added to CIP 2016

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 General Purpose

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Project critical to production at Springwells WTP during repurposing of Northeast WTP as recommended by the 2015 WMPU. Contract CS-1623 identified problem areas on the raw water supply system that compromised the system's ability to meet demands during the repurposing of Northeast WTP.

Scope of Work The scope of work is to conduct supplemental investigations to design the repairs for the sections of tunnel identified in CS-1623 as having structural concerns. Three areas were identified with the highest concern being a portion of the Springwells Tunnel near the Springwells WTP.

Challenges The tunnels are approximately 80 feet below the surface of the Detroit River. This poses challenges for assessing the extent of damage to the structures, as well as repair. Dewatering the tunnels to repair them will create extensive stresses that must be considered prior to performing the work. Maintaining a supply of raw water to Springwells, Northeast and Water Works Park throughout construction to meet finished water production requirements/demands of the system. Specialized/complicated construction.

Project History Portions of the Raw Water Tunnel system are approaching 100 years of service. The Northeast Tunnel failed catastrophically in the late 80s due to infiltration of sand through cracking. This project is based on the recommendations of CS-1623, currently underway, which is inspecting all GLWA raw water tunnels.

Related Project CS-1623 is currently being completed. This project is a predecessor project to allow for the repurposing of NE WTP.

Lookup Driver 1 - Condition

Other Important Info n/a

Explanation Failure of the affected raw water tunnels could impact as much as 50% of the GLWA customers.

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

PM	Weighted
	Score

85.6

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

RC Weighted Score

0

Criteria	Score	Comment
Condition		
Condition		
Financial		
O&M		
Performance (Service Level/Reliability)		
Public Benefit		
Public Health & Safety		
Regulatory (Environmental/Legal)		

GLWA FY 2020-2024 CIP

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

hase GLWA Em	Projec	ct manager	nent		Contract	Sta	Status Active						
tle GLWA Salo	aries												
Phase Budget	e Budget Water					Cost Allocation CTA							
Phase Status	Active				Funding Source Bond Proceeds								
Start Date					Fund Construction Bond Fund								
End Date					Useful Life >20Yrs? No								
Cost Estimation Information						Tot. Fe	ederal Loan A	mount		\$0			
4 Cost Est. Class					Program/Allowance Task Information								
1/1/2016 Cost Est. Date				ate	Project Manager								
FKE Cost Est. Source			ource	C	CIP Number								
FKE			Cost Est. Prepared By			escription							
Cost Typ	oe	Fi	scal Year	Expens	e	Fringe Benefit	NonPersonne	(Comment				
SLWA Salaries C	IP2020	FY1	9		\$84	33	4						
GLWA Salaries CIP2020		FY2	0	\$8		33	4						
GLWA Salaries CIP2020		FY2	1		\$84	33	4						
GLWA Salaries CIP2020		FY2	FY22		\$84	33	4						
GLWA Salaries CIP2020		FY2	3	\$83		33	4						
Prior Yr Actua	ls FY	19	FY20	FY21	FY:	22 FY23	FY24	FY25+	Total				

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

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

Phase not applic		Contract NA					itus C	Closed	Out						
Title Prior Year A	Actual Ex	pense:	S												
Phase Budget Water						Cost Allocation CTA									
Phase Status	hase Status Closed Out					Funding Source									
Start Date	tart Date					Fund									
End Date					Useful Life >20Yrs?										
Co	formation	Tot. Federal Loan Amount													
4 Cost Est. Class						Program/Allowance Task Information									
1/1/2016 Cost Est. Date					Project Manager										
FKE Cost Est. Source					C	IP Nun	nber								
FKE	epared By	D	escrip	lion											
Cost Typ	Expens	se Fringe Benefil NonPersonne) (Comm	ent							
Construction		FY18	3-	\$2					FY18						
Jnknown		FY18	}-		\$10				FY17						
GLWA Salaries CIP2020			Y18-			\$4 1		(0 FY18						
Prior Yr Actual	s F	′19	FY20	FY21	FY2	22	FY23	FY24	FY25+	To	tal				
2,1	2,178									1	2,178				

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

Phase Design an	nd Build				Со	ntract	DB-150		Stat	tus Activo	е		
Title DB-150 Pen	nnsylvania,	Springwells and	d Northeast R	aw W	ater Su	pply Tur	nnel Improv	ement	S				
Phase Budget	Water						Cost All	ocatio	n CTA				
Phase Status	Active			Funding Source Bond Proceeds									
Start Date				Fund Construction Bond Fund							und		
End Date							Useful Life	>20Yrs	? Yes				
Co	st Estimatio	on Information		Tot. Federal Loan Amount									
	4	Class	Program/Allowance Task Information										
	1/1/2016	ate	Project Manager										
FKE					CIP Number								
FKE					By Description								
Cost Typ	ре	Fiscal Year	Expense)	Fringe	Benefit	IonPersonn	Э	C	Comment			
Cost Typ Design-Build	pe	Fiscal Year FY19	·	e ,392	Fringe	BenefitN	IonPersonn	2020		Comment			_
	oe .		\$7		Fringe	Benefit	IonPersonn			Comment			
Design-Build	oe	FY19	\$7 \$5	,392	Fringe	Benefit	IonPersonn			Comment			
Design-Build Design-Build	oe	FY19 FY20	\$7 \$5 \$5	,392 ,346	Fringe	BenefilN	IonPersonn			Comment			
Design-Build Design-Build Design-Build	De .	FY19 FY20 FY21	\$7 \$5 \$5 \$5	,392 ,346 ,346	Fringe	Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build	De .	FY19 FY20 FY21 FY22	\$7 \$5 \$5 \$5	,392 ,346 ,346 ,346 ,878	Fringe	Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build Design-Build		FY19 FY20 FY21 FY22 FY23	\$7 \$5 \$5 \$5 \$5 \$3	,392 ,346 ,346 ,346 ,878		Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build Design-Build Task		FY19 FY20 FY21 FY22 FY23 Start Date	\$7 \$5 \$5 \$5 \$3 End Date	,392 ,346 ,346 ,346 ,878	ation	Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build Design-Build Task Scope Developn	nent	FY19 FY20 FY21 FY22 FY23 Start Date 11/15/2016	\$7 \$5 \$5 \$5 \$3 End Date 2/13/2017	,392 ,346 ,346 ,346 ,878	ation 90	Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build Design-Build Task Scope Developn Procurement	nent	FY19 FY20 FY21 FY22 FY23 Start Date 11/15/2016 2/14/2017	\$7 \$5 \$5 \$5 \$3 End Date 2/13/2017 2/14/2018	,392 ,346 ,346 ,346 ,878	ation 90 365	Benefit	IonPersonn			Comment			
Design-Build Design-Build Design-Build Design-Build Task Scope Developn Procurement Project Execution	nent n	FY19 FY20 FY21 FY22 FY23 Start Date 11/15/2016 2/14/2017 1/25/2018 1/17/2023	\$7 \$5 \$5 \$5 \$3 End Date 2/13/2017 2/14/2018 1/16/2023	,392 ,346 ,346 ,346 ,878	ation 90 365 1817 90	Benefit N	onPersonn	2020		Comment			_

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

	Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)												
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total		
2018		500	2,000	10,000	15,000	4,900			0	0	32,400		
2019	0	10	3,625	9,042	5,468	5,468	5,468	3,998		0	33,079		
2020	0	0	2,178	7,513	5,467	5,467	5,467	3,998	0	0	30,090		

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposi	dancy	Project Status Closed CIP Type Project Project New To CIP	Transmission mo	Transmission main
Project Engineer/Ma	nager To	odd King	Budget	Water
Ma	nager G	rant Gartrell	Class Lvl 1	Water
Managing	Dept W	/ater Eng	Class LvI 2	Treatment Plants and Facilities
Date Original Busines	ss Case I	Prepared 4/27/2017	Class LvI 3	General Purpose
Year Proj	ect Add	ed to CIP 2016	Location	Multiple Counties
	·		Fund and Cost Center	Water - 5519-882111
Project Significance	Genese	critical to maintaining chlorine residual ee County and abandonment of the 72' be substantially complete by July		o the 72" main feeding Flint and esee County are off the system. Projects
Scope of Work	main in	e departure of Flint and Genesee Count creases to levels where minimum chlorir d along the 72-inch transmission main to	ne residuals cannot be mai	
Challenges		pping and line stops on 72" PCCP require pordination with operations to meet pre		·
Project History	GCDC r	morandum of understanding executed regarding a new model contract betweend GCDC, and GLWA's securing of KW	en GLWA and Flint, recipro	ocal backup water service between
Related Project	none			
Lookup Driver	5 - Publi	c Health & Safety		
Other Important Info	n/a			
Evolanation	Not pro	vided		

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Genesee and Lapeer County Transmission System Improvements

PM Weighted Score

56.2

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	0	
Financial	0	
O&M	1	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	5	

RC Weighted Score

54.6

Score	Comment
0	
0	
0	
0	
5	
5	
4	
5	
	Score 0 0 0 5 5 4

Genesee and Lapeer County Transmission System Improvements

Contract DBW-070 Phase Design and Build Status Closed Out DBW-070 Genesee and Lapeer County Transmission System Improvements DBW-070 Phase Budget Water Cost Allocation CTA Phase Status Closed Out Funding Source Bond Proceeds Start Date Fund Construction Bond Fund 2/5/2016 Useful Life >20Yrs? Yes **End Date** 9/26/2019 Tot. Federal Loan Amount **Cost Estimation Information** 5 Cost Est. Class Program/Allowance Task Information **Project Manager** 1/1/2015 Cost Est. Date **CIP Number** CDM Smith Cost Est. Source Description Cost Est. Prepared By CDM Smith

Task	Start Date	End Date	Duration
Scope Development	4/1/2017	6/30/2017	90
Procurement	7/1/2017	7/1/2018	365
Project Execution	7/2/2018	6/28/2019	361
Project Closeout	6/29/2019	9/27/2019	90

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

Phase Design			Co	ontract NA	A	Status	Closed Out
Title Genesee and Lapee	r County Trans	mission Systen	n Improveme	ents			
Phase Budget Water					Cost Allocation	СТА	
Phase Status Closed Ou	ıt			oceeds			
Start Date				ction Bond Fund			
End Date				U			
Cost Estimation	on Information			Tot. Fede	ral Loan Amount		
5					gram/Allowance	Task Info	ormation
1/1/2015	Cost Est.	Date	Project Manager				
CDM Smith	Cost Est.	Source	CIP Num				
CDM Smith	Cost Est.	Prepared By	Description				
Task	Start Date	End Date	Duration				
Scope Development							
Procurement							
Project Execution							
Project Closeout				1			

Genesee and Lapeer County Transmission System Improvements

	ployees Projec	ct managem	ent	С	Contract N	4	Statu	us Closed Ou	t	
						Cost Alloc	ation CTA			
Phase Budget										
Phase Status	Closed Out					Funding So	burce Bond	Proceeds		
Start Date						Fund Const	ruction Bond F	und		
End Date	End Date				Useful Life >20Yrs? No					
Co	st Estimation II	nformation			Tot. Fede	ral Loan Am	nount		\$0	
	5	Cost Est. Clo	ass		Prog	gram/Allow	ance Task lı	nformation		
	1/1/2015	Cost Est. Da	te	Project	Manager					
CDM Smith		Cost Est. So	urce	CIP Nu	mber					
CDM Smith		Cost Est. Pre	epared By	Descrip	otion					
Prior Yr Actual	s FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		
	'	Ph	ase Total Ex	penses By F	Y (All figure	es are in \$1,0)00's)	,		

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1.000's)

	11010	ci ioiai i	-xpcmsc.	, , , , , ,	ompare	<u>a 10 1 1101</u>		n ngores	are m q	,000	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			400	3,200	3,200				0	0	6,800
2019	0			0						0	0
2020	0	0		0	0	0	0	0	0	0	0

Explanation N/A - Pending Closeout

GLWA FY 2020-2024 CIP

122001 CIP#

Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road

☐ Innovation☐ Water MP Right Si☑ Reliability/Redund☐ NEWTP Repurposit	dancy Project New To CIP	A large water mo	ain
Project Engineer/Ma	nager Khader Hamad	Budget	Water
Ma	nager Grant Gartrell	Class LvI 1	Water
Managing	Dept Water Eng	Class Lvl 2	Field Services
Date Original Busines	ss Case Prepared 6/2/2005	Class LvI 3	Transmission System
Year Proj	ect Added to CIP 2005	Location	Macomb County
		Fund and Cost Center	Water - 5519-882411
Project Significance	Paralleling original 36" water main that is cri	tical to the supply of three cor	mmunities and has had history of breaks
Scope of Work	This project will provide for the installation of embedded concrete cylinder pipe (PCCP) Mile Road from Rochester Station to Romeo valves.	and approximately 1,070 lines	or feet of 36-inch diameter of PCCP in 24
Challenges	N/A - Pending Closeout		
Lookup Driver	N/A - Pending Closeout		

Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road

hase not applicab	ole					(Contract	NA		Sta	tus (Closed	Out		
itle Prior Year Act	ual Expe	ense	S												
Phase Budget Wo	ater								Cost Allo	cation CTA					
Phase Status Clo	osed Ou	t			Funding Source										
Start Date					Fund										
End Date	End Date					Useful Life >20Yrs?									
Cost I		Tot. Federal Loan Amount													
	lass			P	rogra	am/Allov	vance Task	Inforr	nation						
1/1	ate	P	rojec	t Manage	er										
Somat	1,1,212				CIP Number										
Somat			Cost Est. Pr	epared By	ed By Description										
Cost Type		Fis	scal Year	Expens	е	Fring	e Benefit	NonP	ersonne	(Comn	nent			
Construction		FY18	3-		\$862	862				WS-681	S-681				
ngineering Service	es	FY18	3-		\$131			WS-681			S-681				
Other		FY18	3-		\$1			Other			Other Expenses				
Inknown		FY18	3-	\$	1,611	1,611		FY17		-Y17					
Jnknown		FY18	3-	\$	1,898	FY16		FY16							
Jnknown		FY18	3-	\$29	9,062					Pre-Bifurcat	Bifurcation				
SLWA Salaries CIP2020 FY18-					\$1					2020CIP					
Prior Yr Actuals	Prior Yr Actuals FY19 FY20						FY23		FY24	FY25+	To	otal			
33.566											3	33.566			

Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road

Phase Construction	on			Co	ntract W	S-681	Statu	s Pendin	g Close-out
itle WS-681 Parc	allel 42-Inch	Main in 24 Mile	e Road from	Rochester S	tation to R	omeo Planl	k Road		
Ric-Man Detroit,	Awaiting fir	nal change ord	ler.						
Phase Budget W	Vater					Cost Alloc	cation CTA		
Phase Status P	ending Clo	se-out				Funding Sc	ource Bond	Proceeds	
Start Date		4/7/2	2014				Fund Const	ruction Bor	nd Fund
End Date		10/9/2	2016		U	seful Life >2	OYrs? Yes		
Cos	st Estimation	n Information			Tot. Fede	ral Loan An	nount		
	1	Cost Est. Cl	ass	Program/Allowance Task Information					
1,	/1/2012	Cost Est. Do	ıte	Project Manager					
Somat		Cost Est. So	urce	CIP Num	ber				
Somat		Cost Est. Pre	epared By	Descript	ion				
Task		Start Date	End Date	Duration					
Project Execution		1/1/2017	1/2/2017	1					
Project Closeout		1/3/2017	12/31/2018	727					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	0	0	
		Ph	ase Total Ex	penses By FY	' (All figure	es are in \$1,	000's)		

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

	Troject rolar Expenses by 11 Compared to Thor on 5 (All rigores are in \$1,000 5)														
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total				
2018	26926	2,367	715						0	0	30,008				
2019	0	32,571	2,813							0	35,384				
2020	0	0	33,566	0	0	0	0	0	0	0	33,566				

Explanation N/A - Active

GLWA FY 2020-2024 CIP

122002 CIP#

Replacement of Five (5) PRV Pits of Treated Water Transmission System

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redund☐ NEWTP Repurposin	dancy Project New To CIP	An example Pl	RV
Project Engineer/Mai	nager Eric Kramp	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Field Services
Date Original Busines	ss Case Prepared 3/12/2010	Class LvI 3	Transmission System
Year Proje	ect Added to CIP 2010	Location	Multiple Counties
		Fund and Cost Center	Water - 5519-882111
•	Replacement of the PRVs to enhance operab customer pressure needs	ility of the system and impro	ove control of the system to meet
·	This project will replace five existing pressure redownstream pressures. During the replacemenew sump pumps as needed, and make other	nt, the PRV pits will be upgro	
Challenges	N/A - Active		
•	Only element remaining of project is the compassociated close work paperwork is complete		e Order Number One. Once this and
Lookup Driver	N/A - Active		

122002 CIP#

Replacement of Five (5) PRV Pits of Treated Water Transmission System

Phase Construction Contract DWS-891 Status Pending Close-out DWS-891 Replacement of Five (5) PRV Pits of Treated Water Transmission System Lakeshore Global Phase Budget Water Cost Allocation CTA Phase Status Pending Close-out Funding Source Bond Proceeds Start Date Fund Construction Bond Fund 5/14/2015 **End Date** 6/30/2017 Useful Life >20Yrs? Yes **Tot. Federal Loan Amount Cost Estimation Information** Cost Est. Class Program/Allowance Task Information **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source Metco Description Cost Est. Prepared By Metco Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment \$804 2020CIP Construction FY19 Task Start Date Fnd Date Duration **Project Execution** 1/31/2018 3/31/2018 59 Project Closeout 4/1/2018 6/30/2018 90 Prior Yr Actuals FY22 FY23 FY24 FY25+ FY19 FY20 FY21 Total 0 804 \cap 0 0 0 0 804

122002 CIP#

Replacement of Five (5) PRV Pits of Treated Water Transmission System

se GLWA Emplo GLWA Salaries		t managem	ent	C	Contract N	A	Statu	us Pendin	g Close-out		
Phase Budget Wo						Cost Alloco	ıtion CTA				
Phase Status Per	nding Close	-out				Funding So	urce Bond	Proceeds			
Start Date					nd Fund						
End Date					U	seful Life >20	Yrs? No	No			
Cost E	stimation Ir	nformation			Tot. Fede	eral Loan Am	ount	\$0			
	1	Cost Est. Cl	ass	Program/Allowance Task Information							
1/1,	/2016	Cost Est. Do	ıte	Project	l Manager						
Metco		Cost Est. So	urce	CIP Nu	mber						
Metco Cost Est. Prepare				Descrip	otion						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	0	0	0	0	0	0	0				

Replacement of Five (5) PRV Pits of Treated Water Transmission System

				Contract NA Status Closed Out							
xpense	S										
						Cost Alloc	cation CTA				
Out											
			Fund								
			Useful Life >20Yrs?								
ation In	formation		Tot. Federal Loan Amount								
1	Cost Est. C	Class		Program/Allowance Task Information							
1/1/2016 Cost Est. Date											
	Cost Est. S	ource	CIP Number								
	Cost Est. P	repared By	Description								
Fis	scal Year	Expens	se Fringe BenefilNonPersonne					Comment			
FY18	8-		\$148			F	Y18				
FY18	8-		\$811			F	Y16				
FY18	8-		\$611			F	-Y17				
Unknown FY18-						F	Pre-Bifurcati	on			
Prior Yr Actuals FY19 FY20 FY21				22 FY23		FY24	FY25+	Total			
1,844								1,844			
	P	hase Total Ex	(pense	es By FY (All fig	gure	s are in \$1,	,000's)				
	Out nation Ir Fig. FY16 FY16 FY16	Cost Est. Cost Est. Cost Est. S Cost Est. P Fiscal Year FY18- FY18- FY18- FY18- FY18- FY18- FY18- FY18- FY18-	Out Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expens FY18- FY18- FY18- FY18- FY18- FY18- FY18- FY18- FY18-	Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Expense FY18-	Out Tot. F Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefi FY18- FY1	Out Out Tot. Feder Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe BenefitNon FY18- F	Cost Alloc Funding S Useful Life >2 Ination Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefit NonPersonne FY18- FY1	Cost Allocation CTA Funding Source Fund Useful Life >20Yrs? Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefit NonPersonne FY18- FY18- S148 FY18- FY18- FY18- S611 FY17- FY18- \$274 Pre-Bifurcati	Cost Allocation CTA Funding Source Fund Useful Life >20Yrs? Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe BenefitNonPersonne Comment FY18- FY1	Cost Allocation CTA	

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	1015	1,205							0	0	2,220
2019	0	1,697	670							0	2,367
2020	0	0	1,844	804	0	0	0	0	0	0	2,648



WWP to NE Transmission Main

☐ Innovation☑ Water MP Right Size☑ Reliability/Redund☑ NEWTP Repurposit	dancy Project New To CIP	NONE	
Project Engineer/Mar	nager Timothy Kuhns	Budget War	ter
Mai	nager Grant Gartrell	Class Lvl 1 War	ter
Managing	Dept Water Eng	Class Lvl 2 Field	d Services
Date Original Busines	ss Case Prepared 9/8/2016	Class LvI 3 Tran	nsmission System
Year Proje	ect Added to CIP 2014	Location City	of Detroit
		Fund and Cost Center War	ter - 5519-882111
Project Significance	Historical pumpage data for the Northeast WTF service area can be as high as 190 MGD. With WTP, an 81-inch transmission main is proposed the finished water to the Northeast high lift pumping to meet a large portion of the Northeast service.	the upcoming decommissioning between Water Works Park and g system to provide service to t	g of treatment at the Northeast Northeast to convey 150 MGD of he existing Northeast service area
Scope of Work	This project includes construction of 35,000 feet Northeast. The project includes a flow control s Park and the Northeast High Lift Station		
Challenges	Route determination, utility conflicts and conne large new main will cross I-94 and run through 7	, , , ,	
Project History	This project was proposed as part of the 2015 V	/ater Master Plan.	
Related Project	115001 - WWP WTP Yard Piping, Valves and Ver	turi Meters Replacement	
Lookup Driver	8 - Efficiency		
Other Important Info	n/a		

Explanation This project provides for efficiencies in facilitating the decommissioning of treatment at the Northeast WTP.



WWP to NE Transmission Main

PM Weighted Score

53.2

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

RC Weighted Score

62.4

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	5	
Financial	5	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	



WWP to NE Transmission Main

Phase Design and	Build					C	ontract 1	NA	Stat	tus Future	Planned S	start	
Title Phase 2 WW	P to NE Ti	ransr	nission Mair	n - Transmissi	on Mo	nin							
Phase Budget W	ater							Cost Allo	cation CTA				
Phase Status Fu	uture Plar	nned	Start					Funding S	Source Bond	l Proceeds			
Start Date			9/11/	2017					Fund Cons	truction Bo	nd Fund		
End Date			9/10/	2018				Useful Life >	20Yrs? Yes				
Cost	t Estimati	on In	formation		Tot. Federal Loan Amount								
	5		Cost Est. C	lass	Program/Allowance Task Information								
			Cost Est. De	ate	Project Manager								
			Cost Est. So	ource	CIP Number								
	Cost Est. Prep)escrip	tion						
Cost Type)	Fis	cal Year	Expense	Э	Fringe	BenefitN	onPersonne	C	Comment			
Design-Build		FY20)		\$0								
Design-Build		FY2			5,215								
Design-Build		FY22	2	\$21	,294								
Design-Build		FY23	3	\$29	,494								
Design-Build		FY2	4	\$29	,800								
Design-Build		FY2	5+	\$30),115				2020CIP				
Task		St	art Date	End Date	Dur	ration							
Scope Developme	ent		7/8/2018	10/6/2018	3	90							
Procurement	rocurement 10/7/2018 1		10/7/2019)	365	5							
Project Execution	roject Execution 10/8/2019 9,		9/30/2024		1819	>							
Project Closeout	roject Closeout 10/1/2024 12/		12/30/2024	90									
Prior Yr Actuals	FY1	9	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total			
		0	0	5,215	2	1,294	29,494	29,800	30,115	115,918			



1,000

WWP to NE Transmission Main

Phase Study Contract CS-152 Status Active Title CS-152 New Waterworks Park to Northeast Transmission Main CS-152 CH2M Route Study **Phase Budget** Water Cost Allocation CTA Funding Source Revenue Financed Capital **Phase Status** Active Fund Improvement & Extension Fun Start Date **End Date** Useful Life >20Yrs? No Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** Cost Est. Date **CIP Number** Cost Est. Source Description Cost Est. Prepared By Cost Type Fringe BenefitNonPersonne Fiscal Year Expense Comment **Engineering Services** FY19 \$1,000 **Engineering Services** FY20 \$750 2020CIP **Engineering Services** FY21 \$450 2020CIP **Engineering Services** FY22 \$500 2020CIP Task Start Date **End Date** Duration Scope Development Procurement Project Execution **Project Closeout** FY19 FY21 FY22 FY23 FY25+ Total Prior Yr Actuals FY20 FY24

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

500

450

750

0

0

0

2,700



Prior Yr Actuals

FY19

121

FY20

121

FY21

121

WWP to NE Transmission Main

roject managen	nent		Contract	Status	Active				
				Cost Alloc	ation	CTA			
				Funding S	ource R	evenue	Financed	Capital	
		Fund Improvement & Extension Fun							
		Useful Life >20Yrs? No							
on Information			Tot. Fe	deral Loan Ar			\$0		
Cost Est. C	lass	Program/Allowance Task Information							
1/1/2015 Cost Est. Date				Project Manager					
Cost Est. So	ource	CIP Number							
Cost Est. Pr	epared By	Description							
Fiscal Year	Expense	;	Fringe Benefit	VonPersonne		Com	ment		
FY19		\$84	33	4					
FY20		\$84	33	4					
FY21		\$84	33	4					
GLWA Salaries CIP2020 FY22			33	4					
GLWA Salaries CIP2020 FY23		\$84	33	4					
FY24	\$	134	53	7					
	on Information Cost Est. C Cost Est. So Cost Est. Pr Fiscal Year FY19 FY20 FY21 FY22 FY23	Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense FY19 FY20 FY21 FY22 FY23	on Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense FY19 \$84 FY20 \$84 FY21 \$84 FY22 \$84 FY23 \$84	on Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefit FY19 \$84 33 FY20 \$84 33 FY21 \$84 33 FY22 \$84 33 FY22 \$84 33 FY23 \$84 33	Cost Alloc Funding So Useful Life >2 On Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefit NonPersonne FY19 \$84 33 4 FY20 \$84 33 4 FY21 \$84 33 4 FY22 \$84 33 4 FY22 \$84 33 4 FY22 \$84 33 4	Cost Allocation C Funding Source R Fund In Useful Life >20Yrs? On Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Fiscal Year Expense Fringe Benefit NonPersonne FY19 \$84 33 4 FY20 \$84 33 4 FY21 \$84 33 4 FY22 \$84 33 4 FY22 \$84 33 4 FY22 \$84 33 4 FY23 \$84 33 4	Cost Allocation CTA Funding Source Revenue Fund Improver Useful Life >20Yrs? No Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By Project Manager CIP Number Description Fiscal Year Expense Fringe Benefit NonPersonne Com FY19 \$84 33 4 FY20 \$84 33 4 FY21 \$84 33 4 FY22 \$84 33 4 FY22 \$84 33 4 FY23 \$84 33 4 FY23 \$84 33 4	Cost Allocation CTA Funding Source Revenue Financed Fund Improvement & Externor Source Revenue Financed Fund Improvement & Externor Source Revenue Financed Fund Improvement & Externor Source Revenue Financed Fund Improvement & Externor Source Revenue Financed Fund Improvement & Externor Source Revenue Financed Froject Item Improvement Revenue Finance Froject Item Improvement	

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

FY23

121

FY24

194

FY25+

0

Total

799

FY22

121



WWP to NE Transmission Main

	nase not applicable He Prior Year Actual Expenses							N/	tus Closed	d Out			
litle Prior Year <i>i</i>	Actual Exp	enses	5										
Phase Budget	Water				Cost Allocation CTA								
Phase Status	Closed O	J†			Funding Source								
Start Date					Fund								
End Date	End Date					Useful Life >20Yrs?							
Cost Estimation Information						Tot. Federal Loan Amount							
	5 Cost Est. Class					Program/Allowance Task Information							
	1/1/2015		Cost Est. Do	ate	Project Manager								
CDM Smith			Cost Est. So	ource	CIP Number								
CDM Smith			Cost Est. Pr	epared By	ed By Description								
Cost Ty	pe	Fis	cal Year	Expens	e	Fringe Benefil		Nor	onPersonne		Comment		
Engineering Serv	vices	FY18	3-	\$	1,612					FY18			
Unknown	Inknown FY18-				\$19					FY17	-Y17		
GLWA Salaries CIP2020 FY18-				\$17		7			FY18				
Prior Yr Actua	Prior Yr Actuals FY19 FY20 FY2				FY	22	FY23		FY24	FY25+	Total		
1,0	1,655										1,655		



WWP to NE Transmission Main

Phase Design and	d Build				Contract NA					iture Pla	nned S	tart	
Title Phase 1 WW	'P to NE 1	Transmission Mo	ain - Flow Con	trol Stc	ation a	it NE							
Phase Budget W	Vater						Cost Allo	cation CT/	СТА				
Phase Status Fu	uture Pla	inned Start		Funding Source						Bond Proceeds			
Start Date								Fund Co	nstructio	n Bond	Fund		
End Date							Useful Life >	20Yrs? Yes)				
Cos	t Estimat	ion Information				Tot. Fe	deral Loan A	mount				\$0	
	5	Cost Est.	Class	Program/Allowance Task Information									
		Cost Est.	Date	Project Manager									
		Cost Est.	Source	CIP Number									
		Cost Est.	Prepared By	d By Description									
Cost Type		Fiscal Year	Expens	е	Fringe	Benefit	lonPersonne		Comme	ent			
Design-Build		FY21	\$10	0,000				2020CIP					
Design-Build		FY22	\$2	2,200				2020CIP					
Prior Yr Actuals	FY	19 FY20	FY21	FY2	22	FY23	FY24	FY25+	Tot	al			
			10,000	2	2,200				12	2,200			
			Phase Total Ex	pense	s By F	Y (All figu	ures are in \$1	,000's)					

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1.000's)

	rioje	Ci ioidi i	rybelise		ompare	a io i iioi		ii iigores	are iii yi	,000 3)	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,500	5,000	10,000	74,000	2,000	37,500	0	0	130,000
2019	0	19	1,305	1,372	8,622	17,547	46,022	30,722	25,270	0	130,879
2020	0	0	1,655	1,121	871	15,786	24,115	29,615	29,994	30,115	133,272

122004 CIP#

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

_	
	Innovation
	Water MP Right Sizing
✓	Reliability/Redundancy
	NEWTP Repurposing
_	

Project Status Active

CIP Type Project

Project New To CIP \Box

Map of the 96-inch main relocation away from the landfill



Project Engineer/Manager Grant Gartrell

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 1/1/2015

Year Project Added to CIP 2016

Budget Water

Class Lvl 1 Water

Class LvI 2 Field Services

Class Lvl 3 Transmission System

Location Multiple Counties

Fund and Cost Center Water - 5519-882411

Project Significance Project critical to providing redundancy to Lake Huron WTP supply and protection of water supply from potential contamination. Project includes relocation around existing landfill and addition of a parallel main with interconnection to meters between Romeo and 24 Mile Road.

Scope of Work Relocate 2.5 miles of 96-inch transmission main currently located in an EPA NPL landfill, a portion of which is submerged in landfill leachate. Relocation includes crossing the Clinton River, coordination with many various authorities having jurisdiction and easement acquisition. Isolation valve installation portion of the project provides the ability to isolate segments of the 96-inch main between Imlay Station and North Service Center for maintenance while maintaining customer expected level of service.

Challenges Shutdown, isolation and live tapping of the 96" main while maintaining the Lake Huron WTP supply and operations of Rochester Station. Routing and possible property acquisition for both the parallel main and relocation around the landfill.

Project History n/a

Related Project Contract No. CS-165 with Jacobs for pre-design work is underway

Lookup Driver 2 - Performance

Other Important Info n/a

Explanation Not provided.

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

PM	Weighted
	Score

72.6

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

RC Weighted Score

65.2

Score	Comment
2	
2	
1	
5	
5	
5	
4	
2	
	Score 2 2 1 5 5 4 2

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

Phase Construction					Contract NA Status Future Planned Start							
itle 96-inch Main	Relocation	on, Isolat	ion Va	Ilves Installat	tions, a	nd Ne	w Paralle					
Phase Budget W	ater				Cost Allocation CTA							
Phase Status Fu	ture Planr	ned Start	ŀ		Funding Source Bond Proceeds							
Start Date 4/3/2017				2017					Fund Cons	struction Bo	nd Fund	
End Date			5/22/	2023				Useful Life >	20Yrs? Yes			
Cost Estimation Information							Tot. Fed	leral Loan A	mount			
	5 Cost Est. Class			ass	Program/Allowance Task Information							
		Cost	Est. Do	ate	Pr	oject l	Manager	,				
		Cost	Est. Sc	ource	CI	P Nun	nber					
		Cost	Est. Pr	epared By	ed By Description							
				. ,								
Cost Type		Fiscal Y	'ear	Expense	ense Fringe Benefit NonPersonne					Comment		
Construction	F	Y21		\$1,116		116			2020CIP			
Construction	F	Y22		\$24	4,786							
Construction	F	Y23		\$34,091								
Construction	F	Y24		\$19	2,615							
Construction	F	Y25+		\$33	3,907				2020CIP			
Task		Start D	ate	End Date	Durc	ation						
Scope Developme	ent	10/19/	/2020	1/17/2021		90						
Procurement 1/18/202		/2021	7/25/2021	188		3						
Project Execution 7/26/2021 7/			7/18/2025	5 1453								
Project Closeout		7/19/	/2025	10/17/2025		90)					
Prior Yr Actuals	FY19	F	Y20	FY21	FY2:	2	FY23	FY24	FY25+	Total		
		0	0	1,116	24.	,786	34,091	19,615	33,907	113,515		



96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

Phase Desig	gn & Construction Assistance	Contract NA	Status Active
,			

Title 96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

CS-165 CH2 Hill?	S			
Phase Budget	Water			Cost Allocation CTA
Phase Status	Active			Funding Source Bond Proceeds
Start Date				Fund Construction Bond Fund
End Date			Us	reful Life >20Yrs? Yes
Cost Estimation Information			Tot. Feder	al Loan Amount
	5	Cost Est. Class	Prog	ram/Allowance Task Information
		Cost Est. Date	Project Manager	
		Cost Est. Source	CIP Number	
		Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$133			
Engineering Services	FY20	\$4,994			
Engineering Services	FY21	\$4,873			
Engineering Services	FY22	\$1,606			
Engineering Services	FY23	\$1,734			
Engineering Services	FY24	\$3,676			

Task	Start Date	End Date	Duration
Scope Development	11/1/2018	1/4/2019	64
Procurement	1/7/2019	5/31/2019	144
Project Execution	6/1/2019	6/1/2025	2192
Project Closeout	6/1/2025	9/1/2025	92

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	133	4,994	4,873	1,606	1,734	3,676	0	17,016

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

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

Phase Study Contract CS-165 Status Active

Title CS-165 96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

CH2M CS-165										
Phase Budget Water						Cost Allo	cation	СТА		
Phase Status	Phase Status Active Start Date 3/28/2017						Funding S	Revenue Financed Capital		
Start Date								Fund	Improvement & Extension Fun	
End Date 3/28/2018					Useful Life >20Yrs? No					
Cost Estimation Information				Tot. Federal Loan Amount						
	5 Cost Est. Class			Program/Allowance Task Information						
		Cost Est. [Date	Project Manager						
		Cost Est. S	ource	CIP Number						
		Cost Est. F	repared By	D	escript	on				
Cost Ty	pe	Fiscal Year	Expens	Э	Fringe	Benefit	NonPersonne		Comment	
Engineering Sen	vices	FY19		\$700						
Task	(Start Date	End Date	Dur	ation					
Scope Develop	ment									

peope Bovolopinoi								
Procurement								
Project Execution		10/24/2017	10/9/2018	35	50			
Project Closeout								
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	700	0	0	0	0	0	0	700

Prior Yr Actuals

FY19

4

GLWA FY 2020-2024 CIP

122004 CIP#

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

Phase GLWA Em	nployees P	roject manager	nent		Contract	NA	Sto	atus	Active	
Title GLWA Salo	aries									
Phase Budget	Water					Cost Alloc	cation CTA	\		
Phase Status	Active					Funding S	ource Bon	d Pro	oceeds	
Start Date							Fund Cor	nstruc	ction Bond Fund	
End Date						Useful Life >2	20Yrs? No			
Co	ost Estimat	ion Information			Tot. Fe	deral Loan Ar	mount			\$0
	5	Cost Est. C	lass		P	rogram/Allow	ance Task	Info	rmation	
	1/1/2017	Cost Est. D	ate	Р	roject Manage	r				
Jacobs		Cost Est. S	ource	C	CIP Number					
Jacobs		Cost Est. P	repared By	D	escription					
Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	lonPersonne		Com	ment	
GLWA Salaries C	CIP2020	FY19		\$3	1	0				
GLWA Salaries C	CIP2020	FY20		\$4	2	0				
GLWA Salaries C	CIP2020	FY21		\$8	3	0				
GLWA Salaries C	CIP2020	FY22		\$42	17	2				
GLWA Salaries C	CIP2020	FY23		\$42	17	2				
GLWA Salaries C	CIP2020	FY24		\$112	44	6				

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

FY23

61

FY24

162

FY25+

0

Total

305

FY22

61

FY21

11

FY20

6

96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

Phase not applicable				Contract	NA	4	Stat	tus Closed	Out	
Title Prior Year Actual Expe	enses									
Phase Budget Water						Cost Allo	cation CTA			
Phase Status Closed Ou	ı†					Funding S	ource			
Start Date							Fund			
End Date					Us	seful Life >2	20Yrs?			
Cost Estimation	on Information			Tot. F	ede	ral Loan Ar	mount			
5	Cost Est. C	lass			Prog	gram/Allow	vance Task	Information		
1/1/2017	Cost Est. D	ate	Р	roject Manag	er					
Jacobs	Cost Est. S	ource	C	IP Number						
Jacobs	Cost Est. P	repared By	D	escription						
Cost Type	Fiscal Year	Expense	е	Fringe Benefi	tNor	nPersonne		Comment		
Engineering Services	FY18-		\$542			F	FY18			
Engineering Services	FY18-		\$89			F	-X185			
Unknown	FY18-		\$460			F	-Y17			
GLWA Salaries CIP2020	FY18-		\$29	10)	F	-Y18			
Prior Yr Actuals FY1	9 FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
1,130								1,130		
	P	hase Total Ex	pense	es By FY (All fi	gure	s are in \$1	,000's)			

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

				_							
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		500	1,500	6,000	35,900	31,700	31,700	31,700	0	0	139,000
2019	0	460	570	1,797	2,644	895	23,087	45,825	57,389	0	132,667
2020	0	0	1,130	837	5,000	6,000	26,453	35,886	23,453	33,907	132,666



Schoolcraft Road Water Transmission Main Replacement

	Innovation
	Water MP Right Sizing
✓	Reliability/Redundancy
	NEWTP Repurposing

Project Status Active

CIP Type Project

Project New To CIP \Box

Water main replacement



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/17/2015

Year Project Added to CIP 2016

Budget Water

Class Lvl 1 Water

Class LvI 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Improving transmission system reliability and redundancy

Scope of Work Design work of 10,800 of new 48-inch transmission main along I-96 under the freeway service drive between Middlebelt and Beech Daly. Due to excessive breaks the Schoolcraft water main in Redford/Livonia will be replaced. The purpose is to improve the transmission system reliability/redundancy.

Lookup Driver

Other Important Info Designed under CS-1488 by SOMAT engineering advisors



GLWA FY 2020-2024 CIP Schoolcraft Road Water Transmission Main Replacement

PM Weighted Score

65.6

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	2	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	1	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

42

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



Schoolcraft Road Water Transmission Main Replacement

Phase Design & C	Constructio	n Assistance			Co	ntract C	:S-1488	S	tatus	Active		
Title Transmission	System W	ater Main Wor	k - Replacem	ent of	Schoo	olcraft Wo	ıter Main					
Phase Budget V	Vater						Cost Alloc	cation C1	Α			
Phase Status A	ctive						Funding \$	ource Bo	nd Pr	oceeds		
Start Date								Fund Co	onstru	ction Bor	nd Fund	
End Date						l	Jseful Life >2	20Yrs? Ye	:S			
Cos	t Estimatio	n Information				Tot. Fed	eral Loan Ar	mount				
	5	Cost Est. C	lass			Pro	gram/Allow	ance Ta	sk Info	ormation		
1	/1/2016	Cost Est. D	ate	Pr	oject A	Manager						
Somat		Cost Est. S	ource	С	IP Num	ber						
Somat		Cost Est. P	repared By	D	escripti	ion						
Cost Typ	е	Fiscal Year	Expense	•	Fringe	BenefitNo	nPersonne		Cor	nment		
Engineering Servi	ces	FY19	\$	150								
Engineering Servi	ces	FY20	Ф	125								
	-	F12U	Φ	123								
Engineering Servi		FY21	<u> </u>	5125								
-	ces		\$									
	ces	FY21	\$	\$125 \$50	ation							
Engineering Servi	ces ces	FY21 FY22	\$	\$125 \$50	ation 90							-
Engineering Servi Task Scope Developm	ces ces	FY21 FY22 Start Date	\$ End Date	\$125 \$50								
Engineering Servi Task Scope Developm	ces ces ent	FY21 FY22 Start Date 10/1/2016	End Date 12/30/2016	\$125 \$50	90							
Scope Developm Procurement	ces ces ent	FY21 FY22 Start Date 10/1/2016 12/31/2016	End Date 12/30/2016 12/31/2017	\$125 \$50	90 365							
Engineering Service Task Scope Developm Procurement Project Execution	ces ces ent	FY21 FY22 Start Date 10/1/2016 12/31/2016 1/1/2018 7/3/2021	End Date 12/30/2016 12/31/2017 7/2/2021	\$125 \$50	90 365 1278 90		FY24	FY25+		Total		

122005 CIP#

Schoolcraft Road Water Transmission Main Replacement

'nase not appli	cable)			(Contract	NΑ	Sta	tus Closed	Out
Title Prior Year A	Actuc	al Expen	ses							
Phase Budget	Wate	er					Cost Alloc	cation CTA		
Phase Status	Close	ed Out					Funding S	ource		
Start Date								Fund		
End Date							Useful Life >2	20Yrs?		
Co	ost Est	imation	Information			Tot. Fed	leral Loan Ar	mount		\$0
		5	Cost Est. C	lass		Pro	ogram/Allow	ance Task	Information	
	1/1/2	016	Cost Est. D	ate	Projec	t Manager				
Somat			Cost Est. So	ource	CIP Nu	ımber				
Somat			Cost Est. Pr	epared By	Descri	ption				
Cost Ty	pe		Fiscal Year	Expens	e Fring	e BenefitN	onPersonne	(Comment	
Engineering Serv	vices	F`	Y18-		\$4		F	Y18		
Prior Yr Actua	Is	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	4								4	



Schoolcraft Road Water Transmission Main Replacement

Phase ConstructionContractNAStatusFuture Planned Start

Title Transmission System Water Main Work - Replacement of Schoolcraft Water Main

project is 95% designed und	der CS-1488 by SOMAT		
Phase Budget Water		Cost Allocation	СТА
Phase Status Future Plann	ned Start	Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimation	n Information	Tot. Federal Loan Amount	
5	Cost Est. Class	Program/Allowance	Task Information
1/1/2016	Cost Est. Date	Project Manager	
Somat	Cost Est. Source	CIP Number	
Somat	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY20	\$7,945			
Construction	FY21	\$8,990			
Construction	FY22	\$565			

Task		Start Date	End Date	Duration				
Scope Developmen	nt	10/1/2018	12/30/2018	ç	90			
Procurement		12/31/2018	7/7/2019	18	38			
Project Execution		7/8/2019	7/2/2021	72	25			
Project Closeout		7/3/2021	10/1/2021	ç	90			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 7,945	8,990	565	0	0	0	17,500



Schoolcraft Road Water Transmission Main Replacement

Phase GLWA Employees Project management					Contract NA				s Active	
Title GLWA Salaries	S									
Phase Budget Wa	Phase Budget Water			Cost Allocation CTA						
Phase Status Act	tive			Funding Source					Proceeds	
Start Date	9			Fund Construction Bond Fund						d Fund
End Date	l Date			Useful Life >20Yrs? No						
Cost E	Estimatio	on Information		Tot. Federal Loan Amount						\$0
	5	Cost Est. C	Class			Prog	gram/Allow	ance Task Ir	formation	
1/1/2016 Cost Est. Date		ate	Project Manager							
Somat Cost Est. Source		ource	CIP Number							
Somat Cost Est. Prepared			repared By	d By Description						
Cost Type Fiscal Year E		Expens	Expense Fringe Benefil NonPersonne		Co	omment				
GLWA Salaries CIP2020 FY19			\$21		8	1				
GLWA Salaries CIP2020 FY20		FY20	\$21			8	1			
GLWA Salaries CIP2020 FY2		FY21	\$21			8	1			
GLWA Salaries CIP20	020	FY22		\$12		5	1			
Prior Yr Actuals	FY1	9 FY20	FY21	FY2	22 FY23	3	FY24	FY25+	Total	
		30 30	30		18	0	0	0	108	
	'	P	hase Total E	xpense	es By FY (All f	igure	s are in \$1,0	000's)		
Proje	act Tot	tal Evnanças	By EV Co	mpar	and to Prin	r CII	De (All figu	uros aro ir	\$1,000'	•1

Project lotal expenses by FY Compared to Prior CIPS (All figures are in \$1,000's)

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018				7,300	7,250				0	0	14,550
2019	0		16	50	6,249	6,899	591			0	13,805
2020	0	0	4	180	8,100	9,145	633	0	0	0	18,062

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Wick Road Water Transmission Main Construction

 □ Innovation □ Water MP Right Sizing ☑ Reliability/Redundancy Project Status Active CIP Type Project 		Transmission mo	ain				
□ NEWTP Repurposi	ng	Project New To CIP $\;\square$					
Project Engineer/Ma	nager P	eter Fromm	Budget	Water			
Ma	nager 🤆	Grant Gartrell	Class Lvl 1	Water			
Managing	g Dept ∨	Vater Eng	Class Lvl 2	Field Services			
Date Original Busines	ss Case	Prepared 8/17/2015	Class Lvl 3	Transmission System			
Year Proje	ect Add	ed to CIP 2016	Location	Wayne County - Outside Detroit			
			Fund and Cost Center	Water - 5519-882411			
Project Significance	Placem	ent of parallel water main to minimize s	service disruptions to custor	mer communities			
Scope of Work	Scope of Work Construction of the new 48-inch transmission main along a principal roadway in Romulus. Original water main from Wick station to Ypsilanti station has history of excessive breaks. Additionally, the main is the only principal connection between the two facilities with multiple community Master Meters along its length. A break in this line is disruptive to several communities dependent upon this supply line. The purpose is to improve the transmission system reliability/redundancy.						
Challenges	May red	quire shut down of large transmission ma	ains.				
Project History	Project History Original water main from Wick station to Ypsilanti station has history of excessive breaks. Additionally, the main is the only principal connection between the two facilities with multiple community Master Meters along its length. A break in this line is disruptive to several communities dependent upon this supply line. The purpose is to improve the transmission system reliability/redundancy.						
Related Project	n/a						
Lookup Driver	2 - Perfo	ormance					
Other Important Info	n/a						



Wick Road Water Transmission Main Construction

PM Weighted Score

59

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	3	
Financial	1	
O&M	3	
Performance (Service Level/Reliability)	5	
Public Benefit	2	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

54.2

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



Wick Road Water Transmission Main Construction

Phase Construction Contract CON-306 Status Active

Title CS-1488 TASK 4. Transmission System Water Main Work-Wick Road Parallel Water Main

CS-1488 task 4			
Phase Budget Water		Cost Allocation	CTA
Phase Status Active		Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimation	n Information	Tot. Federal Loan Amount	
5	Cost Est. Class	Program/Allowance	Task Information
1/1/2016	Cost Est. Date	Project Manager	
Somat	Cost Est. Source	CIP Number	
Somat	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe BenefitN	onPersonne	Comment
Construction	FY19	\$1,000			
Construction	FY20	\$17,689			
Construction	FY21	\$11,995			

Task		Start Date	End Date	Duration				
Scope Developmer	n†	7/10/2018	10/8/2018	9	90			
Procurement		10/9/2018	4/15/2019	18	38			
Project Execution		4/16/2019	4/12/2021	72	27			
Project Closeout		4/13/2021	7/30/2021	10)8			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,0	00 17,689	11,995	0	0	0	0	30,684



GLWA FY 2020-2024 CIP

Wick Road Water Transmission Main Construction

hase GLWA Em	ployees	Projec	t manager	nent		Contract	NA	S	Status A	Active		
itle GLWA Salo	aries											
Phase Budget	Water						ГА					
Phase Status	Active				Funding Source Bond Proceeds							
Start Date					Fund Construction Bond Fund							
End Date							Useful Life >2	20Yrs? No)			
Co	ost Estima	ıtion In	formation		Tot. Federal Loan Amount							\$0
5 Cost Est. Class					Program/Allowance Task Information							
	1/1/2016		Cost Est. D	ate	Р	roject Manage	er					
Somat			Cost Est. So	ource	C	CIP Number						
Somat			Cost Est. P	repared By	D	escription						
Cost Typ	20	Fig	scal Year	Expens	Δ	Fringe Benefit	MonPersonne		Comm	nent		
GLWA Salaries C		FY19		LAPELIS	\$7	3	0		COITIII	ICIII		
LWA Salaries CIP2020 FY20					\$10	4	0					
GLWA Salaries CIP2020 FY21					\$10	4	0					
SLWA Salaries C	IP2020	FY2	2		\$7	3	0					
Prior Yr Actual	ls F	/19	FY20	FY21	FY	22 FY23	FY24	FY25+	То	tal		

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



Wick Road Water Transmission Main Construction

Phase Construction Assistance Contract CS-1488 Status Active

Title CS-1488 TASK 7, Transmission System Water Main Work-Wick Road Parallel Water Main

CS1488 task 7					
Phase Budget	Water			Cost Allocation	CTA
Phase Status	Active		F	funding Source	Bond Proceeds
Start Date				Fund	Construction Bond Fund
End Date			Use	eful Life >20Yrs?	Yes
Co	ost Estimatio	n Information	Tot. Federa	ıl Loan Amount	
	5	Cost Est. Class	Progr	am/Allowance	Task Information
	1/1/2016	Cost Est. Date	Project Manager		
Somat		Cost Est. Source	CIP Number		
Somat		Cost Est. Prepared By	Description		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$100			
Engineering Services	FY20	\$325			
Engineering Services	FY21	\$325			
Engineering Services	FY22	\$50			2020CIP

Task	Start Date	End Date	Duration
Scope Development	7/10/2018	10/8/2018	90
Procurement	10/9/2018	4/15/2019	188
Project Execution	4/16/2019	4/12/2021	727
Project Closeout	4/13/2021	7/12/2021	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	100	325	325	50	0	0	0	800



Wick Road Water Transmission Main Construction

Phase not applic	not applicable						Contract NA Status Closed Out							
Title Prior Year A	Actual I	Expense	S											
Phase Budget	Water							С	ost Allo	cation CTA	\			
Phase Status	Closed	Out			Funding Source									
Start Date	Date				Fund									
End Date								Usef	ul Life >	20Yrs?				
Co	ost Estin	nation In	formation				Tot. Fe	ederal	Loan A	mount				
		5	Cost Est. C	lass			P	rogra	ım/Allov	wance Task	Info	rmation		
	1/1/201	16	Cost Est. D	ate	Project Manager									
Somat			Cost Est. So	ource	C	CIP Nu	ımber							
Somat			Cost Est. Pr	epared By	D	escri	ption							
Cost Typ	ре	Fis	cal Year	Expens	e	Fring	e Benefit	NonPe	ersonne		Com	ment		
Engineering Serv	vices .	FY18	3-		\$103					FY18				
Unknown		FY18	3-		\$23					FY17				
Prior Yr Actua	Is	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25+		Total .		
-	126											126		



Wick Road Water Transmission Main Construction

hase Design						Co	ontract	C	S-1488		State	us Active		
itle CS-1488, Tro	ansmission	Syste	em Water N	Main Work-Wi	ick R	oad Par	allel W	ate	r Main					
CS-1488 task 4														
Phase Budget	Water								Cost Alloc	ation C	TA			
Phase Status	Active				Funding Source Bond Proceeds									
Start Date					Fund Construction Bond Fund							L L		
End Date			Useful Life >20Yrs? Yes											
Со	st Estimatio	on In	formation				Tot. Fe	ede	ral Loan An	nount				
	5		Cost Est. C	ass				Prog	gram/Allow	ance To	ask I	nformation		
1	/1/2016		Cost Est. Do	ate	F	Project I	Manag	er						
Somat					CIP Number									
Somat			Cost Est. Pr	epared By	[Descript	ion							
Cost Typ	e	Fis	cal Year	Expense)	Fringe	Benefit	No	nPersonne		С	omment		
ingineering Servi		FY19)	\$	260									
Task		St	art Date	End Date	Du	ration								
cope Developn	nent		10/1/2016	12/30/2016		90)							
rocurement		1	2/31/2016	12/31/2017		365								
Project Execution	1		1/1/2018	4/12/2021		1197								
Project Closeout	oject Closeout 4/13/2021 7/1					90)							
Prior Yr Actuals	FY1	9	FY20	FY21	FY	22	FY23		FY24	FY25-	F	Total		
		260	0	0		0		0	0		0	260		
			Pł	nase Total Ex	pens	es By FY	(All fig	jure	es are in \$1,	000's)				
_														

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		10,000	9,350						0	0	19,350
2019	0	23	16	1,743	12,373	10,154	10			0	24,319

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

122006 CIP#

Wick Road Water Transmission Main Construction

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	126	1,370	18,028	12,334	60	0	0	0	31,918



Lookup Driver 2 - Performance

GLWA FY 2020-2024 CIP

Newburgh Road Water Transmission Main

□ Innovation✓ Water MP Right Siz✓ Reliability/Redund□ NEWTP Repurposin	lancy Project New To CIP	Water main installation							
Project Engineer/Man	nager Eric Kramp	Budget Water							
Mar	nager Grant Gartrell	Class Lvl 1 Water							
Managing	Dept Water Eng	Class Lvl 2 Field Services							
Date Original Busines	s Case Prepared 8/11/2015	Class Lvl 3 Transmission System							
Year Proje	ect Added to CIP 2016	Location Wayne County - Outside Detroit							
		Fund and Cost Center Water - 5519-882411							
	Project identified in the 2015 Water Master Plan Update; improves system reliability, redundancy, and provides operational savings. It was also identified in the 2015 WMPU that this project is a predecessor project to decommissioning the Michigan Avenue Booster Station.								
•	This project involves design and construction services associated with the installation of 3 miles of new 24-inch transmission main along Hannon Road.								

GLWA FY 2020-2024 CIP Newburgh Road Water Transmission Main



PM Weighted Score

58.6

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	4	
Financial	5	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

57

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



Newburgh Road Water Transmission Main

Phase Construction					Contract NA Status Future Planned Start					Start			
Title Newburgh Ro	ad Transm	ission Main											
Phase Budget Wa	ter						С	ost Allo	cation C1	Α			
Phase Status Futi	ure Planne	ed Start		Funding Source Bond Proceeds									
Start Date									Fund Co	onstru	ction Bor	nd Fund	
End Date							Usef	ul Life >	20Yrs? Ye	es			
Cost Estimation Information						Tot. Fe	deral	Loan A	mount				
5 Cost Est. Class						P	rogra	m/Allov	wance Ta	sk Info	rmation		
1/1,	/2015	Cost Est. D	ate	Proj	ect N	Nanage	r Eri	c Kram	p				
CDM Smith		Cost Est. So	ource	CIP Number									
CDM Smith		Cost Est. P	repared By	Des	cripti	on							
Cost Type	I	iscal Year	Expense	e Fri	nge E	Benefit	lonPe			Con	nment		
Construction	FY	19		\$0					2020CIP				
Construction	FY	21		\$0									
Construction	FY	22		\$0									
Construction	FY	24	\$4	,019					2020CIP				
Engineering Service	s FY	23		\$0					2020CIP				
Task		Start Date	End Date	Durati	on								
Scope Developmer	nt	1/1/2023	5/1/2023		120								
Procurement		5/1/2023	6/30/2023		60								
Project Execution		7/1/2023	4/1/2024		275								
Project Closeout		4/1/2024	6/30/2024		90								
Prior Yr Actuals	FY19	FY20	FY21	FY22		FY23		FY24	FY25+		Total		
		0 0	0		0		0	4,019		0	4,019		



Newburgh Road Water Transmission Main

hase GLWA Em	nployees P	roject manager	nent		Contract	NA	Status	Future Planned	Start
tle GLWA Salo	aries								
Phase Budget	Water					Cost Alloc	cation CTA		
Phase Status	Future Planned Start				oceeds				
Start Date						ction Bond Fund			
End Date						Useful Life >2	OYrs? No		
Co	ost Estimati	ion Information			Tot. Fe	deral Loan Ar	nount		\$0
	5	Cost Est. C	lass		P	rogram/Allow	ance Task Info	ormation	
	1/1/2015	Cost Est. D	ate	Р	roject Manage	r			
CDM Smith		Cost Est. So	ource	C	CIP Number				
CDM Smith		Cost Est. P	repared By	D	escription				
Cost Ty	pe	Fiscal Year	Expense	9	Fringe Benefit	VonPersonne	Cor	nment	
GLWA Salaries C	CIP2020	FY19		\$0	0	0			
GLWA Salaries C	CIP2020	FY20		\$0	0	0			
GLWA Salaries C	CIP2020	FY21		\$0	0	0			

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY19	\$0	0	0	
GLWA Salaries CIP2020	FY20	\$0	0	0	
GLWA Salaries CIP2020	FY21	\$0	0	0	
GLWA Salaries CIP2020	FY22	\$0	0	0	
GLWA Salaries CIP2020	FY23	\$21	8	1	2020CIP
GLWA Salaries CIP2020	FY24	\$40	16	2	2020CIP
GLWA Salaries CIP2020	FY25+	\$0	0	0	2020CIP

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	30	58	0	88



Newburgh Road Water Transmission Main

Phase Design & Construction Assistance

Contract NA

Status Future Planned Start

Title Newburgh Road Transmission Main

Design and Cor Avenue	nstruction A	Assistance of a new Newbur	gh Road 24" Main alon	g Newburgh Road	d between Cherry Hill and Glenwoo		
Phase Budget	Water			CTA			
Phase Status	Future Plar	nned Start		Funding Source	Revenue Financed Capital		
Start Date				Fund	Improvement & Extension Fun		
End Date			U	seful Life >20Yrs?	No		
Cost Estimation Information			Tot. Federal Loan Amount				
	5	Cost Est. Class	Program/Allowance Task Information				
	1/1/2015	Cost Est. Date	Project Manager	Eric Kramp			
CDM Smith		Cost Est. Source	CIP Number				
CDM Smith		Cost Est. Prepared By	Description				

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY20	\$0			
Engineering Services	FY21	\$0			
Engineering Services	FY22	\$0			
Engineering Services	FY24	\$1,132			2020CIP
Engineering Services	FY25+	\$0			2020CIP

Task		Start Date	End Date	Duration				
Scope Developmen	t	1/1/2023	4/1/2023	9	90			
Procurement		4/1/2023	6/30/2023	9	90			
Project Execution		7/1/2023	4/1/2024	27	75			
Project Closeout		4/1/2024	6/30/2024	9	90			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	1,132	0	1,132





Newburgh Road Water Transmission Main

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

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,800	2,200					0	0	4,000
2019	0		6	653	1,611	2,076	901			0	5,247
2020	0	0		0	0	0	0	30	5,209	0	5,239

Explanation N/A - Pending Closeout

GLWA FY 2020-2024 CIP

122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

☐ Innovation☐ Water MP Right Si☑ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	Water main being lo	id						
Project Engineer/Ma	nager Khader Hamad	Budget	Water						
Ма	nager Grant Gartrell	Class LvI 1	Water						
Managing	Dept Water Eng	Class LvI 2	Field Services						
Date Original Busine	ss Case Prepared 2/28/2014	Class LvI 3	Transmission System						
Year Proj	ect Added to CIP 2014	Location	City of Detroit						
		Fund and Cost Center	Water - 5519-882411						
Project Significance	Replacement of original piping with excessive roadway.	ve break history with new duc	tile iron main along Wayne County						
Scope of Work	The work consists of replacement of existing distribution mains and existing 24-inch transmissions mains, including gate valve, blow offs, air release valves and other appurtenances along Joy Road from Southfield Freeway to Trinity Road in the City of Detroit. A portion of this work is part of the Retail system (not included in this amount) CIP No. 463. Joy Road is also a significant Wayne County roadway within Detroit and a DDOT bus route.								
Challenges	N/A - Pending Closeout								
Lookup Driver	N/A - Pending Closeout								

122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

Phase not applicable			Contract	NA	Stati	us Closed	Out		
Title Prior Year Actual Exp	enses								
Phase Budget Water					Cost Alloc	cation CTA			
Phase Status Closed Ou	J†				Funding S	ource			
Start Date						Fund			
End Date					Useful Life >2	20Yrs?			
Cost Estimati	on Information			Tot. Fed	deral Loan Ar	mount			
5	Cost Est. C	lass		Pı	ogram/Allow	vance Task I	nformation		
1/1/2015	Cost Est. D	ate	Pro	oject Manage	r				
CDM Smith	Cost Est. S	ource	CI	P Number					
CDM Smith	Cost Est. P	repared By	De	escription					
Cost Type	Fiscal Year	Expense	F	Fringe Benefit	IonPersonne	С	omment		
Unknown	FY18-	\$1	101		F	Y16			
Unknown	FY18-		\$6		F	Y17			
Prior Yr Actuals FY1	9 FY20	FY21	FY2	2 FY23	FY24	FY25+	Total		
107							107		

122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

Phase Construction				Co	ntract W	S-693	Status	Pending Close-out
Title WS-693 Water S	System Imp	provements	in Joy Road	from Southfie	eld Road to	o Trinity		
Major Cement Com	npany, DWS	SD contrac	t.					
Phase Budget Wat	er					Cost Allocation	СТА	
Phase Status Pen	ding Close	-out				Funding Source	Bond Pr	oceeds
Start Date		8/11	/2014			Fund	Constru	ction Bond Fund
End Date		8/10	/2016		U	seful Life >20Yrs?	Yes	
Cost Es	stimation In	nformation			Tot. Fede	eral Loan Amount		
	1	Cost Est. C	Class		Prog	gram/Allowance	Task Info	ormation
9/15/2	2017	Cost Est. D	ate	Project A	Nanager			
Contractor		Cost Est. S	ource	CIP Num	ber			
Biren Saparia		Cost Est. P	repared By	Descripti	on			
Task	St	tart Date	End Date	Duration				
Scope Developmen		I GIT B GTO	Eria Baio	Bordhorr				
Procurement								
Project Execution								
i rojeci Execulion								

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

	- J									, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	8323	100							0	0	8,423
2019	0	107								0	107
2020	0	0	107								107

Challenges N/A - Active

Lookup Driver N/A - Active

Explanation N/A - Active

Related Project WS-693

GLWA FY 2020-2024 CIP

GLWA F1 2020-2024 CIT Great Lakes Water Authority Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and

☐ Innovation☐ Water MP Right Siz✓ Reliability/Redunct☐ NEWTP Repurposir	lancy Project New To CIP	Water main bein replace			
Project Engineer/Mar	nager Eric Kramp	Budget	Water		
Mar	nager Grant Gartrell	Class LvI 1	Water		
Managing	Dept Water Eng	Class LvI 2	Field Services		
Date Original Busines	s Case Prepared 8/18/2016	Class LvI 3	13 Transmission System		
Year Proje	ect Added to CIP 2014	Location	City of Detroit		
		Fund and Cost Center	Water - 5519-882431		
Project Significance	Original piping has history of excessive breaks	; replacing to minimize disru	ption in high-traffic area		
	Work includes replacement of approx. 18500 Rd and Davison. The scope of work also inclu work is part of the Retail system (amounts not	des approx. 5300 ft. of 24" D			

122010 CIP#

Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and

Phase Construction Contract WS-693 Status Pending Close-out

Title WS-693 Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and Davison Ave from Lindwood to Livernois

Shared service with DWSD. 4/28/18

Yes this is a joint project 38%-GLWA 62%-DWSD as of 6/30/17 the project was 29% complete with GLWA portion completed at 15% or \$536,930

Contract Split 38% GLWA - \$3,617130

62% DWSD - \$5,862,746

Total \$9,479,876

Estimated Spend

2018 \$7,050,000

2019 \$580,000

This will not tie completely because it does not take into account the portion that was for FY2017 but paid in FY2018 and a \$450,000 allowance that the Engineers are not yet sure of the need to spend.

Phase Budget	Water	
Phase Status	Pending Close-out	
Start Date		9/6/2016
End Date		11/5/2018

Cost Estimation Information									
1	Cost Est. Class								
1/1/2015	Cost Est. Date								
CDM Smith	Cost Est. Source								
CDM Smith	Cost Est. Prepared By								

Cost Allocation	СТА
Funding Source	Federal Loan Programs
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	

Program/Allowance Task Information Project Manager

CIP Number
Description

Task	Start Date	End Date	Duration
Project Execution	1/1/2017	1/2/2017	1
Project Closeout	1/3/2017	4/3/2017	90

122010 CIP#

GLWA 1 2020-2024 City Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

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

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

	11010	or rorar E	.xpcnoc.	, , , , ,	ompare	<u>a 10 1 1101</u>		90103	are in q	,,,,,,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		1,370	1,106	652					0	0	3,128
2019	0		16							0	16
2020	0	0		0	0	0	0	0	0	0	0



Park-Merriman Water Transmission Main Construction

□ Innovation	Project Status Active	Water main being installed	
☐ Water MP Right Si	izing CIP Type Project	ii istaliea	
✓ Reliability/Reduna			
□ NEWTP Repurposi	ng Project New To CIP		
Drain of Engine or /AA or	Deter Fromm	Dudget Water	
Project Engineer/Ma		Budget Water	
Ма	inager Grant Gartrell	Class Lvl 1 Water	
Managing	g Dept Water Eng	Class Lvl 2 Field Serv	ices
Date Original Busines	ss Case Prepared 4/12/2017	Class LvI 3 Transmissi	on System
Year Proj	ect Added to CIP 2015	Location Wayne C	ounty - Outside Detroit
		Fund and Cost Center Water - 55	519-882411
Project Significance	Replacement of new water main to conve	rt deduct water meters to direct connec	tion meters
Scope of Work	This third and final leg of the 24" water main to direct connection service and retire Ma		
Challenges	n/a		
Project History	n/a		
Related Project	CS-1488 – Design Services. Two previous construction contracts.		
	TWO previous construction confiders.		
Lookup Driver	2 - Performance		



Park-Merriman Water Transmission Main Construction

PM Weighted Score

38

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

RC Weighted Score

30.2

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



Park-Merriman Water Transmission Main Construction

Phase Design & Cor	nstruction .	Assistance			Co	ntract	CS	5-1488	:	Status	Active		
Title Park-Merriman	Water Mo	ain-Final Pha	se										
Phase Budget Wa	ter							Cost Allo	cation C	TA			
Phase Status Act	ive							Funding S	Source Bo	ond Pr	oceeds		
Start Date									Fund C	onstru	ction Bo	nd Fund	
End Date							Us	seful Life >	20Yrs? Y	es			
Cost E	stimation	Information				Tot. Fe	ede	ral Loan A	mount				
	5	Cost Est. C	lass			ı	rog	gram/Allov	wance To	ısk Info	ormation	1	
1/1/	/2016	Cost Est. D	ate	Р	roject <i>l</i>	Manage	er						
Somat		Cost Est. So	ource		CIP Num	ber							
Somat		Cost Est. P	repared By		escript	ion							
Cost Type	-	Fiscal Year	Expense)	Fringe	Benefit	Nor	nPersonne		Cor	nment		
Engineering Service	s FY	19	9	137									
Engineering Service	s FY	20	\$	5107									
Engineering Service	s FY	21	9	5107									
Other	FY	19		\$0					2020CIP				
Task		Start Date	End Date	Dur	ation								
Scope Developmer	n†	7/24/2016	10/22/2016		90								
Procurement		10/23/2016	10/23/2017		365								
Project Execution		10/24/2017	1/15/2021		1179								
Project Closeout		1/16/2021	4/16/2021		90								
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23		FY24	FY25+	-	Total		
	13	7 107	107		0		0	0		0	351		



Park-Merriman Water Transmission Main Construction

Phase Construct	tion					Co	ntract	CC	DN-268		Statu	JS Ac	ctive		
itle Park-Merrir	man Wate	er Mair	n-Final Phas	se											
Phase Budget	Water								Cost Allo	cation	СТА				
Phase Status	Active								Funding S	ource	Bond	Proce	eds		
Start Date										Fund	Const	ructio	n Bor	ıd Fund	
End Date								Us	seful Life >2	20Yrs?	Yes				
Co	ost Estima	tion Inf	ormation				Tot. Fe	edei	al Loan A	mount					
	5		Cost Est. C	lass			ĺ	Prog	ıram/Allov	vance '	Task Ir	nformo	ation		
	1/1/2016		Cost Est. De	ate	Р	roject <i>l</i>	Manag	er							
Somat			Cost Est. So	ource	C	IP Num	ber								
Somat			Cost Est. Pr	epared By	D	escript	ion								
Cost Typ	ne.	Fisa	cal Year	Expense	<i>j</i>	Fringe	Benefit	Nor	Personne		C	omme	ent		
Construction		FY19			900	111190	DOTTOTT	1 101	11 013011110		0.	01111110	21 11		
Construction		FY20			,600										
Construction		FY21		\$2	,100										
Task		Sto	art Date	End Date	Dur	ation									
Scope Developi	ment	1	1/30/2017	8/26/2018		269									
Procurement		8	8/27/2018	1/14/2019		140									
Project Executio	n	•	1/15/2019	1/15/2021		731									
Project Closeou	t	•	1/16/2021	4/16/2021		90									
Prior Yr Actua	ls FY	19	FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Tota	al		
		900	4,600	2,100		0		0	0		0	7	,600		



Park-Merriman Water Transmission Main Construction

Phase not applicable			(Contract $ ightharpoonup$	1A	Stat	us Closed	Out
Title Prior Year Actual Ex	xpenses							
Phase Budget Water					Cost Alloc	cation CTA		
Phase Status Closed	Out				Funding S	ource		
Start Date						Fund		
End Date				ı	Useful Life >2	20Yrs?		
Cost Estime	ation Informatio	1		Tot. Fed	eral Loan Ar	mount		\$0
5	Cost Est.	Class		Pro	ogram/Allow	ance Task I	nformation	
1/1/2016	Cost Est.	Date	Projec	t Manager				
Somat	Cost Est.	Source	CIP Nu	ımber				
Somat	Cost Est.	Prepared By	Descri	ption				
Cost Type	Fiscal Year	Expens	e Fring	e BenefitNo	onPersonne	C	omment	
Engineering Services	FY18-		\$156		F	Y18		
Prior Yr Actuals F	Y19 FY20	FY21	FY22	FY23	FY24	FY25+	Total	
156							156	



Park-Merriman Water Transmission Main Construction

Phase GLWA Emplo	WARE Pr	roject managa	ment		_	Contract N	Δ	State	us Active	
·	,	ojeci manage				Joinnaci (N)	^	Jiuli	J ACIIVE	
Title GLWA Salaries	5									
Phase Budget Wa	ıter						Cost Alloc	cation CTA		
Phase Status Act	tive						Funding S	burce Bond	Proceeds	
Start Date								Fund Cons	truction Bor	nd Fund
End Date						U	seful Life >2	OYrs? No		
Cost E	stimati	on Information				Tot. Fede	eral Loan Ar	nount		\$0
	5	Cost Est.	Class			Prog	gram/Allow	ance Task I	nformation	
1/1,	/2016	Cost Est.	Date	Р	roject	Manager				
Somat		Cost Est.	Source	C	IP Nu	mber				
Somat		Cost Est.	Prepared By	D	escrip	otion				
Cost Type		Fiscal Year	Expens	e	Fringe	e BenefitNoi	nPersonne	С	omment	
GLWA Salaries CIP2	020	FY19		\$21		8	1			
GLWA Salaries CIP2	020	FY20		\$21		8	1			
GLWA Salaries CIP2	020	FY21		\$21		8	1			
GLWA Salaries CIP2	020	FY22		\$4		2	0			
Prior Yr Actuals	FY1	9 FY20	FY21	FY	22	FY23	FY24	FY25+	Total	
		30 3	0 30		6	0	0	0	96	
	1	1	Phase Total Ex	kpense	es By I	FY (All figure	es are in \$1,	000's)		
Du - ! -	o L Tal	tal Evpansa							- ¢1 000	J-A

Project lotal expenses by FY Compared to Prior CIPS (All figures are in \$1,000's)

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,800	2,200					0	0	4,000
2019	0		23	955	3,676	1,549	6			0	6,209
2020	0	0	156	1,067	4,737	2,237	6	0	0	0	8,203



Explanation N/A - Active

GLWA FY 2020-2024 CIP

36-inch Water Main in Telegraph Road

☐ Innovation☐ Water MP Right Size☑ Reliability/Redund☐ NEWTP Repurposing	dancy Project New To CIP	Water main ready t inst	
Project Engineer/Ma	nager Khader Hamad	Budget	Water
Mai	nager Grant Gartrell	Class LvI 1	Water
Managing	Dept Water Eng	Class LvI 2	Field Services
Date Original Busines	ss Case Prepared 8/18/2016	Class LvI 3	Transmission System
Year Proje	ect Added to CIP 2012	Location	Wayne County - Outside Detroit
		Fund and Cost Center	Water - 5519-882411
Project Significance	Excessive joint leaks warrant replacement; n	new water line to be placed in	greenbelt
Scope of Work	This project includes installation of approxim Cherry Hill to Warren Ave.	ately 10,530 feet of 36-inch die	a. water main in Telegraph Road from
Challenges	N/A - Active		
Related Project	WS-684		
Lookup Driver	1 Condition		



36-inch Water Main in Telegraph Road

Score	PM	Weighted
		Score

55

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

RC Weighted Score

45.6

Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	2	
Financial	2	
O&M	3	
Performance (Service Level/Reliability)	3	
Public Benefit	3	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	1	
		l Control of the Cont



36-inch Water Main in Telegraph Road

Phase not applicabl	le					(Contract	NA		Sta	itus C	losed	Out	
Title Prior Year Actu	ıal Exp	ense	S											
Phase Budget Wat	ter								Cost Allo	cation CTA				
Phase Status Clos	sed Ou	ı†							Funding	Source				
Start Date										Fund				
End Date								Us	eful Life >	20Yrs?				
Cost Es	stimati	on In	formation				Tot. Fe	der	al Loan A	mount				
	1		Cost Est. C	lass			P	rog	ram/Allo	wance Task	Inform	ation		
1/1/2	2016		Cost Est. De	ate	P	rojec	t Manage	er [
Somat			Cost Est. So	ource	C	CIP Nu	ımber							
Somat			Cost Est. Pr	epared By)escri	ption							
Cost Type		Fis	scal Year	Expens	e	Fring	e Benefill	Von	Personne	(Comm	ent		
Construction		FY18	3-	\$,087					FY18				
Engineering Services	S	FY18	3-		\$160					FY18				
Unknown		FY18	3-	\$7	7,545					FY17				
Unknown		FY18	3-		\$581					FY16				
GLWA Salaries CIP20)20	FY18	3-		\$32		13			FY18				
Prior Yr Actuals	FY1	9	FY20	FY21	FY:	22	FY23		FY24	FY25+	Tot	tal		
9,418											ç	9,418		



36-inch Water Main in Telegraph Road

Contract WS-684A Status Pending Close-out **Phase** Construction WS-684A 36-inch Water Main in Telegraph Road Ric-Man **Phase Budget** Water Cost Allocation CTA Phase Status Pending Close-out Funding Source Bond Proceeds Start Date 4/25/2016 **Fund** Construction Bond Fund **End Date** 6/24/2017 Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source Somat Description Cost Est. Prepared By Somat Cost Type Fiscal Year Fringe Benefit NonPersonne Expense Comment Construction FY19 \$127 2020CIP Task Start Date Fnd Date Duration Scope Development 10/18/2015 90 7/20/2015 Scope Development 10/19/2015 4/24/2016 188 Procurement Project Execution 4/25/2016 1/31/2018 646 Project Closeout 2/1/2018 12/31/2019 698 Prior Yr Actuals FY20 FY21 FY22 FY23 FY24 FY19 FY25+ Total 127 0 0 0 0 0 0 127



36-inch Water Main in Telegraph Road

Phase Design & Con	struction	n Assistance			Co	ntract	1A	;	Status	Pendin	g Close-ou	t
itle 36-inch Water	Main in T	elegraph Roc	nd									
Phase Budget Wat	er						Cost Allo	cation C	TA			
Phase Status Pen	ding Clo	se-out					Funding S	Source Bo	ond Pro	oceeds		
Start Date								Fund C	onstru	ction Bor	nd Fund	
End Date							Useful Life >	20Yrs? Ye	∋s			
Cost Es	stimation	ı Information				Tot. Fed	eral Loan A	mount				
	1	Cost Est. C	lass			Pro	ogram/Allov	wance Ta	sk Info	ormation		
1/1/:	2016	Cost Est. D	ate	Р	roject <i>l</i>	Manager						
Somat	omat Cost Est. Source					CIP Number						
Somat		Cost Est. Pi	repared By	D	escript	ion						
Cost Type		Fiscal Year	Expense	7	Fringe	Renefit No	onPersonne		Con	nment		
Engineering Services	s F	Y19	2/10/100	\$10	111190	Borromitt		2020CIP	0011			
Other		Y19		\$15				2020CIP				
Task		Start Date	End Date	Dur	ation							
Scope Developmen	t	7/21/2013	10/19/2013		90							
Procurement		10/20/2013	10/20/2014		365							
Project Execution		10/21/2014	1/31/2018		1198							
Project Closeout		2/1/2018	12/31/2019		698							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+		Total		
	2	25 0	0		0	0	0		0	25		



2018

2019

2020

2,000

8,125

0

0

0

5,061

2,257

9,418

3

0

155

GLWA FY 2020-2024 CIP

36-inch Water Main in Telegraph Road

0

0

0

0

0

0

7,061

10,385

9,573

hase	GLWA Em	ployee	es Proje	ct manager	ment		Contrac	t NA	4		Status	Pending	g Close-out		
tle G	SLWA Sala	aries													
Phase Budget Water									СТА	СТА					
Phase Status Pending Close-out						Funding Source						Bond Proceeds			
Start Date						Fund Construction Bond Fund									
E	End Date					Useful Life >20Yrs?						No			
	Со	st Estir	nation I	nformation			Tot.	Fede	ral Loar	Amoun	+		\$	0	
1 Cost Est. Class						Program/Allowance Task Information									
1/1/2016 Cost Est. Date					ate	Project Manager									
Som	iat			Cost Est. S	ource	CIP Number									
Somat Cost Est. Pre				repared By	ed By Description										
	Cost Typ	oe .	F	iscal Year	Expens	e Fri	inge Bene	fitNor	nPerson	ne	Cor	nment			
GLWA :	Salaries C	IP2020	FY1	19		\$2		1		0					
Prior	Yr Actual	ls	FY19	FY20	FY21	FY22	FY2	3	FY24	FY2	25+	Total			
			3	0	0		0	0		0	0	3			
				P	hase Total E	xpenses	By FY (All	figure	es are in	\$1,000's)				
	Pr	oject	Total	Expenses	By FY Co	mpare	d to Pric	r CI	Ps (All	figures	are in	\$1,000's	s)		
CIP	FY16		FY17	FY18	FY19	FY20	FY21	F`	Y22	FY23	FY24	FY25	Tota	al	

0

0



14 Mile Transmission Main Loop

☐ Innovation	Project Status Future Planned		
☐ Water MP Right Si	zing		
✓ Reliability/Redund	Cir Type Project		
□ NEWTP Repurposi	Project New To CIP		
Project Engineer/Ma	nager Timothy Kuhns	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Field Services
Date Original Busines	ss Case Prepared 10/28/2016	Class Lvl 3	Transmission System
Year Proje	ect Added to CIP 2017	Location	Oakland County
		Fund and Cost Center	Water - 5519-882111
	The 14 Mile Transmission Main that currently see Township, Novi, Walled Lake, and Wixom is a soccur on this transmission main, many of the land flow. This project would provide a transmithis branch of the system.	single feed transmission syste users along this main would e nission main loop to the 14 M	em. If a disruption to service were to experience a complete loss of pressure ile system to increase redundancy on
Scope of Work	Install approximately 6 Miles of 48-inch transm The work will also include connections to the well as a control valve to regulate flows along	yard piping and reservoir fill	
Challenges	Routing and construction staging for the propapears to be a significant challenge as this Southeast Michigan.		
Project History	The 2015 Water Master Plan Update included system to increase redundancy. Since that reperformed a hydraulic analysis of redundancy hydraulic analysis was presented at the May and based on the discussion at these meeting appears to be the preferred alternative.	commendation, GLWA Wat y alternatives for the 14 Mile 15, 2017 and September 19,	er Supply Operations Engineering Transmission System. The results of the 2017 Analytical Work Group Meetings
Related Project	CIP 1336 West Service Center Division Valve L	Ipgrades and Newburgh Ac	tive Bypass System
Lookup Driver	2 - Performance		

122013 CIP#

14 Mile Transmission Main Loop

Other Important Info

GLWA should consider discussing additional connections with the City of Novi as they may desire an additional meter connection along Napier Road.

Explanation Additional purchase volume (new customers) defrays fixed costs of operating and maintaining the system ensuring the long-term financial viability of the system.



14 Mile Transmission Main Loop

PM Weighted Score

60.6

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	2	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	2	

RC Weighted Score

58.4

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	2	
Financial	1	
O&M	3	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	2	



14 Mile Transmission Main Loop

hase Design & Con	struction	n Assistance		Contract NA S							Planned Sta	rt	
itle 14 Mile Transmi	ssion Mo	ain Loop											
Phase Budget Wat	er			Cost Allocation CTA									
Phase Status Futu	re Planr	ned Start					ource Bond	d Prod	ceeds				
Start Date							Fund Con	Construction Bond Fund					
End Date		Useful Life >20Yrs? Yes											
Cost Es	stimatio	n Information		Tot. Federal Loan Amount									
	lass	Program/Allowance Task Information											
Cost Est. Date				Project Manager									
	ource	CIP Number											
		Cost Est. P	repared By	ed By Description									
Cost Type Fiscal Year			Expense	Expense Fringe Benefit NonPersonne						ment			
ingineering Services	F	Y20		\$690									
Ingineering Services	F	Y21	\$1	,254									
Engineering Services	F	Y22	\$1	\$1,446									
Ingineering Services	F	Y23	\$1	\$1,000									
Engineering Services FY24				\$300									
Task Start Date End			End Date	Dur	ation								
Scope Development 6/2/2018 8			8/31/2018	8 90		O							
Procurement 9/1/2018		9/1/2019	9 365		5								
Project Execution 9/2/2019 2		2/27/2026	2370		O								
Project Closeout		2/28/2026	5/29/2026)	90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	To	otal			
		0 690	1 254	1	116	1 000	300	Λ		4 690			





14 Mile Transmission Main Loop

Phase Construction					Co	ntract 1	NA	Sta	ıtus	Future I	Planned S	Start
Title 14 Mile Transm	ission Mo	ain Loop										
Phase Budget Wa	ter						Cost Allo	cation CTA				
Phase Status Futu	ure Planr	ned Start					Funding :	Source Bond	d Pro	ceeds		
Start Date								Fund Con	struc	tion Bor	nd Fund	
End Date							Useful Life >	20Yrs? Yes				
Cost E	stimatio	n Information				Tot. Fed	leral Loan A	mount				
	5	Cost Est. C	lass			Pr	ogram/Allo	wance Task	Info	rmation		
		Cost Est. D	ate	Pro	oject A	Nanage r	,					
		Cost Est. S	ource	CI	P Num	ber						
		Cost Est. P	repared By	De	scripti	ion						
Cost Type		Fiscal Year	Expense	e F	ringe I	BenefitN	onPersonne	(Com	ment		
Construction	F	Y21		\$0				2020CIP				
Construction	F	Y22		\$0								
Construction	F	Y23	\$12	,359								
Construction	F	Y24	\$11	,518								
Construction	F	Y25+	\$25	,433				2020CIP				
Task		Start Date	End Date	Dura	tion							
Scope Developmen	n†	5/31/2021	8/29/2021		90							
Procurement		8/30/2021	3/6/2022		188							
Project Execution		3/7/2022	2/27/2026		1453							
Project Closeout		2/28/2026	5/29/2026		90							
Prior Yr Actuals	FY19	FY20	FY21	FY22	2	FY23	FY24	FY25+	T	Total		
		0 0	0		0	12,359	11,518	25,433		49,310		



14 Mile Transmission Main Loop

Phase GLWA Employe	nent	Contract NA					us Future	Planned S	tart				
itle GLWA Salaries													
Phase Budget Water	r			Cost Allocation CTA									
Phase Status Future		Funding Source Bond Proceeds											
Start Date			Fund Construction Bond Fund										
End Date			Useful Life >20Yrs? No										
Cost Esti		Tot. Federal Loan Amount \$0											
	lass	Program/Allowance Task Information											
1/1/20	ate	Pro	oject <i>l</i>	Manager									
GLWA		Cost Est. So	ource	CI	P Num	nber							
GLWA	repared By	De	escript	ion									
Cost Type Fiscal Year I			Expense	e F	ringe	BenefitNo	С	omment					
GLWA Salaries CIP202	20 FY	′20		\$42		17	2						
GLWA Salaries CIP202	20 FY	′21		\$42		17	2						
GLWA Salaries CIP202	20 FY	′22		\$42		17	2						
GLWA Salaries CIP202	20 FY	′23		\$42		17	2						
GLWA Salaries CIP202	20 FY	′24		\$126		50	6						
Task Start Date End			End Date	e Duratio									
Project Execution													
Prior Yr Actuals	FY19	FY20	FY21	FY22	2	FY23	FY24	FY25+	Total				
		0 61	61		61	61	182	0	426				
		P	hase Total Ex	penses	s By FY	(All figure	es are in \$1,0	000's)					
Projec	t Total	Expenses	By FY Co	mpare	ed to	Prior CI	Ps (All fig	ures are i	n \$1.000	's)			

CIP FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 Total 1,300 2018 10,500 12,000 6,000 0 0 29,800 2019 751 1,315 1,507 37,433 54,426 0 13,420 0

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

122013 CIP#

14 Mile Transmission Main Loop

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		0	751	1,315	1,507	13,420	12,000	25,433	54,426

GLWA Great Lakes Water Authority

Explanation N/A - Active

GLWA FY 2020-2024 CIP

Romulus 48-inch Water Main Installation

☐ Innovation✓ Water MP Right Siz✓ Reliability/Redund☐ NEWTP Repurposir	dancy Project New To CIP	Pipe ready to inst	all
Project Engineer/Mai	nager Khader Hamad	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Field Services
Date Original Busines	ss Case Prepared 8/18/2016	Class LvI 3	Transmission System
Year Proje	ect Added to CIP 2015	Location	Wayne County - Outside Detroit
		Fund and Cost Center	Water - 5519-882411
Project Significance	Placement of a parallel water main to mir	nimize service disruptions to cust	omer communities
·	The City of Romulus notified DWSD of a sig corner of Vining and Wick Roads. Romulu main along Wick Road. Placement of the traffic entrances/exits facing Wick road. I it could be in place at the time of the reto main will be placed by Romulus as a part	is was also aware that DWSD ha e new 48" water main would be Thus, Romulus asked if the 48" wo ail development construction in	s a project pending to place a 48" water disruptive to the retail development ater main project could be expedited so Spring/Summer 2016. The 48" water
Challenges	N/A - Active		
Lookup Driver	N/A - Active		



Romulus 48-inch Water Main Installation

Phase not applic	able					C	Contract	NA		Sta	tus Clo	sed	Out	
Title Prior Year A	ctual Exp	oense	S											
Phase Budget V	Vater								Cost Allo	cation CTA				
Phase Status (Closed O	ut			Funding Source									
Start Date					Fund									
End Date								Us	eful Life >	20Yrs?				
Cos	st Estima	lion In	formation				Tot. Fe	der	al Loan A	mount				
	5		Cost Est. C	lass			P	rog	ram/Allov	vance Task	Informat	lion		
1	1/1/2016 Cost Est. Date				Project Manager									
Somat			Cost Est. So	ource	e CIP Number									
Somat			Cost Est. Pr	epared By	ed By Description									
Cost Typ	e	Fis	cal Year	Expens	е	Fring	e Benefil	Von	Personne	(Commer	nt		
Construction		FY18	3-		\$110					FY18				
Engineering Servi	ces	FY18	3-		\$61					FY18				
Unknown		FY18	3-	\$3	3,404					FY17				
Unknown		FY18	3-		\$436					FY16				
Prior Yr Actuals	; FY	19	FY20	FY21	FY2	22	FY23		FY24	FY25+	Total			
4,0	11										4,0	011		



Romulus 48-inch Water Main Installation

Phase Construction Contract MOU-4848 Status Closed Out

Title MOU-4848 Romulus 48-inch Water Main Installation

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?	Yes
Cost Estimation	n Information	Tot. Federal Loan Amount	
4	Cost Est. Class	Program/Allowance	Task Information
10/30/2017	Cost Est. Date	Project Manager	
Engineering	Cost Est. Source	CIP Number	
Biren Saparia	Cost Est. Prepared By	Description	

Task		Start Date	End Date	Duration				
Project Execution		1/1/2017	6/30/2018	54	5			
Project Closeout		7/1/2018	9/29/2018	9	0			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0



3,514

3,840

4,011

GLWA FY 2020-2024 CIP

Romulus 48-inch Water Main Installation

4,535

4,243

4,011

hase GLWA En	. ,	Projec	t managen	nent	(Contract	NA		Status	s Closec	l Out		
tle GLWA Salo	aries												
Phase Budget	Water						Cost	Allocatio	on CTA				
Phase Status	Closed (Out					Fund	ing Sourc	e Bond P	roceeds			
Start Date					Fund Construction Bond Fund							I	
End Date					Useful Life >20Yrs? No								
Co	ost Estimo	ation Ir	nformation]	Tot. Fed	deral Loc	an Amou	ınt			\$0	
5 Cost Est. Class						Pı	ogram/	Allowand	ce Task In	formation	l		
	1/1/2016	5	Cost Est. Do	ate	Project Manager								
Somat			Cost Est. Sc	ource	CIP Number								
Somat			Cost Est. Pr	epared By	Descri	iption							
Prior Yr Actua	ıls F	Y19	FY20	FY21	FY22	FY23	FY2	4 F	Y25+	Total			
		0	0	0	0	()	0	0	0			
			Pł	nase Total E	xpenses By	FY (All figu	res are	in \$1,000	's)				
Pi	roject T	otal I	xpenses	By FY Co	mpared	to Prior C	CIPs (A	ll figure	es are in	\$1,000	's)		
CIP FY16	5 F	Y17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY2	25	Total	

Project History Project is completed.

GLWA FY 2020-2024 CIP

122015 CIP#

30" Water main Replacement - Water main Replacement Under Jefferson & Rouge River

☐ Innovation☐ Water MP Right Siz☑ Reliability/Redunc☐ NEWTP Repurposir	ancy Project New To CIP	Water main	
Project Engineer/Mar	ager Khader Hamad	Budget Water	
Mar	nager Grant Gartrell	Class Lvl 1 Water	
Managing	Dept Water Eng	Class Lvl 2 Field Services	
Date Original Busines	s Case Prepared 10/21/2016	Class Lvl 3 Transmission System	
Year Proje	ect Added to CIP	Location City of Detroit	
		Fund and Cost Center Water - 5519-882111	
•	This project was completed to replace a c WRRF.	ritical water main that suffered a break and that serves the GLWA	

122015 CIP#

30" Water main Replacement - Water main Replacement Under Jefferson & Rouge River

Phase not applicable				Contract	· NA	4	Sta	tus Closed	Out		
itle Prior Year Actua	l Expense	es									
Phase Budget Water	r						Cost Alloc	cation CTA			
Phase Status Close	d Out			Funding Source							
Start Date				Fund							
End Date		Useful Life >20Yrs?									
Cost Estimation Information				Tot. Federal Loan Amount							
	lass	Program/Allowance Task Information									
1/1/20	016	Cost Est. D	ate	Project Manager							
GLWA		Cost Est. S	ource	CIP Number							
GLWA		Cost Est. P	repared By	D	escription						
Cost Type	F	iscal Year	Expens	е	Fringe Benef	itNor	nPersonne	(Comment		
Construction	FY1	8-		\$116			F	Y18			
Unknown	FY1	8-	\$2	2,345			F	Y17			
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
2,461									2,461		

30" Water main Replacement - Water main Replacement Under Jefferson & Rouge River

Phase Construction Contract CON-105 Status Closed Out

ojects Capito	alized/Expens	ed @FY18 \$2,461K		
Phase Budget	Water		Cost Allocation	СТА
Phase Status	Closed Out		Funding Source	Bond Proceeds
Start Date			Fund	Construction Bond Fund
End Date			Useful Life >20Yrs?	Yes
C	ost Estimation	Information	Tot. Federal Loan Amount	
	5	Cost Est. Class	Program/Allowance	Task Information
	1/1/2016	Cost Est. Date	Project Manager	
GLWA		Cost Est. Source	CIP Number	
GLWA		Cost Est. Prepared By	Description	

Task		Start Date	End Date	Duration				
Project Execution		1/1/2017	6/30/2017	18	0			
Project Closeout		7/1/2017	9/29/2017	91	0			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

30" Water main Replacement - Water main Replacement Under Jefferson & Rouge River

n ase GLWA Emplo	yees Projec	ct managem	ent	C	Contract NA	4	Statu	us Closed O	ut	
le GLWA Salaries	S									
Phase Budget Wo	ıter					ation CTA	CTA			
Phase Status Clo	sed Out					Bond	Bond Proceeds			
Start Date						Fund Const	ruction Bond	Fund		
End Date										
Cost I	Cost Estimation Information				Tot. Fede	nount	\$0			
	5	Cost Est. Clo	ass	Program/Allowance Task Information						
1/1	/2016	Cost Est. Da	te	Project Manager						
GLWA		Cost Est. Source		CIP Number						
GLWA		Cost Est. Pre	epared By	Descrip	otion					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		
		Ph	ase Total Ex	penses By I	FY (All figure	es are in \$1,0	000's)			

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

		ei ioiai i	-xpciisc:	, , , , , ,	r compared to the end (All lightes die in \$1,000 s)								
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total		
2018		2,327							0	0	2,327		
2019	0	2,345	398							0	2,743		
2020	0	0	2,461	0	0	0	0	0	0	0	2,461		

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Downriver Transmission Main Loop

□ Innovation□ Water MP Right Si☑ Reliability/Redund□ NEWTP Repurposi	dancy	Project Status Future Planned CIP Type Project Project New To CIP	Example transmissio mo	on ain
Project Engineer/Ma	nager Ti	imothy Kuhns	Budget	Water
Ma	nager 🤆	Grant Gartrell	Class Lvl 1	Water
Managing	Dept V	Vater Eng	Class Lvl 2	Field Services
Date Original Busines	ss Case	Prepared 10/12/2017	Class Lvl 3	Transmission System
Year Proj	ect Add	ed to CIP 2017	Location	Wayne County - Outside Detroit
			Fund and Cost Center	Water - 5519-882411
Project Significance	Gibralto service loss of p	wnriver Transmission Main that currently sar, Rockwood, South Rockwood, and Be were to occur on this transmission main, pressure and flow. This project would prolancy on this branch of the system.	rlin Township is a single fee , many of the users along t	ed transmission system. If a disruption to
Scope of Work		approximately 6 Miles of 16-inch transmiss Avenue corridor to parallel the existing		•
Challenges		ng ownership of the 24-inch transmission nent of this portion of pipeline.	main through the City of T	renton may require condition
Project History	system perform hydraul and ba	5 Water Master Plan Update included a to increase redundancy. Since that reco ned a hydraulic analysis of redundancy lic analysis were presented at the May 1 used on the discussion at these meetings of work appears to be the preferred alter	ommendation, GLWA Wat alternatives for the Downri 5, 2017 and September 19 , the Electric Avenue Trans	er Supply Operations Engineering iver Transmission System. The results of the P, 2017 Analytical Work Group Meetings
Related Project	None			
Lookup Driver	2 - Perfo	ormance		



Downriver Transmission Main Loop

PM Weighted Score

57.4

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	2	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	2	

RC Weighted Score

58.4

Score	Comment
1	
2	
1	
3	
5	
5	
4	
2	
	Score 1 2 1 3 5 4 2



Downriver Transmission Main Loop

Phase Design & Cor		Contract NA Status Future Planned Sta								Start				
Title Downriver Tran	nsmission	n Mair	n Loop											
Phase Budget Wat	ter								Cost Allo	cation	СТА			
Phase Status Futu	ıre Planr	ned S	Start		Funding Source Bond Proceeds									
Start Date						Fund Construction Bond Fu							nd Fund	
End Date								Us	eful Life >	20Yrs?	Yes			
Cost E	stimatio	n Info	ormation			Tot. Federal Loan Amount								
	ass	Program/Allowance Task Information												
	ate	F	roject	Manage	er -									
	ource	CIP Number												
	epared By	[Descrip	tion										
Cost Type			al Year	Expense	U		Benefit	Von	Personne		Cc	mment		
Engineering Services	s F	FY20		•	\$276									
Engineering Services	s F	FY21			\$934									
Engineering Services	s F	FY22		•	\$801									
Engineering Services	s F	FY23			\$931									
Engineering Services	s F	FY24		\$1	,058									
Task		Sta	rt Date	End Date	Du	ration								
Scope Developmen	t	10	0/1/2018	12/30/2018	3	90	O							
Procurement		12,	/31/2018	12/31/2019)	36	5							
Project Execution			1/1/2020	4/1/2024		1552	2							
Project Closeout		,	4/1/2024	6/30/2024		90)							
Prior Yr Actuals	FY19		FY20	FY21	FY	22	FY23		FY24	FY25	5+	Total		
		0	276	934		801	93	31	1,058		0	4,000		



Downriver Transmission Main Loop

Phase Construction	se Construction				Contract NA					Status	Future	Planned	Start	
Title Downriver Tr	ransmissio	n Mc	ain Loop											
Phase Budget V	Vater							Cost All	ocation C	TA				
Phase Status F	uture Plar	nned	Start		Funding Source Bond Proceeds									
Start Date					Fund Construct						uction Boi	nd Fund		
End Date	End Date					Useful Life >20Yrs? Yes								
Cos	t Estimatio	on In	formation				Tot. Fe	deral Loan	Amount					
	ass	Program/Allowance Task Information												
Cost Est. Date				ate	P	roject <i>l</i>	Manage	er						
Cost Est. Source				ource	CIP Number									
Cost Est. Prepare				epared By	d By Description									
Cost Type	e	Fis	cal Year	Expense		Fringe	Benefit	VonPersonn	е	Со	mment			
Construction		FY21			\$0				2020CIP					
Construction		FY22)	\$2	,220									
Construction		FY23	3	\$9	,802									
Construction		FY24	ļ.	\$20	,979									
Task		St	art Date	End Date	Dur	ation								
Scope Developm	ent		2/17/2021	5/18/2021		90								
Procurement			5/19/2021	11/23/2021		188								
Project Execution		1	1/24/2021	4/1/2024		859								
Project Closeout			4/1/2024	6/30/2024		90								
Prior Yr Actuals	FY19	9	FY20	FY21	FY2	22	FY23	FY24	FY25+	-	Total			
		0	0	0		2,220	9,80	20,97	9	0	33,001			



Downriver Transmission Main Loop

Phase GLWA Emplo	yees Pro	oject	managen	nent		Co	ntract N	A	Stat	Status Future Planned Start				
itle GLWA Salaries	S													
Phase Budget Wa	iter							Cost Alloc	cation CTA					
Phase Status Futu	ure Plan	ned :	Start		Funding Source Bond Proceeds									
Start Date					Fund Construction Bond Fund									
End Date					Useful Life >20Yrs? No									
Cost E	Estimatio	on Info	ormation		Tot. Federal Loan Amount						† \$0			
	5 Cost Est. Class					Program/Allowance Task Information								
1/1/	/2015	(Cost Est. De	ate	Project Manager									
CDM Smith		(Cost Est. Source			CIP Number								
CDM Smith			Cost Est. Pr	epared By	ed By Description									
Cost Type		Fisc	cal Year	Expens	nse Fringe BenefitNonPe			nPersonne	Personne Comment					
GLWA Salaries CIP20	:020	FY20			\$14		6	1						
GLWA Salaries CIP20	020	FY21			\$21		8	1						
GLWA Salaries CIP20	020	FY22			\$21		8	1						
GLWA Salaries CIP20	020	FY23			\$21		8	1						
GLWA Salaries CIP20	2020 FY24 \$59 23		3											
Prior Yr Actuals	FY19	7	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total				
		0	21	30		30	30	85	0	196				
			Pł	nase Total Ex	rpense	es By FY	' (All figure	es are in \$1	000's)		•			

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

										,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				297	964	3,051	10,763	22,122	0	37,197
2020	0	0		0	297	964	3,051	10,763	22,122	0	37,197

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

☐ Innovation

✓ Water MP Right Sizing

▼ Reliability/Redundancy

☐ NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ✓

Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/21/2018

Year Project Added to CIP 2020

Budget Water

Class Lvl 1 Water

Class LvI 2 Field Services

Class LvI 3 Transmission System

Location City of Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Historical pumpage data for the Northeast WTP indicates that the maximum day demands for the Northeast service area can be as high as 190 MGD. With the upcoming decommissioning of treatment at the Northeast WTP, Water Works Park will provide 150 MGD of finished water to the Northeast high lift pumping system to provide service to the existing Northeast service area, which means that 40 MGD must be delivered from other water treatment plants during the maximum day demand conditions. 7 Mile/Nevada Transmission Main provides transmission between the Springwells and Water Works Park Service areas and will provide needed redundancy once Northeast WTP treatment is decommissioned. A new flow control station is needed at the intersection of Carrie and Nevada to provide back up water service from Springwells WTP to the Water Works and Northeast Service Areas in case of loss of service to the Water Works Park WTP.

Scope of Work Project includes inspection and rehab of the 7 Mile/Nevada Transmission Main and construction of a new flow control station at Carrie/Nevada.

Challenges Work will be required within crowded right-of-way within the Nevada/Carrie Intersection

Project History The 2015 Water Master Plan proposed decommissioning of treatment at the Northeast WTP. However, the Master Plan assumed that the excess capacity at Water Works Park could fully supply the Northeast Service Area demands, which is not the case. For this reason, it will be necessary to use this station to provide maximum day demands from the Springwells WTP to the Northeast Service Area once decommissioning at the Northeast WTP is complete.

Related Project CIP 132025 Northwest Booster Station Yard Piping Improvements.

Lookup Driver 8 - Efficiency

122017 CIP#

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Other Important Info	This project highlights the need to reinforce the transmission system in order to reliably provide service after
	treatment is decommissioned at the Northeast WTP.

Explanation This project provides for efficiencies in facilitating the decommissioning of treatment at the Northeast WTP.

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

	PM	Weighted
Score		Score

53

Criteria	Score	Comment
Condition	1	
Efficiency and Innovation	2	
Financial	2	
O&M	2	
Performance (Service Level/Reliability)	5	
Public Benefit	4	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

44

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

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

hase GLWA Emp	ise GLWA Employees Project manageme					t Contract NA						Start	
itle GLWA Salaı	ries												
Phase Budget \	Water							Cost Allo	cation CTA	4			
Phase Status	-uture Pl	annec	d Start					ource Bor	Bond Proceeds				
Start Date			Fund Construction Bond Fund										
End Date					Useful Life >20Yrs? Yes								
Co	st Estima	Estimation Information					Tot. Federal Loan Amount \$0					\$0	
	5		Cost Est. C	lass	Program/Allowance Task Information								
1/1/2018 Cost Est. Dat				ate	Project Manager								
GLWA Cost Est. So				ource	CII	P Num	nber						
GLWA	repared By	De	script	ion			_						
Cost Typ	е	Fi:	scal Year	Expense	e F	ringe	BenefitNo	nPersonne		Comment			
GLWA Salaries Cl	P2020	FY2	0		\$49		19	2	2020CIP				
GLWA Salaries Cl	P2020	FY2	1		\$49	19		2	2020CIP				
GLWA Salaries Cl	P2020	FY2	2		\$49		19	2	2020CIP				
GLWA Salaries Cl	IP2020	FY2	3		\$49		19	2	2020CIP				
GLWA Salaries Cl	IP2020	FY2	4		\$49		19	2	2020CIP				
Task		St	tart Date	End Date	Dura	tion							
Scope Developm	nent		7/1/2019	10/1/2019		92							
Project Execution	1		10/2/2019	4/1/2024		1643							
Project Closeout			4/1/2024	6/30/2024									
Prior Yr Actuals	FY	′19	FY20	FY21	FY22	2	FY23	FY24	FY25+	Total			
			70	70		70	70	70		350			

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

There o										
rnase Design and	ase Design and Build					ract T	BD	Stat	us Future F	Planned Start
Title 7 Mile/Neva	ıda Transr	mission Main Re	ehab							
Phase Budget W	'ater						Cost Allo	cation CTA		
Phase Status Fu	uture Plani	ned Start		Funding Source Bond Proceeds						
Start Date								Fund Cons	truction Bon	nd Fund
End Date				Useful Life >20Yrs? Yes						
Cost			Т	ot. Fed	eral Loan A	mount		\$0		
	5 Cost Est. Class					Pro	gram/Allov	wance Task I	nformation	
1/	1/1/2018 Cost Est. Date			Pro	oject Mo					
GLWA				CII	P Numb	er				
GLWA				De	scriptio	n				
DZ V V										
Cost Type	Cost Type Fiscal Year Expens		pense Fringe Benefil NonPersonne			С	omment			
					0			_		
Design-Build		FY20	\$	5970	U			2020CIP		
Design-Build		FY20 FY21	\$ \$5,	970 ,980	U			2020CIP 2020CIP		
Design-Build Design-Build		FY20 FY21 FY22	\$ \$5, \$6,	5970 ,980 ,840	J			2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build		FY20 FY21 FY22 FY23	\$ \$5, \$6, \$3,	,980 ,840 ,680				2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build		FY20 FY21 FY22	\$ \$5, \$6, \$3,	5970 ,980 ,840				2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build		FY20 FY21 FY22 FY23	\$ \$5, \$6, \$3,	,980 ,840 ,680				2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build Design-Build		FY20 FY21 FY22 FY23 FY24	\$ \$5, \$6, \$3, \$2,	,980 ,840 ,680 ,680				2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build Design-Build Task		FY20 FY21 FY22 FY23 FY24 Start Date	\$5, \$6, \$3, \$2, End Date	,980 ,840 ,680 ,680	tion			2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build Design-Build Task Scope Developme		FY20 FY21 FY22 FY23 FY24 Start Date 7/1/2019	\$5, \$6, \$3, \$2, End Date 10/1/2019	,980 ,840 ,680 ,680	tion 92			2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build Design-Build Task Scope Developme		FY20 FY21 FY22 FY23 FY24 Start Date 7/1/2019 10/1/2019	\$5, \$6, \$3, \$2, End Date 10/1/2019 10/1/2020	,980 ,840 ,680 ,680	tion 92 366			2020CIP 2020CIP 2020CIP 2020CIP		
Design-Build Design-Build Design-Build Design-Build Task Scope Developme Procurement Project Execution		FY20 FY21 FY22 FY23 FY24 Start Date 7/1/2019 10/1/2019 10/1/2020 4/1/2024	\$5, \$6, \$3, \$2, End Date 10/1/2019 10/1/2020 4/1/2024	,980 ,840 ,680 ,680	tion 92 366 1278 90	-Y23		2020CIP 2020CIP 2020CIP 2020CIP	Total	

122017 CIP#

7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

	Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)										
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0			1,040	6,050	6,910	3,750	2,750		20,500



Wick Road Booster Pumping Station Rehabilitation

☐ Innovation☐ Water MP Right Sizing☐ Reliability/Redundar☐ NEWTP Repurposing	ncy Project New To CIP	Wick Road Stati	on				
Project Engineer/Manag	ger Eric Kramp	Budget	Water				
Manag	ger Grant Gartrell	Class Lvl 1	Water				
Managing D	ept Water Eng	Class Lvl 2	SCC				
Date Original Business (Case Prepared 8/8/2016	Class Lvl 3 Pump Station/Reservoir					
Year Project	Added to CIP 2004	Location	Wayne County - Outside Detroit				
		Fund and Cost Center	Water - 5519-882111				
Project Significance Pro	ovides improved control on the far-western p	portion of the transmission s	ystem.				
Scope of Work Re	ehab 3 pumps and added VFDs and related	controls system upgrades					
Challenges Co	omplicated control programming of VFDs an	d HVAC system.					
Lookup Driver 2 -	- Performance						
Explanation $N/$	/A - Pending Closeout						



GLWA FY 2020-2024 CIP Wick Road Booster Pumping Station Rehabilitation

PM Weighted Score

54.4

0.11	•	
Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	4	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	2	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	2	

RC Weighted Score

0

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

132001 CIP#

Wick Road Booster Pumping Station Rehabilitation

Phase not applica	Contract NA					rus Closed	Out				
Title Prior Year Ac	tual Exper	nses									
Phase Budget W	ater			Cost Allocation CTA							
Phase Status CI	osed Out		Funding Source								
Start Date								Fund			
End Date						ι	Jseful Life >2	OYrs?			
Cost Estimation Information						Tot. Fede	eral Loan Ar	nount		\$0	
	1 Cost Est. Class			Program/Allowance Task Information							
1/	1/2015	Cost Est. D	ate	Project Manager							
CDM Smith		Cost Est. So	ource	CIP Number							
CDM Smith		Cost Est. Pi	repared By	y Description							
Cost Type		Fiscal Year	Expens	е	Fring	e BenefitNo	nPersonne	C	Comment		
Construction	F	Y18-		\$130			F	Y18-DWS-8	58		
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total		
130	С								130		



Wick Road Booster Pumping Station Rehabilitation

Phase Design and Build Contract DWS-858 Status Pending Close-out

Title DWS-858 Wick Road Station Rehabilitation

Tooles Contracting: End Date: contract time expired on 6/30/2016. It will have to be extended once the contractor adequately completes the defective work listed in the certificate of substantial completion. At this time a final change order will be executed to extend the contract time and adjust final contract price in order to close out the contract. Phase Budget Water Cost Allocation CTA **Phase Status** Pending Close-out **Funding Source** Bond Proceeds 11/25/2008 Start Date **Fund** Construction Bond Fund 6/30/2016 Useful Life >20Yrs? Yes **End Date Tot. Federal Loan Amount Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2015 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith

Cost Type		Fiscal Year	Expense	Frir	nge Ben	efitNo	nPersonne	C	Comment	
Design-Build	FY	(19		\$35				2020CIP		
Task		Start Date	End Date	Duratio	on					
Scope Development										
Procurement										
Project Execution		1/1/2017	1/2/2017		1					
Project Closeout		1/2/2017	12/31/2018		728					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY	23	FY24	FY25+	Total	
	3	35 0	0		0	0	0	0	35	



Wick Road Booster Pumping Station Rehabilitation

Phase GLWA Emp	loyees Projec	ent	C	Contract N	Status	Pendin	g Close-out		
Title GLWA Salari	es								
Phase Budget W	udget Water					ation CTA	CTA		
Phase Status P	ending Close	-out				Funding So	Bond P	roceeds	
Start Date							Fund Constru	uction Bor	nd Fund
End Date					U	seful Life >20	OYrs? No		_
Cos	Tot. Federal Loan Amount					\$0			
	1	Cost Est. Cl	ass	Program/Allowance Task Information					
1,	/1/2015	Cost Est. Do	ıte	Project Manager					
CDM Smith		Cost Est. So	urce	CIP Number					
CDM Smith		Cost Est. Pre	epared By	Descrip	otion				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	0	0	0	0	0	0	
		Ph	ase Total Ex	penses By I	FY (All figure	es are in \$1,0	000's)		

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

	Troject foral Expenses by Tr Compared to Their on 5 (7m ingeres are in \$1,000 5)											
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
2018	13452	250							0	0	13,702	
2019	0		147							0	147	
2020	0	0	130	35	0	0	0	0	0	0	165	

132003 CIP#

West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

☐ Innovation☐ Water MP Right Siz☑ Reliability/Redund☐ NEWTP Repurposir	dancy	Project Status Active CIP Type Project Project New To CIP	Isolation gate valv	es
Project Engineer/Mai	nager Tii	mothy Kuhns	Budget	Water
Mai	nager G	rant Gartrell	Class Lvl 1	Water
Managing	Dept W	/ater Eng	Class Lvl 2	SCC
Date Original Busines	ss Case F	Prepared 6/26/2014	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Adde	ed to CIP 2014	Location	Oakland County
			Fund and Cost Center	Water - 5519-882111
	during p	needed to provide isolation of the exist bumping unit and discharge flow contro be taken out of service to		
	during punits to	oumping unit and discharge flow contro	ol valve maintenance. Exist	ing conditions require three pumping Service Center. Maintenance on
Scope of Work	during punits to Currentlindividu Sequen	bumping unit and discharge flow control be taken out of service to ly there is no means to isolate individua	ol valve maintenance. Exist I pumping units at the West intermediate pumping sys	ing conditions require three pumping Service Center. Maintenance on tems without isolation valves.
Scope of Work	during punits to Currentlindividu Sequen	bumping unit and discharge flow control be taken out of service to ly there is no means to isolate individua al units require taking out entire high or ce of construction and meeting system	ol valve maintenance. Exist I pumping units at the West intermediate pumping sys	ing conditions require three pumping Service Center. Maintenance on tems without isolation valves.
Scope of Work Challenges Project History	during punits to Currentlindividu Sequengoing w	bumping unit and discharge flow control be taken out of service to ly there is no means to isolate individua al units require taking out entire high or ce of construction and meeting system	I pumping units at the West intermediate pumping system demands will need to be	ing conditions require three pumping t Service Center. Maintenance on tems without isolation valves. coordinated with operations and on-
Scope of Work Challenges Project History	during punits to Currentlindividu Sequengoing w n/a West Se	be taken out of service to ly there is no means to isolate individua al units require taking out entire high or ce of construction and meeting system york to repurpose the Northeast WTP. rvice Center Division Valve Replaceme	I pumping units at the West intermediate pumping system demands will need to be	ing conditions require three pumping t Service Center. Maintenance on tems without isolation valves. coordinated with operations and on-
Scope of Work Challenges Project History Related Project	during punits to Currentlindividu Sequengoing w n/a West Se 2 - Perfo	be taken out of service to ly there is no means to isolate individua al units require taking out entire high or ce of construction and meeting system york to repurpose the Northeast WTP. rvice Center Division Valve Replaceme	I pumping units at the West intermediate pumping system demands will need to be	ing conditions require three pumping t Service Center. Maintenance on tems without isolation valves. coordinated with operations and on-



GLWA FY 2020-2024 CIP 1320 West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

PM Weighted Score

76.2

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	3	
Financial	1	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	4	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	3	

RC Weighted Score

70.8

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

132003 CIP#

West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

Phase Budget Wa	ter							Cost Alloc	ation	СТА			
Phase Status Futu		od Start									l Procoods		
	ridilii			Funding Source Bond Proceeds									
Start Date		2/27/	/2018	Fund Construction Bond Fund									
End Date		8/26/	/2019	Useful Life >20Yrs? Yes									
Cost E	stimation	Information		Tot. Federal Loan Amount									
	2 Cost Est. Class					Program/Allowance Task Information						1	
	Cost Est. Date				Project Manager								
Cost Est. Source				CIP Number									
		Cost Est. P	repared By		escript	ion							
			7										
Cost Type		Fiscal Year	Expense	,	Fringe	BenefitN	on	Personne		C	Comment		
Construction	F`	Y19	\$1,	056									
Construction	F`	Y20	\$	392									
Task		Start Date	End Date	Dur	ration								
Scope Developmen	t	11/28/2017	2/26/2018		90								
Procurement		2/27/2018	10/7/2018		222								
Project Execution		10/7/2018	7/13/2019		279								
Project Closeout		7/13/2019	10/11/2019		90								
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY2	25+	Total		
		56 392	0		0)	0		0	1,448	1	

132003 CIP#

West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

Phase not applic	cable				Contract NA					tus 🤇	Closed	Out		
Title Prior Year A	Actual Ex	pense	S											
Phase Budget	Water							Cost Allo	cation CTA					
Phase Status	Closed C	Out			Funding Source									
Start Date					Fund									
End Date					Useful Life >20Yrs?									
Co	ost Estimo	tion In	formation			Tot. Federal Loan Amount								
	1		Cost Est. C	lass			Prog	gram/Allov	vance Task	Inform	nation			
	1/1/2015		Cost Est. D	ate	Р	roject Manaç	ger							
CDM Smith			Cost Est. So	ource	C	CIP Number								
CDM Smith			Cost Est. P	repared By	D	escription								
Cost Typ	pe	Fis	cal Year	Expens	e	Fringe Benef	itNor	nPersonne	(Comm	ent			
Engineering Serv	vices .	FY18	3-		\$71			I	FY18					
Unknown		FY18	3-		\$66			I	-Y17					
GLWA Salaries C	CIP2020	FY18	3-		\$1)	01	FY18					
Prior Yr Actua	ls F	′19	FY20	FY21	FY2	22 FY23		FY24	FY25+	То	tal			
	138										138			

132003 CIP#

West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

Phase Design & Co	nstruction	n Assistance			Co	ntract N	A	Sto	atus Activ	ve		
itle Isolation Gate	e Valves f	or Line Pumps	for West Serv	ice C	enter P	umping S	tation					
HRC - CS-062												
Phase Budget Wo	ater						Cost Allo	cation CTA	٨			
Phase Status Ac	tive			Funding Source Bond Proceeds								
Start Date	tart Date 10/24/2017							Fund Cor	nstruction E	Bond F	und	
End Date		8/26/	′2019			U	seful Life >	20Yrs? Yes				
Cost	Estimatior	n Information				Tot. Fede	eral Loan A	mount				
	1	Cost Est. C	lass			Pro	gram/Allov	vance Task	c Informatio	on		
		Cost Est. D	ate	Р	roject <i>N</i>	Nanager						
		Cost Est. So	ource	C	IP Num	ber						
		Cost Est. P	repared By	D	escript	ion						
Cost Type		Fiscal Year	Expense		Fringe	BenefilNo	nPersonne		Comment	•		
Engineering Service	es F	Y19	9	\$100								
Engineering Service	es F	Y20		\$80								
Task		Start Date	End Date	Dur	ation							
Scope Developme	nt	7/24/2016	10/22/2016		90							
Procurement		10/23/2016	10/23/2017		365							
Project Execution		10/24/2017	7/12/2019		626							
Project Closeout		7/12/2019	10/10/2019		90							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total			
	1	00 80	0		0	0	0	C) 18	30		

West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

Phase GLWA En	nployees P	rojec	t manager	ment		C	Contract N	4	Stat	tus Active			
Title GLWA Salo	aries												
Phase Budget	Water							Cost Alloc	cation CTA				
Phase Status	Active							Funding Sc	ource Bond	Bond Proceeds			
Start Date					Fund Construction Bond Fund								
End Date					Useful Life >20Yrs? No								
Co	ost Estimat	ion In	formation		Tot. Federal Loan Amount							\$0	
	1		Cost Est. C	lass	Program/Allowance Task Information								
	1/1/2015		Cost Est. D	ate	Р	roject	t Manager						
CDM Smith			Cost Est. So	ource	CIP Number								
CDM Smith			Cost Est. P	repared By	ed By Description								
Cost Ty	pe	Fis	scal Year	Expens	е	Fringe	e BenefitNor	nPersonne		Comment			
GLWA Salaries C	CIP2020	FY19	9		\$21		8	1					
GLWA Salaries C	CIP2020	FY20)		\$12		5	1					
Prior Yr Actua	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total					
		30	18	0		0	0	0	0	48			
			P	hase Total Ex	pense	es By I	FY (All figure	es are in \$1,	000's)				

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

	rioject foldi Expenses by it compared to thorein 5 (All lightes die in \$1,000 5)												
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total		
2018			521	1,000					0	0	1,521		
2019	0	66	147	1,229	96					0	1,538		
2020	0	0	138	1,186	490	0	0	0	0	0	1,814		

GLWA Great Lakes Water Authority

Explanation N/A - Under Procurement

GLWA FY 2020-2024 CIP

North Service Center Pumping Station - Hydraulic Surge Control

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redunct☐ NEWTP Repurposir	dancy Project New To CIP	Observed pressure data from meter at the border of Warren and Madison Heights.	
Project Engineer/Mai	nager Timothy Kuhns	Budget Wate	er
Mai	nager Grant Gartrell	Class Lvl 1 Wate	er
Managing	Dept Water Eng	Class Lvl 2 SCC	
Date Original Busines	s Case Prepared 6/26/2014	Class LvI 3 Pum	o Station/Reservoir
Year Proje	ect Added to CIP 2014	Location Oakl	and County
		Fund and Cost Center Water	er - 5519-882111
	Madison Heights, Troy, and Sterling Heights ex Center when line pumps trip. Hydraulic transic mitigate the pressure spikes		
•	In recent years, the North Service Center has	·	• • • • • • • • • • • • • • • • • • • •
	pump trips have caused high pressure transie Heights, Troy, Warren, Fraser, Clinton Township measures to mitigate the hydraulic transients	, and Roseville. The proposed pro	
	Heights, Troy, Warren, Fraser, Clinton Township	o, and Roseville. The proposed pro present within the system.	
	Heights, Troy, Warren, Fraser, Clinton Township measures to mitigate the hydraulic transients Coordination with operations and customers	o, and Roseville. The proposed pro present within the system.	
Challenges	Heights, Troy, Warren, Fraser, Clinton Township measures to mitigate the hydraulic transients Coordination with operations and customers n/a	o, and Roseville. The proposed pro present within the system.	
Challenges Project History Related Project	Heights, Troy, Warren, Fraser, Clinton Township measures to mitigate the hydraulic transients Coordination with operations and customers n/a	o, and Roseville. The proposed pro present within the system.	



North Service Center Pumping Station - Hydraulic Surge Control

PM Weighted Score

37.2

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

RC Weighted Score

28.2

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

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

ase GLWA Emplo • GLWA Salaries	,	t managem	ient	(Contract N	A	Statu	s Pending	g Close-out
Phase Budget Wa						Cost Alloc	ation CTA		
Phase Status Pen	ding Close	-out				Proceeds			
Start Date						ruction Bon	d Fund		
End Date					U	seful Life >2	OYrs? No		
Cost E	stimation In	nformation			Tot. Fede	ral Loan An	nount		\$0
	5	Cost Est. Cl	ass		Pro	gram/Allow	ance Task Ir	nformation	
1/1/	′2015	Cost Est. Do	ıte	Projec	Manager				
CDM Smith		Cost Est. So	urce	CIP Nu	mber				
CDM Smith		Cost Est. Pro	epared By	Descri	otion				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	0	0	0	0	0	0	

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

Phase Design & Construc	tion Assistance		Contro	ict NA	Status	Status Pending Close-out				
Fitle Hydraulic Surge Co	ntrol for North Se	ervice Center	Pumping Station							
Phase Budget Water				Cost All	ocation CTA					
Phase Status Pending	Close-out			Funding	Source Bond Pro	oceeds				
Start Date	2/20	6/2018		ction Bond Fund						
End Date	9/20	0/2022		Useful Life	>20Yrs? Yes					
Cost Estimo	tion Information		To	. Federal Loan	Amount					
5	Cost Est.	Class		Program/Allo	wance Task Info	rmation				
	Cost Est.	Date	Project Man	ager						
	Cost Est.	Source	CIP Number							
	Cost Est.	Prepared By	Description							
						, , , , , , , , , , , , , , , , , , ,				
Task	Start Date	End Date	Duration							
Scope Development										
Procurement										
Project Execution										
Project Closeout										



North Service Center Pumping Station - Hydraulic Surge Control

132004 CIP#

Phase Study Contract SCP-CS-054 Status Pending Close-out

Title SCP-CS-054 Hydraulic Surge Control for North Service Center Pumping Station

Brown & Caldw	/ell				
Phase Budget	Water		Cost	Allocation CT/	4
Phase Status	Pending C	lose-out	Fund	ing Source Rev	venue Financed Capital
Start Date				Fund Imp	provement & Extension Fun
End Date			Useful L	ife >20Yrs? No	
Co	ost Estimatio	on Information	Tot. Federal Lo	an Amount	
	1	Cost Est. Class	Program/	Allowance Tas	k Information
		Cost Est. Date	Project Manager		
		Cost Est. Source	CIP Number		
		Cost Est. Prepared By	Description		

GLWA FY 2020-2024 CIP

Task		Start Date	End Date	Duration					
Project Execution		12/19/2016	4/15/2018	482					
Project Closeout		4/16/2018	7/15/2018	90					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	0	0	

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

Phase not applicable					Contract	N/	4	Sta	tus Closec	d Out	
itle Prior Year Actual I	Expense	S									
Phase Budget Water				Cost Allocation CTA							
Phase Status Closed Out						Funding S	ource				
Start Date	Start Date							Fund			
End Date	End Date					U	seful Life >2	20Yrs?			
Cost Estimation Information				Tot. Fe	ede	ral Loan Aı	mount				
5 Cost Est. Class			lass	Program/Allowance Task Information						l	
1/1/201	1/1/2015 Cost Est. Date		ate	Project Manager							
CDM Smith		Cost Est. So	ource	CIP Number							
CDM Smith		Cost Est. Pi	repared By	d By Description							
Cost Type	Fi	scal Year	Expens	е	Fringe Benefit	Nor	nPersonne	(Comment		
Engineering Services	FY1	8-	•	\$130	_		i	Y18			
Unknown	FY1	8-		\$75			F	Y17			
GLWA Salaries CIP2020	FY1	8-		\$7	3		0	Y18			
Prior Yr Actuals	FY19	FY20	FY21	FY:	22 FY23		FY24	FY25+	Total		
215									215]	

North Service Center Pumping Station - Hydraulic Surge Control

ase Construction				Co	ntract NA	4	Status Pending Close-out			
tle Hydraulic	Surge Contr	ol for North Se	rvice Center	Pumping Stat	tion					
Phase Budget	Water					Cost Allocation	CTA			
Phase Status	hase Status Pending Close-out					Funding Source	Bond Pr	oceeds		
Start Date	Start Date 1/15/2020					Fund	Constru	ction Bond Fund		
End Date	End Date 9/20/2022				U	seful Life >20Yrs?	Yes			
Cost Estimation Information					Tot. Fede	ral Loan Amount				
5 Cost Est. Class			Class	Program/Allowance Task Information						
		Cost Est. [Date	Project A	Nanager					
		Cost Est. S	ource	CIP Num						
		Cost Est. F	repared By	Descript	ion					
Task	,	Start Date	End Date	Duration						
cope Develop		Sidil Daic	Life Date	Dorallon						
rocurement	-									
roject Executio	n									
roject Closeou	t									

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

			o o. a	.xpcmoc.	, , , , , ,	o i i p ai c	a 10 1 110		90.00	are iii q	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2	2018		200	500	2,000	100				0	0	2,800
2	2019	0	75	157							0	232
2	2020	0	0	215	0	0	0	0	0	0	0	215

132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

Great Lakes Water Authority	
☐ Innovation	
☐ Water MP Right Sizing	
☐ Reliability/Redundancy	
☐ NEWTP Repurposing	
Project Engineer/Manager Manager	Gr
Managing Dept	
Date Original Business Case Year Project Add	\ Pr
redi i lojeci Adi	

Project Status Active

CIP Type Project

Project New To CIP \Box

Ford Road Booster **Pumping Station**



othy Kuhns

ant Gartrell

ter Eng

epared 6/26/2014

to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 SCC

Class Lvl 3 Pump Station/Reservoir

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

	Design of pressure and flow control equipment for efficient delivery of consistent pressures to wholesale customers at Ford Road water booster pumping station
Scope of Work	The work involves designing variable speed pumping equipment and controls on line and reservoir pumping units to better match water demands to efficiently provide consistent pressures and flows to wholesale customers in the service area.
Challenges	N/A - Under Procurement
Project History	n/a
Related Project	none
Lookup Driver	7 - Financial
Other Important Info	n/a
Explanation	N/A - Under Procurement

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Ford Road Pumping Station, Pressure and Control Improvements

PM Weighted Score

47.4

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

RC Weighted Score

43.4

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

132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

hase not applicable					Contract NA			Stat	lus Closed	Out	
Title Prior Year Actu	al Expe	enses									
Phase Budget Wat	er						Cost Alloc	cation CTA			
Phase Status Closed Out							Funding S	ource			
Start Date	Start Date							Fund			
End Date						Us	eful Life >2	OYrs?			
Cost Estimation Information				Tot. F	eder	al Loan Ar	nount				
5 Cost Est. Class				Program/Allowance Task Information							
1/1/2	1/1/2015 Cost Est. Date		ate	Project Manager							
CDM Smith		Cost Est. S	ource	CIP Number							
CDM Smith		Cost Est. P	repared By	D	escription						
Cost Type		Fiscal Year	Expens	e	Fringe Benefi	Nonl	Personne	C	Comment		
Engineering Services	5	FY18-		\$146			F	Y18			
Unknown		FY18-		\$8			F	:Y17			
GLWA Salaries CIP20)20	FY18-		\$5	2	2	O F	Y18			
Prior Yr Actuals	FY1	9 FY20	FY21	FY2	22 FY23		FY24	FY25+	Total		
161									161		

25

25

18

GLWA FY 2020-2024 CIP

Ford Road Pumping Station, Pressure and Control Improvements

nase GLWA Em	nployees Pr	oject manager	nent		Contract	NA	Sta	itus Active	
itle GLWA Salo	aries								
Phase Budget	Water			Cost Allocation					
Phase Status	Phase Status Active					Funding S	ource Bond	d Proceeds	
Start Date							Fund Con	struction Bo	nd Fund
End Date				Useful Life >20Yrs?			20Yrs? No		
Cost Estimation Information					Tot. Fe	ederal Loan A	mount		\$0
	5	Cost Est. C	lass		İ	Program/Allov	vance Task	Information	1
	1/1/2015 Cost Est. Date		ate	Project Manager					
CDM Smith	, , , , , , , , , , , , , , , , , , ,	Cost Est. So	ource	CIP Number					
CDM Smith		Cost Est. P	repared By	D	escription				
Cost Ty	эе	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne	(Comment	
GLWA Salaries C		FY19	<u> </u>	\$17	7	1			
GLWA Salaries C	IP2020	FY20		\$17	7	1			
GLWA Salaries C	IP2020	FY21		\$12	5	1			
Prior Yr Actua	ls FY1	9 FY20	FY21	FY'	22 FY23	FY24	FY25+	Total	

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

0

0

68

0

Ford Road Pumping Station, Pressure and Control Improvements

Phase Design & Construction Assistance

Contract CS-1749

Status Active

Title CS-1749 Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chicago Water Booster Pumping Stations

Bennesch			
Phase Budget Water		Cost Allocation	CTA
Phase Status Active		Funding Source	Bond Proceeds
Start Date	9/6/2017	Fund	Construction Bond Fund
End Date	12/6/2019	Useful Life >20Yrs?	Yes
Cost Estima	tion 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	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$150			
Engineering Services	FY20	\$150			
Engineering Services	FY21	\$0			

Task	Start Date	End Date	Duration
Scope Development	6/6/2016	9/4/2016	90
Procurement	9/5/2018	9/5/2019	365
Project Execution	9/6/2017	7/28/2020	1056
Project Closeout	7/29/2020	10/27/2020	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	150	150	0	0	0	0	0	300



Ford Road Pumping Station, Pressure and Control Improvements

Phase Construction					C	ontract	NA	4		Statu	s Active			
Title Pressure and (mprovements (at the Electric	c, Ford					t Chica			er Pumpi	ng Statio	ons
Phase Budget Wa		'				<u>.</u>		Cost Alloc						
Phase Status Act	tive			Funding Source Bond Proceeds										
Start Date				Fund Construction Bond Fund										
End Date				Useful Life >20Yrs? Yes										
Cost E	stimatio	n Information				IOT. F	eae	rai Loan Ai	mount					
	4	lass			ļ	Prog	gram/Allov	vance T	ask In	formation				
	ate	Pı	oject	Manag	er									
	ource	e CIP Number												
	epared By	ed By Description												
Cost Type		Fiscal Year	Expense	7	Fringe	Renefit	Nor	nPersonne			mment			
Construction		FY19	•	, \$60	ringe	DCHCIII	1101	11 013011110			ATTITIOTITE TO			
Construction		FY20		,340										
Task		Start Date	End Date	Dur	ation									
Scope Developmer	nt	6/6/2018	9/4/2018		90)								
Procurement		9/5/2018	5/23/2019		260)								
Project Execution		5/24/2019	10/8/2020		503	3								
Project Closeout		10/9/2020	1/7/2021		90)								
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23		FY24	FY25	+	Total			
		60 2,340	0		0		0	0		0	2,400			
		PI	nase Total Ex	pense	s By F	Y (All fig	ure	s are in \$1	,000's)					
			By FY Cor			Dellar		Da / A II fia			¢1 000	1-1		

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			200	2,800					0	0	3,000
2019	0	8	106	245	1,805	445				0	2,609

A-332

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	161	235	2,515	18	0	0	0	0	2,929

Other Important Info n/a

Explanation Not provided.

GLWA FY 2020-2024 CIP

132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

✓ Innovation✓ Water MP Right Si✓ Reliability/Redund☐ NEWTP Repurposi	dancy Project New To CIP	Imlay Pump Statio	on					
Project Engineer/Ma	nager Eric Kramp	Budget	Water					
Ma	nager Grant Gartrell	Class Lvl 1	Water					
Managing	Dept Water Eng	Class Lvl 2	SCC					
Date Original Busines	ss Case Prepared 6/26/2014	Class Lvl 3	Pump Station/Reservoir					
Year Proj	ect Added to CIP 2014	Location Lapeer County						
		Fund and Cost Center	Water - 5519-882111					
Project Significance	Project driven by eliminating the applicatio water quality in the existing reservoir during water quality and reduces operating costs,	low demand season. Project r	educes operating costs, maintains					
Scope of Work	The purpose of this project is to minimize the water in the reservoir during low-demand p minutes daily, a 150 HP motor-driven pump	eriods. Rather than running a	6,000 HP motor-driven pump for a few					
Challenges	None.							
Project History	n/a							
Related Project	none							
Lookup Driver	8 - Efficiency							

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

PM	Weighted
	Score

44.2

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

RC Weighted Score

37.6

Score	Comment
1	
5	
4	
3	
1	
1	
1	
1	
	Score 1 5 4 3 1 1 1

132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

Phase not application	able				(Contract N	A	Stat	us Closed	Out			
Title Prior Year A	ctual Exp	enses											
Phase Budget V	Vater						Cost Alloc	cation CTA					
Phase Status	Closed O	ut					Funding So	ource					
Start Date								Fund					
End Date						U	seful Life >2	OYrs?					
Cos	st Estimat	ion Information				Tot. Fede	eral Loan An	nount		\$0			
	5 Cost Est. Class						Program/Allowance Task Information						
1	/1/2015	Cost Est. D	ate	Р	rojec	t Manager							
CDM Smith		Cost Est. S	ource	C	IP Nu	ımber							
CDM Smith		Cost Est. P	repared By	D	escri	ption							
Cost Typ	e	Fiscal Year	Expens	е	Fring	e BenefitNo	nPersonne	C	comment				
GLWA Salaries Cl	P2020	FY18-		\$7		2	0 F	Y18					
Prior Yr Actuals	FY1	19 FY20	FY21	FY2	22	FY23	FY24	FY25+	Total				
	9								9				

132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

Contract NA **Status** Future Planned Start Phase Design and Build Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station Phase Budget Water Cost Allocation CTA **Phase Status** Future Planned Start Funding Source Bond Proceeds Start Date 2/5/2018 Fund Construction Bond Fund 10/9/2020 **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2015 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith Cost Type Fiscal Year Fringe Benefil NonPersonne Expense Comment Design-Build FY20 \$520 2020CIP Design-Build FY21 \$1,250 Design-Build 2020CIP FY22 \$230 Task Start Date **End Date** Duration Scope Development 1/27/2018 4/27/2018 90 4/28/2018 4/28/2019 365 Procurement 9/11/2020 **Project Execution** 4/29/2019 501 90 **Project Closeout** 9/12/2020 12/11/2020 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 1,250 230 0 2,000 0 520 0 0

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

Phase GLWA Em	ployees P	rojec	t manager	nent	Contract NA					tus Active		
Title GLWA Sala	ries											
Phase Budget	Water							Cost Alloc	cation CTA			
Phase Status	Active							ource Bond	l Proceeds			
Start Date								Fund Cons	truction Bo	nd Fund		
End Date	End Date						U	seful Life >2	20Yrs? No			
Со	Cost Estimation Information						Tot. Fede	ral Loan Ar	nount			\$0
	5 Cost Est. Class						Prog	gram/Allow	ance Task	Information		
1	1/1/2015 Cost Est. Date				Project Manager							
CDM Smith			Cost Est. So	ource	CIP Number							
CDM Smith			Cost Est. Pi	repared By	d By Description							
Cost Typ	oe	Fis	cal Year	Expens	e	Fringe	BenefitNor	nPersonne		Comment		
GLWA Salaries C	IP2020	FY19)		\$10		4	0				
GLWA Salaries C	IP2020	FY20)		\$50		20	2				
GLWA Salaries C	GLWA Salaries CIP2020 FY21				\$45		18	2				
Prior Yr Actuals	Prior Yr Actuals FY19 FY20 FY21						FY23	FY24	FY25+	Total		
		14	72	65	65 0 0 0					151		
			Pl	nase Total Ex	kpense	es By F	Y (All figure	es are in \$1,	000's)			

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			200	500	300				0	0	1,000
2019	0			38	385	134				0	557
2020	0	0	9	14	592	1,315	230	0	0	0	2,160



Various Pumping Stations - Needs Assessment Study

☐ Innovation		ject Status Active	Example of a large pip and valve installati	
☐ Water MP Right Si	dancy Cir type Floject			
☐ Reliability/Redund				
□ NEWTP Repurposi	ng	Project New To CIP \Box		
Project Engineer/Ma	nager Erich K	lun	Budget	Water
Ma	nager Grant	Gartrell	Class Lvl 1	Water
Managing	Dept Water	Eng	Class Lvl 2	SCC
Date Original Busines	ss Case Prepo	red 6/26/2014	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to	CIP 2014	Location	Multiple Counties
			Fund and Cost Center	Water - 5519-882111
Project Significance	capacities for condition an	or the nineteen (19) water boos ad providing list of improvemen	ster pumping station facilities.	deling to determine future station Study will include assessment of existing ms: Facility HVAC and Lighting, Pumping Protection and Alarms, etc.
Scope of Work	exclusive of I Water Maste variable spe	reservoirs. System wide modelli r Plan Update. The condition c ed pumping applications to m	ing will confirm station decomr assessments will include all eng	tudy of all water booster stations, missioning as recommended by the 2015 ineering disciplines, with a focus on ls, DTE rate incentive identification, ses.
Challenges	Shutdown, o work.	peration and manpower requi	ired to cover the condition ass	essment inspections to complete the
Project History	n/a			
Related Project	none			
Lookup Driver	1 - Condition			
Other Important Info	n/a			
•	N/A - Under	Procurement		



Various Pumping Stations - Needs Assessment Study

PM Weighted Score

46.4

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

RC Weighted Score

51.2

Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	5	
Financial	4	
O&M	2	
Performance (Service Level/Reliability)	3	
Public Benefit	2	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	1	



Various Pumping Stations - Needs Assessment Study

Phase not appli			Contract	Ą	Stat	tus Clo	sed O	ut					
Title Prior Year	Actual Exp	penses	3										
Phase Budget	Water							Cost Allo	cation CTA				
Phase Status	hase Status Closed Out							Funding S	ource				
Start Date	Start Date								Fund				
End Date							U	seful Life >	20Yrs?				
Co	ost Estima	lion In	formation			Tot. F	ede	eral Loan A	mount				
	5		Cost Est. C	ass			Prog	gram/Allov	vance Task	Informat	tion		
	1/1/2016		Cost Est. De	ate	Р	roject Manag	er						
GLWA			Cost Est. So	ource	CIP Number								
GLWA			Cost Est. Pr	epared By	Description								
Cost Ty	pe	Fis	cal Year	Expens	e	Fringe Benefi	1Noi	nPersonne	C	Commer	nt		
Engineering Ser	vices	FY18	3-		\$858				FY18				
Unknown		FY18	}-		\$33				FY17				
GLWA Salaries C	CIP2020	FY18	3-		\$20	2)		FY18				
Prior Yr Actua	ls FY	19	FY20	FY21	FY2	22 FY23		FY24	FY25+	Total			
	913									9	913		



Various Pumping Stations - Needs Assessment Study

Phase GLWA Emp F itle GLWA Salar	•	oject manage	ment	(Contract N	A	Status	Active		
Phase Budget V	Vater					Cost Alloc	cation CTA			
Phase Status A	Active					Funding S	ource Revenu	Je Finance	ed Capita	,I
Start Date							Fund Improv	ement & E	Extension F	⁻un
End Date					l	Jseful Life >2	20Yrs? No			
Cos	st Estimatio	n Information			Tot. Fede	eral Loan Ar	mount			\$0
	5	Cost Est. C	Class		Pro	gram/Allow	rance Task Inf	ormation		
1	/1/2016	Cost Est. D	ate	Projec	Manager					
GLWA		Cost Est. S	ource	CIP Nu	mber					
GLWA		Cost Est. P	repared By	Descri	otion					
Cost Typ	е	Fiscal Year	Expens	e Fring	e BenefilNo	nPersonne	Со	mment		
GLWA Salaries Cl	P2020	FY19		\$10	4	02	2020CIP			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
		14 (0	0	0	0	0	14		



Prior Yr Actuals

FY19

750

FY20

0

FY21

 \cap

GLWA FY 2020-2024 CIP

Various Pumping Stations - Needs Assessment Study

Phase Study Contract SCP-CS-052 Status Active

SCP-CS-052 Needs Assessment Study for all Water Booster Pumping Stations

Tetra Tech **Phase Budget** Water Cost Allocation CTA Funding Source Revenue Financed Capital **Phase Status** Active Start Date 6/5/2016 Fund Improvement & Extension Fun **End Date** 7/1/2017 Useful Life >20Yrs? No Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By **GLWA** Fringe Benefit NonPersonne Cost Type Fiscal Year Expense Comment **Engineering Services** FY19 \$750 Task Start Date Fnd Date Duration Scope Development 3/1/2017 6/29/2017 120 6/29/2017 8/1/2017 33 Procurement 10/31/2018 454 **Project Execution** 8/3/2017 Project Closeout 11/1/2018 2/1/2019 92

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

FY23

0

FY24

0

FY25+

0

Total

750

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

0

FY22

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		500	1,200						0	0	1,700
2019	0	33	722	1,178						0	1,933

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

132008 CIP#

Various Pumping Stations - Needs Assessment Study

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	913	764	0	0	0	0	0	0	1,677

132010 CIP#

West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve

□ Innovation	Project Status Future Planned		
☐ Water MP Right Si	zing		
	CIP Type Project		
Reliability/Redund	Project New To CID		
✓ NEWTP Repurposi	ng		
Project Engineer/Ma	nager Timothy Kuhns	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	SCC
Date Original Busines	ss Case Prepared 10/11/2016	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2017	Location	Oakland County
		Fund and Cost Center	Water - 5519-882111
Project Significance	Construction of West Service Center Division Valve Service Center to the Springwells high service are repairs. Construction of active bypass around the	ves is needed to convey I ea while the Springwells ro	Lake Huron flows through the West aw water tunnel is out of service for
-	Service Center to the Springwells high service are	ves is needed to convey lea while the Springwells ro e Newburgh Pump Station	Lake Huron flows through the West aw water tunnel is out of service for n.
Scope of Work	Service Center to the Springwells high service are repairs. Construction of active bypass around the Lake Huron WTP needs to provide flows to the Springwells high service are	ves is needed to convey I ea while the Springwells ro e Newburgh Pump Station ringwells high service are g of existing valves. Isolat	Lake Huron flows through the West aw water tunnel is out of service for n. a while the Springwells raw water tunnel
Scope of Work	Service Center to the Springwells high service are repairs. Construction of active bypass around the Lake Huron WTP needs to provide flows to the Spris out of service for repair. Coordination with operations critical meet testing Huron and Springwells WTPs, North Service Center	ves is needed to convey I ea while the Springwells ro e Newburgh Pump Station ringwells high service are g of existing valves. Isolat	Lake Huron flows through the West aw water tunnel is out of service for n. a while the Springwells raw water tunnel
Scope of Work Challenges Project History	Service Center to the Springwells high service are repairs. Construction of active bypass around the Lake Huron WTP needs to provide flows to the Spris out of service for repair. Coordination with operations critical meet testing Huron and Springwells WTPs, North Service Center	ves is needed to convey I ea while the Springwells ro e Newburgh Pump Station ringwells high service are g of existing valves. Isolat	Lake Huron flows through the West aw water tunnel is out of service for n. a while the Springwells raw water tunnel
Scope of Work Challenges Project History Related Project	Service Center to the Springwells high service are repairs. Construction of active bypass around the Lake Huron WTP needs to provide flows to the Spris out of service for repair. Coordination with operations critical meet testing Huron and Springwells WTPs, North Service Centern/a	ves is needed to convey I ea while the Springwells ro e Newburgh Pump Station ringwells high service are g of existing valves. Isolat	Lake Huron flows through the West aw water tunnel is out of service for n. a while the Springwells raw water tunnel
Scope of Work Challenges Project History Related Project	Service Center to the Springwells high service are repairs. Construction of active bypass around the Lake Huron WTP needs to provide flows to the Spris out of service for repair. Coordination with operations critical meet testing Huron and Springwells WTPs, North Service Centern/a Springwells WTP Reservoir Fill Line 2 - Performance	ves is needed to convey I ea while the Springwells ro e Newburgh Pump Station ringwells high service are g of existing valves. Isolat	Lake Huron flows through the West aw water tunnel is out of service for n. a while the Springwells raw water tunnel



West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve

PM	Weighted
	Score

52.6

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

RC Weighted Score

54

Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	5	
Financial	1	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve

Phase Design and B	Build				Co	ntract	NA		Status	Future	Planned	Start
Title West Service (Center PS	S - Reservoir, R	eservoir Pum	ping,	and Div	ision Vo	Ilve Upgrad	es				
Phase Budget Wa	iter						Cost Allo	ocation C	TA			
Phase Status Fut	ure Planr	ned Start					Funding	Source Bo	ond P	roceeds		
Start Date				Fund Construction Bond Fund								
End Date							Useful Life	>20Yrs? Ye	es			
Cost E	stimatio	n Information				Tot. Fee	deral Loan A	Amount				
	5	Cost Est. C	lass			Pi	rogram/Allo	wance Ta	sk Inf	ormation		
	ate	P	roject <i>N</i>	Nanage	r							
Cost Est. Source				С	IP Num	ber						
Cost Est. Prepared				By Description								
Cost Type		Fiscal Year	Expense)	Fringe	Benefit	IonPersonne		Со	mment		
Design-Build	F	Y20	\$2	,590								
Design-Build	F	Y21	\$7	,400								
Design-Build	F	Y22	\$15	,540								
Design-Build	F	Y23	\$8	,880,								
Design-Build	F	Y24	\$2	,590								
Task		Start Date	End Date	Dur	ation							
Scope Developmer	nt	6/9/2018	9/7/2018		90							
Procurement		9/8/2018	9/8/2019		365							
Project Execution		9/9/2019	9/1/2023		1453							
Project Closeout		9/2/2023	12/1/2023		90							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+		Total		
		0 2,590	7,400	15	5,540	8,88	2,590	ו	0	37,000		



West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve

Phase GLWA Employ	ees Pro	oject manager	ment		Contra	ct NA	4	Stat	us Future	Planned Start
Title GLWA Salaries										
Phase Budget Wat	er						Cost Alloc	ation CTA		
Phase Status Futu	re Plan	ned Start		Funding Source Bond Proceeds						
Start Date								Fund Cons	truction Bor	nd Fund
End Date						U	seful Life >2	OYrs? No		
Cost Es	stimatio	n Information			Tot	. Fede	ral Loan An	nount		\$0
5 Cost Est. Class						Proc	aram/Allow	ance Task I	nformation	
1/1/	1/1/2015 Cost Est. Date			Pr	oject Man		J . c, <i>z</i> c			
CDM Smith	2010	Cost Est. Source			CIP Number					
CDM Smith			repared By	Description						
CDM 3Milh		COSI ESI. F	терагеа ву							
Cost Type		Fiscal Year	Expens	е	Fringe Ben	efitNor	nPersonne	С	omment	
GLWA Salaries CIP20	20	FY20		\$21		8	1			
GLWA Salaries CIP20	20	FY21		\$21		8	1			
GLWA Salaries CIP20		FY22		\$21		8	1			
GLWA Salaries CIP20		FY23		\$21		8	1			
GLWA Salaries CIP20	20	FY24		\$11		4	1			
Prior Yr Actuals	FY19	FY20	FY21	FY2	2 FY:	23	FY24	FY25+	Total	
		0 30	30		30	30	16	0	136	
1		P	hase Total Ex	(pense	s By FY (All	figure	es are in \$1,0	000's)		
Proio	ct Tot	al Evnoncos	Dy EV Co	mpar	ad to Pri	or CII	De (All fie	uroc aro	n \$1 000'	(c)

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			7,600	4,200					0	0	11,800
2019	0				2,620	7,430	15,570	8,910	2,606	0	37,136
2020	0	0		0	2,620	7,430	15,570	8,910	2,606	0	37,136



Ypsilanti Booster Pumping Station Improvements

☐ Innovation	Project Status Future Planned	Ypsilanti Pump Station
☐ Water MP Right Si	CIP Type Project	
☐ Reliability/Redund	dancy	
□ NEWTP Repurposi	Project New To CIP	
Project Engineer/Ma	nager Jorge Nicolas	Budget Water
Ma	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 SCC
Date Original Busines	ss Case Prepared 9/28/2017	Class Lvl 3 Pump Station/Reservoir
Year Proj	ect Added to CIP 2017	Location Wayne County - Outside Detroit
		Fund and Cost Center Water - 5519-882111
Project Significance	pressures. The pumps, motors and electrical sys The electrical system requires substantial mainte electrical system will improve the reliability of the	sone in the event of a power outage in order to help maintain tem are original to the facility and are past their useful service life. enance to keep it in service. Replacement of the motors and he station. In addition, the station does not have a sewer any underground construction due to dewatering discharges.
Scope of Work	Replace pumps, motors, drive, switchgear with bypass for the station.	new. Install a new discharge sewer, backup generator and
Challenges	_	ting sanitary, storm or combined sewer at the site. A NPDES permit ater to a surface water of the state for all construction dewatering
Related Project	DWS-858 and SCP-DWS-018.	



Ypsilanti Booster Pumping Station Improvements

PM Weighted Score

72

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

RC Weighted Score

61.2

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	3	
Financial	3	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	2	
Public Health & Safety	3	
Regulatory (Environmental/Legal)	1	



Ypsilanti Booster Pumping Station Improvements

Phase not applic	cable			(Contract N	Α	Stat	us Closed	Out	
Title Prior Year A	Actual Exp	enses								
Phase Budget	Water					Cost Alloc	cation CTA			
Phase Status	Closed O	J†				Funding S	ource			
Start Date							Fund			
End Date					l	Jseful Life >2	20Yrs?			
Co	st Estimat	ion Information			Tot. Fed	eral Loan Ar	nount		\$	0
	5	Cost Est. C	lass		Pro	gram/Allow	ance Task I	Information		
	1/1/2015	Cost Est. D	ate	Projec	t Manager					
CDM Smith		Cost Est. So	ource	CIP Nu	ımber					
CDM Smith		Cost Est. Pı	epared By	Descri	ption					
Cost Typ	ре	Fiscal Year	Expense	e Fring	e BenefitNo	nPersonne	C	Comment		
GLWA Salaries C	IP2020	FY18-		\$3	1	0 F	Y18			
Prior Yr Actual	s FY	19 FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	4							4		



Project Execution

Project Closeout

Prior Yr Actuals

3/22/2021

FY19

0

9/2/2023

FY20

0

9/1/2023

12/1/2023

300

FY21

GLWA FY 2020-2024 CIP

Ypsilanti Booster Pumping Station Improvements

Phase Construction	nase Construction			Contract	NA	Status	Future Planned St	art
Title Ypsilanti PS Impro	ovements							
Phase Budget Water					Cost Allo	cation CTA		
Phase Status Future	Planned Start				Funding S	ource Bond Pro	oceeds	
Start Date	9/14	/2020				Fund Construc	ction Bond Fund	
End Date	11/17	/2023			Useful Life >2	20Yrs? Yes		
Cost Estir	nation Information			Tot. Fe	deral Loan Aı	mount		
	5 Cost Est. C	Class		i	Program/Allov	vance Task Info	ormation	
1/1/20	Cost Est. D	ate	Proje	ect Manage	er			
CDM Smith	Cost Est. S	ource	CIP I	Number				
CDM Smith	Cost Est. P	repared By	Desc	cription				
Cost Type	Fiscal Year	Expense	e Frir	nge Benefit	VonPersonne	Con	nment	
Construction	FY21	\$	\$300					
Construction	FY22	\$2	,290					
Construction	FY23	\$3	,640					
Construction	FY24	\$	\$770					
Task	Start Date	End Date	Duratio	on				
Scope Development	7/1/2020	9/11/2020		72				
Procurement	9/14/2020	3/19/2021		186				

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

893

90

FY22

2,290

FY23

3,640

FY24

770

FY25+

0

Total

7,000



Scope Development

Procurement

Project Execution

Project Closeout

GLWA FY 2020-2024 CIP

Ypsilanti Booster Pumping Station Improvements

Phase Study and itle Ypsilanti P.	d Design aı S Improver		n Assistance		Contract	NA		Status	Active		
Phase Budget	Water					Cost Allo	cation	СТА			
Phase Status	Active					Funding	Source	Bond Pro	ceeds		
Start Date		3/5,	/2018				Fund	Construc	ction Bond	l Fund	
End Date		11/17,	/2023			Useful Life >	>20Yrs?	Yes			
Co	ost Estimati	on Information			Tot. Fe	ederal Loan <i>A</i>	Mount				
	5	Cost Est. C	lass		I	Program/Allo	wance	Task Info	rmation		
	1/1/2015	Cost Est. D	ate	P	roject Manag	er					
CDM Smith		Cost Est. S	ource	C	CIP Number						
CDM Smith		Cost Est. P	repared By		Description						
Cost Typ	oe	Fiscal Year	Expens	se	Fringe Benefit	NonPersonne	÷	Com	ment		
ngineering Serv	vices	FY19		\$15							
ngineering Serv	vices	FY20		\$555							
ngineering Serv	vices .	FY21		\$535							
ngineering Serv	vices	FY22		\$535							
ngineering Serv	vices .	FY23		\$535							
ingineering Serv	vices	FY24		\$535							
Task		Start Date	End Date	Dur	ration						

Prior Yr Actuals	FY19	FY20	FY21	FY22			FY25+	Total
	15	555	535	535	535	535	0	2,710

4/27/2018

4/28/2019

9/1/2023

12/1/2023

1/27/2018

4/28/2018

4/29/2019

9/2/2023

90 365

1586

90



Ypsilanti Booster Pumping Station Improvements

Phase GLWA Employ	ees Projec	ct managen	nent		Contract NA	4	Status	Active	
itle GLWA Salaries									
Phase Budget Wate	ər					Cost Allocation	on CTA		
Phase Status Activ	/e					Funding Source	e Bond P	roceeds	
Start Date						Fur	nd Constru	uction Bor	nd Fund
End Date					U	seful Life >20Yr	s? No		
Cost Es	timation I	nformation			Tot. Federal Loan Amount				
	5	Cost Est. C	lass		Prog	gram/Allowand	ce Task Inf	ormation	
1/1/2	2015	Cost Est. D	ate	Р	roject Manager				
CDM Smith		Cost Est. So	ource	C	CIP Number				
CDM Smith		Cost Est. Pr	epared By	D	escription				
Cost Type	F	iscal Year	Expens	е е	Fringe BenefitNor	nPersonne	Со	mment	
GLWA Salaries CIP202	20 FY1	9		\$9	4	0			
GLWA Salaries CIP202	20 FY2	20		\$21	8	1			
GLWA Salaries CIP202		21		\$21	8	1			
GLWA Salaries CIP202	20 FY2	22		\$21	8	1			
GLWA Salaries CIP202	20 FY2	23		\$21	8	1			
GLWA Salaries CIP202	20 FY2	24		\$10	4	0			
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY23	FY24 F	Y25+	Total	
	13	30	30		30 30	14	0	147	
		PI	nase Total Ex	pense	es By FY (All figure	es are in \$1,000	's)		

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

									•	•	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			93	606	820	2,594	4,134	900	0	9,147
2020	0	0	4	28	585	865	2,855	4,205	1,319	0	9,861

132013 CIP#

Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery

☐ Innovation	Project Status Cancelled		
☐ Water MP Right Si	zing CIP Type Project		
☐ Reliability/Redund	dancy		
□ NEWTP Repurposi	Project New To CIP \sqcup		
Project Engineer/Ma	nager Timothy Kuhns	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	SCC
Date Original Busines	ss Case Prepared	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2017	Location	Oakland County
		Fund and Cost Center	
Project Significance	Provide new VFDs to meet vaiable system or replace gate valves with new more reliable		ure (improve customer service) and
Scope of Work	Install new VFDs and replace existing gate	valves.	

132013 CIP#

Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery

ase GLWA Employe GLWA Salaries	ees Proje	ct managen	nent	(Contract TB	SD	Stati	Js Future	Planned Start
Phase Budget Wate	er					Cost Alloc	ation CTA		
Phase Status Future	e Planne	d Start				Funding So	ource		
Start Date	Start Date						Fund		
End Date	End Date				Useful Life >20Yrs? No				
Cost Estimation Information				Tot. Federal Loan Amount					\$0
	5	Cost Est. C	ass	Program/Allowance Task Information					
		Cost Est. Do	ate	Projec	t Manager				
		Cost Est. So	ource	CIP Number					
Cost Est. Prepared By			Description						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
							0	0	

Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery

hase Budget	Vater					Cost Allo	cation C	A		
Phase Status	uture Plann	ed Start				Funding S	ource Bo	nd Proc	ceeds	
Start Date		1/23/20	018				Fund C	onstruct	ion Bond Fu	und
End Date	5/25/2022			Useful Life >20Yrs?			20Yrs? Ye	Yes		
Co	Cost Estimation Information			Tot. Federal Loan Amount			mount			\$(
	2	Cost Est. Cla	SS		Prog	gram/Allov	vance Ta	sk Inforr	mation	
1/	15/2015	Cost Est. Dat	е	Projec	t Manager					
2015 WMPU		Cost Est. Sou	rce	CIP Number						
CDM		Cost Est. Pre	pared By	Description						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	To	otal	
								0	0	

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

Troject foral Expenses by TT Compared to Thor Cit's (All lightes die iii \$1,000 s)											
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				148	531	531	348		0	1,558
2020	0	0								0	0

132014 CIP#

Adams Road Booster Pumping Station Improvements

☐ Innovation	Project Status Future Planned		
☐ Water MP Right Sizing	CIP Type Project		
☐ Reliability/Redundancy	, ,		
☐ NEWTP Repurposing	Project New To CIP $\; \sqcup \;$		
Project Engineer/Manager Ti	mothy Kuhns	Budget	Water
Manager G	Grant Gartrell	Class Lvl 1	Water
Managing Dept ee	Vater Eng	Class Lvl 2	SCC
Date Original Business Case I	Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir
Year Project Adde	ed to CIP 2017	Location	Oakland County
		Fund and Cost Center	
	pumps, motors and electrical gear fo ement to maintain station reliability.	r station power are beyond t	their useful service life and require
Scope of Work Provide	new pumps, high-efficiency electric	motors and electrical gear fo	or entire station.



GLWA FY 2020-2024 CIP Adams Road Booster Pumping Station Improvements

PM Weighted Score

64

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

RC Weighted Score

56.6

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



Adams Road Booster Pumping Station Improvements

Contract NA **Status** Future Planned Start Phase Design and Build

itle Adams Ro	ad Pumping E	BPS Pumping Improvemen	ts	
,	, 0	Construction Analyze the eded.Improve Transmission	need for a 5th line pump since all 4 exist n Redundancy	ing pumps run in the summer months
Phase Budget	Water		Cost Allocation	CTA
Phase Status	Future Planne	ed Start	Funding Source	Bond Proceeds
Start Date		3/31/2021	Fund	Construction Bond Fund
End Date		9/23/2027	Useful Life >20Yrs?	Yes
Co	ost Estimation	Information	Tot. Federal Loan Amount	
	5	Cost Est. Class	Program/Allowance	Task Information
1	/15/2015	Cost Est. Date	Project Manager	
2015 WMPU		Cost Est. Source	CIP Number	
CDM		Cost Est Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY23	\$908			
Design-Build	FY24	\$2,046			
Design-Build	FY25+	\$2,046			2020CIP

Task	Start Date	End Date	Duration
Scope Development	3/31/2021	6/29/2021	90
Procurement	6/30/2021	6/30/2022	365
Project Execution	7/1/2022	6/24/2027	1819
Project Closeout	6/25/2027	9/23/2027	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	908	2,046	2,046	5,000



Adams Road Booster Pumping Station Improvements

Phase GLWA Emplo	•	oject manage	ment		Contract	NA	State	us Future I	Planned Start
Fitle GLWA Salaries)								
Phase Budget Wa	ter			Cost Allocation CTA					
Phase Status Futu	Phase Status Future Planned Start					Funding Sc	ource Bond	Proceeds	
Start Date							Fund Const	truction Bor	nd Fund
End Date						Useful Life >2	OYrs? No		
Cost E		Tot. Federal Loan Amount				\$0			
5 Cost Est. Class			Class		Pr	ogram/Allow	ance Task I	nformation	
1/1/	1/1/2015 Cost Est. Date			Project Manager					
CDM Smith		Cost Est. S	ource	CIP Number					
CDM Smith		Cost Est. P	repared By	Des	scription				
Cost Type		Fiscal Year	Expens	e Fr	inge BenefitN	onPersonne	С	omment	
GLWA Salaries CIP20	020	FY22		\$14	6	1			
GLWA Salaries CIP20	020	FY23		\$84	33	4			
GLWA Salaries CIP20	020	FY24		\$184	73	9			
GLWA Salaries CIP20	020	FY25+		\$184	73	92	020CIP		
Prior Yr Actuals	FY1	9 FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		O C	0		21 121	266	266	674	
		Р	hase Total Ex	kpenses	By FY (All figu	res are in \$1,0	000's)		
Duois	ol Tol	lal Evnence	Dv EV Ca	100 10 01 11 0	al la Dria - C	NDa / All fia		- ¢1 000'	-

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						21	1,030	4,625	0	5,676
2020	0	0		0	0	0	21	1,029	2,312	2,312	5,674

Newburgh Road Booster Pumping Station Improvements

☐ Innovation	Project Status Future Planned										
□ Water MP Right Si	CIP Type Project	Cir iype Flojeci									
□ Reliability/Redund □ NEWTP Repurposi	Project New To CIP										
Project Engineer/Ma	nager TBD	Budget	Water								
Ma	nager Grant Gartrell	Class Lvl 1	Water								
Managing	Dept Water Eng	Class Lvl 2	SCC								
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir								
Year Proj	ect Added to CIP	Location	Wayne County - Outside Detroit								
		Fund and Cost Center									
Project Significance	Existing pumps, motors and electrical gear are beyond useful service life. Replacement will provide new equipment that is more reliable, energy efficient and optimally sized for system demands. Other improvements involve building mechanical equipment replacement again because of surpassing useful life.										
Scope of Work	Scope of Work Replace all existing pumps, motors, VFDs, electrical gear and building mechanical equipment with new.										



Newburgh Road Booster Pumping Station Improvements

PM Weighted Score

57.2

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

RC Weighted Score

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



GLWA FY 2020-2024 CIP

Newburgh Road Booster Pumping Station Improvements

hase GLWA Employees I	Project manage	ment		Contract	NA	Status	Future	Planned Start
itle GLWA Salaries								
Phase Budget Water			Cost Allocation CTA					
Phase Status Future Pla	anned Start				Funding S	ource Bond Pr	oceeds	
Start Date						Fund Constru	ction Bo	nd Fund
End Date				Useful Life >2	20Yrs? No			
Cost Estimation Information				Tot. Federal Loan Amount				
5	Class	Program/Allowance Task Information						
1/1/2015	1/1/2015 Cost Est. Date		Р	roject Manager	,			
CDM Smith	Cost Est. S	Source	CIP Number					
CDM Smith	Cost Est. I	Prepared By	D	escription				
Cost Type	Fiscal Year	Expens	е	Fringe BenefitN	onPersonne	Cor	nment	
GLWA Salaries CIP2020	FY20		\$11	4	1			
GLWA Salaries CIP2020	FY21		\$21	8	1			
SLWA Salaries CIP2020 FY22			\$21	8	1			
GLWA Salaries CIP2020	FY23		\$21	8	1			
GLWA Salaries CIP2020	FY24		\$44	17	2			
Prior Yr Actuals FY	′19 FY20	FY21	FY:	22 FY23	FY24	FY25+	Total	

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



Newburgh Road Booster Pumping Station Improvements

Phase Design and Build Contract NA Status Future Planned Start

Title NewburghPumpingBoosterPumpsVariousDesign/Construction

110 110111011911	ii ompingboo	31C11 0111p3 v 011003DC31g117	9013110011011				
	•		and motor with the same capacity wal and Reliability - & BUILDING AL	as that for existing pump units (12 MGD DDITION			
Phase Budget	Water		Cost Alloca	Ition CTA			
Phase Status	Future Plann	ed Start	Funding Sou	urce Bond Proceeds			
Start Date		7/1/2017	F	cund Construction Bond Fund			
End Date		12/29/2023	Useful Life >20	Yrs? Yes			
Co	ost Estimation	Information	Tot. Federal Loan Amount				
	5	Cost Est. Class	Program/Allowance Task Information				
1/15/2015		Cost Est. Date	Project Manager				
2015 WMPU		Cost Est. Source	CIP Number				
CDM		Cost Est. Prepared By	Description				

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY20	\$0			
Design-Build	FY21	\$591			
Design-Build	FY22	\$2,366			
Design-Build	FY23	\$2,366			
Design-Build	FY24	\$2,366			
Design-Build	FY25+	\$4,311			2020CIP

Start Date	End Date	Duration
12/23/2018	3/23/2019	90
3/24/2019	3/23/2020	365
3/24/2020	3/24/2025	1826
3/25/2025	6/23/2025	90
	12/23/2018 3/24/2019 3/24/2020	12/23/2018 3/23/2019

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	591	2,366	2,366 _{A-365}	2,366	4,311	12,000	



Newburgh Road Booster Pumping Station Improvements

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

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

С	IP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
201	9	0				607	2,396	2,396	2,396	4,375	0	12,170
202	20	0	0		0	16	621	2,396	2,396	2,429	4,311	12,169



North Service Center Pumping Station Improvements

 □ Innovation □ Water MP Right Size ☑ Reliability/Redunded □ NEWTP Repurposin 	ancy Project New To CIP								
Project Engineer/Man Man Managing Date Original Business			Water						
redi rioje	CI Added to Cil. 2017	Fund and Cost Center	Odkidila Coolliy						
•	Project Significance Recondition line pumps L-2 through L-6, add VFD, replace existing valves and electrical gear with new due to equipment being past useful service life in order to provide more reliable equipment.								
Scope of Work Rehabilitate line pumps L-2 through L-6, replace motors and electrical gear with new. Work involves process mechanical and electrical upgrades.									

GLWA FY 2020-2024 CIP



GLWA FY 2020-2024 CIP North Service Center Pumping Station Improvements

PM Weighted Score

54.2

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

RC Weighted Score

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



North Service Center Pumping Station Improvements

Phase Design and			Co	ontract	NA	٨	S	Status	Future I	Planned	Start				
Title North Service	e Center E	3PS	Improveme	ents											
Phase Budget W	ater				Cost Allocation CTA										
Phase Status Fu	Future Planned Start					Funding Source Bond Proceeds									
Start Date										Fund Co	onstru	ction Bor	nd Fund		
End Date								Us	seful Life >	20Yrs? Ye	es				
Cost	Estimatio	n In	formation		Tot. Federal Loan Amount										
	5		Cost Est. C	lass			ı	Prog	gram/Allov	wance Ta	sk Info	ormation			
1/	1/2015		Cost Est. De	ate	Р	roject	Manag	er							
CDM Smith			Cost Est. So	ource	C	CIP Nun	nber								
CDM Smith			Cost Est. Pr	epared By	D	escrip [†]	tion								
Cost Type	;	Fis	scal Year	Expense	Э	Fringe	Benefit	Non	Personne		Con	nment			
Design-Build		FY2	3		\$0										
Design-Build		FY2			\$0					2020CIP					
Design-Build		FY2	4		\$0										
Design-Build		FY2	4	\$6	,296					2020CIP					
Design-Build		FY2	5+	\$18	3,560					2020CIP					
Task		St	art Date	End Date	Dur	ation									
Scope Developme	ent		3/31/2021	6/29/2021		90)								
Procurement			6/30/2021	6/30/2022		365	5								
Project Execution			7/1/2022	6/24/2027		1819)								
Project Closeout			6/25/2027	9/23/2027	,	90)								
Prior Yr Actuals	FY19)	FY20	FY21	FY2	22	FY23		FY24	FY25+		Total			
		0	0	0		0		0	6,296	18,5	60	24,856			



North Service Center Pumping Station Improvements

hase GLWA Employee	es Projec	t managem	nent		С	ontract NA	4	State	us Future	Planned Star
itle GLWA Salaries										
Phase Budget Water							Cost Alloco	ation CTA		
Phase Status Future	Planned	Start					Funding So	urce Bond	Proceeds	
Start Date							1	Fund Cons	truction Bo	nd Fund
End Date						U	seful Life >20	OYrs? No		
Cost Estir	Cost Estimation Information Tot. Federal Loan Amount \$0									
	5	Cost Est. CI	ass			Prog	gram/Allowo	ance Task I	nformation	
1/1/20	15	Cost Est. Do	ıte	Р	roject	Manager				
CDM Smith		Cost Est. So	urce	C	IP Nu	mber				
CDM Smith		Cost Est. Pr	epared By	D	escrip	otion				
Cost Type	Fis	scal Year	Expens	е	Fringe	e BenefitNor	nPersonne	С	omment	
GLWA Salaries CIP2020	FY22	2		\$0		0	0 20)20CIP		
GLWA Salaries CIP2020	FY22	2		\$0		0	0			
GLWA Salaries CIP2020	FY23	3		\$4		2	0 20	020CIP		
GLWA Salaries CIP2020	FY23	3		\$0		0	0			
GLWA Salaries CIP2020	FY2	4		\$20		8	1			
GLWA Salaries CIP2020	FY2	5+		\$20		8	1 20	020CIP		
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total	
	0	0	0	, , , 2	0	6	29	29	64	
		-	-	(nensa			es are in \$1,0		<u> </u>	
			asc rolar L/	(PCII36		· (All light	.5 die 111 91,0			

				"					•	•	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						6	4,520	20,394	0	24,920
2020	0	0		0	0	0	0	6	6,325	18,589	24,920

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

☐ Innovation	Project Status Future Planned		
☐ Water MP Right Si	zing CIP Type Project		
✓ Reliability/Redun	dancy		
□ NEWTP Repurposi	Project New To CIP		
Project Engineer/Ma	nager TBD	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	SCC
Date Original Busines	ss Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2018	Location	Oakland County
		Fund and Cost Center	
Project Significance	Yard piping and valves are original to the fo are needed to improve reliable operation; of subsequent station upgrades to the pumping	and in order to provide reliabl	
Scope of Work	Replace existing yard valves and yard pipin	ng with new.	
Challenges	Maintenance of facility operations during c	onstruction.	

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

PM Weighted Score

55.8

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

RC Weighted Score

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	1	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	3	
Regulatory (Environmental/Legal)	1	

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

Phase GLWA Emplo	oyees Pr	ojec	t manager	ment	Contract NA					rus Future	Planned Start	
itle GLWA Salarie	es											
Phase Budget Wo	ater				Cost Allocation CTA							
Phase Status Fut	ture Plar	nned	Start					Funding S	ource Bond	l Proceeds		
Start Date									Fund Cons	truction Bo	nd Fund	
End Date							U	seful Life >2	OYrs? No			
Cost	Estimati	on In	formation				Tot. Fede	eral Loan Ar	nount		\$0	
	5		Cost Est. C	Class			Prog	gram/Allow	ance Task	Information	ı	
1/1	1/2015		Cost Est. D	ate	Project Manager							
CDM Smith			Cost Est. S	ource	C	CIP Nu	mber					
CDM Smith			Cost Est. P	repared By)escri _l	otion					
Cost Type		Fis	scal Year	Expens	e	Fringe	e BenefilNoi	nPersonne	C	Comment		
GLWA Salaries CIP2	2020	FY20)		\$4		2	0				
GLWA Salaries CIP2	2020	FY21]		\$21		8	1				
GLWA Salaries CIP2	2020	FY22	2		\$21		8	1				
GLWA Salaries CIP2	2020	FY23	3		\$7		3	0				
Prior Yr Actuals	FY1	9	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
		Λ	6	30		30	10	Ω	Ω	76		

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

						٠٥ ٠						р	.9	
Phase Design and Bui	ild				C	ontract	NA		St	atus	Future F	Planned	l Start	
Title North Service Co Repurpose North			/alvesPiping[Design	n/Cons	truction	Repla	ace yard	d valves (Bl	FVs) in	cluding	those c	outside fe	nce.
Phase Budget Wate	er						C	Cost Allo	cation CTA	4				
Phase Status Future	e Planne	d Start					F	unding S	Source Bor	nd Pro	ceeds			
Start Date		4/1/	2019						Fund Co	nstruc	tion Bor	nd Fund		
End Date		9/27/	2022				Use	ful Life >	20Yrs? Yes	;				
Cost Est	imation I	nformation				Tot. Fe	edera	l Loan A	mount					
	5	Cost Est. C	lass			F	rogro	m/Allov	wance Tasl	k Infor	mation			
1/15/2	015	Cost Est. D	ate	Р	roject	Manage	er							
2015 WMPU		Cost Est. So	ource		CIP Nun	nber								
CDM														
OS/III			ор ш о ш - у											
Cost Type	F	iscal Year	Expense)	Fringe	Benefit	NonP	ersonne		Comi	ment			
Design-Build	FY1	19		\$0					2020CIP					
Design-Build	FY2	20		\$0					2020CIP					
Design-Build	FY2	21	\$2	,270										
Design-Build	FY2	22	\$2	,476										
Design-Build	FY2	23	9	\$254										
Task	9	Start Date	End Date	Dur	ation									
Scope Development		7/1/2019	6/30/2020		365	5								
Procurement		4/1/2019	6/30/2019		90)								
Project Execution		7/1/2020	6/28/2022		727	7								
Project Closeout		6/29/2022	9/27/2022		90)								
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23		FY24	FY25+	T	otal			
	C	0	2,270	7	2,476	25	54	0	(0	5,000			

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)											
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				6	2,300	2,506	264		0	5,076
2020	0	0		0	6	2,300	2,506	264	0	0	5,076

132018 CIP#

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Schoolcraft Booster Pumping Station Improvements

☐ Innovation	Project Status Future Planned									
☐ Water MP Right Size	zing CIP Type Project									
✓ Reliability/Redund	dancy									
☐ NEWTP Repurposi	Project New To CIP									
Project Engineer/Ma	nager TBD	Budget	Water							
Mai	nager Grant Gartrell	Class Lvl 1	Water							
Managing	Dept Water Eng	Class Lvl 2	SCC							
Date Original Busines	s Case Prepared 1/4/2018	Class LvI 3	Pump Station/Reservoir							
Year Proje	ect Added to CIP 2018	Location	Wayne County - Outside Detroit							
		Fund and Cost Center								
. •	The existing pumps, yard piping and station valves are past their useful service life and require replacement to maintain reliable station operations. Existing belt drain underdrain system protects reservoir from floating when empty so underdrain system must perform to prevent catastrophic damage to reservoirs.									
Scope of Work	Replace existing station pumps, yard valves, s	elect yard piping, and reha	bilitate reservoir underdrain system.							
Challenges	Maintenance of facility operations during cor	nstruction.								



Schoolcraft Booster Pumping Station Improvements

PM Weighted Score

52.4

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	4	
Financial	2	
O&M	5	
Performance (Service Level/Reliability)	4	
Public Benefit	1	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

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



Schoolcraft Booster Pumping Station Improvements

Phase Design and Build Contract NA Status Future Planned Start

Title Schoolcraft BPS Pumps, Yard Piping, Valves, Reservoir Pumps, & Underdrain System

Sump Pumps Design/Construction Replace Res	ervoir Fill valves and vaults, replace cone valve	s, and control panels. Inspect be	†Iŧ
drain system; replace duplex sump pumps. Trar	nsmission and Reservoir Renewal and Reliability		
Phase Budget Water	Cost Allocation	CT A	

Phase Budget Water

Phase Status Future Planned Start

Start Date

End Date

Cost Estimation Information			
5	Cost Est. Class		
1/1/2015	Cost Est. Date		
CDM Smith	Cost Est. Source		
CDM Smith	Cost Est. Prepared By		

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Jseful Life >20Yrs?	Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Other	FY25+	\$3,500			2020CIP
Design-Build	FY22	\$1,900			
Design-Build	FY23	\$1,990			
Design-Build	FY24	\$2,990			
Design-Build	FY25+	\$0			2020CIP

Task	Start Date	End Date	Duration
Scope Development	3/31/2020	6/29/2020	90
Procurement	6/30/2020	6/30/2021	365
Project Execution	7/1/2021	6/24/2026	1819
Project Closeout	6/25/2026	9/23/2026	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	1,900	1,990	2,990	3,500	10,380

\$0



GLWA FY 2020-2024 CIP

Schoolcraft Booster Pumping Station Improvements

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

Phase GLWA Employees Project management Contract NA Status Future Planned Start

Title GLWA Salaries

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

Cost Estimation Information

5	Cost Est. Class
1/1/2015	Cost Est. Date
CDM Smith	Cost Est. Source
CDM Smith	Cost Est. Prepared By

Cost Allocation	CTA
-----------------	-----

Funding Source Bond Proceeds

Fund Construction Bond Fund

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY21	\$7	3	0	
GLWA Salaries CIP2020	FY22	\$40	16	2	
GLWA Salaries CIP2020	FY23	\$40	16	2	
GLWA Salaries CIP2020	FY24	\$40	16	2	

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	10	58	58	58	0	184

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

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0					10	1,916	2,085	6,553	0	10,564
2020	0	0		0	0	10	1,958	2,048	3,048	3,500	10,564

GLWA FY 2020-2024 CIP Great Lakes Water Authority Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

☐ Innovation	Project Status Future Planned							
☐ Water MP Right Size	zing CIP Type Project							
✓ Reliability/Reduna	dancy							
□ NEWTP Repurposin	Project New To CIP \square							
Project Engineer/Mai	nager TBD	Budget Water						
Mai	nager Grant Gartrell	Class Lvl 1 Water						
Managing	Dept Water Eng	Class Lvl 2 SCC						
Date Original Busines	ss Case Prepared 1/4/2018	Class Lvl 3 Pump Station/Reservoir						
Year Proje	ect Added to CIP 2018	Location Wayne County - Outside Detroit						
		Fund and Cost Center						
Project Significance	Existing switchgear, control valves and hydreplacement to maintain station reliability	dropneumatic tank at station is beyond useful service life and requires						
Scope of Work	Replace station electrical switchgear, L-1 controls for operation of all station control	control valve and related controls, hydropneumatic tank and related valves						
Challenges	Maintenance of station operations during	intenance of station operations during construction.						
Project History	a							
Related Project	n/a							
Other Important Info	n/a							



GLWA F1 2020-2024 CIT Great Lakes Water Authority Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

PM	Weighted
	Score

55

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

RC Weighted Score

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

GLWA FY 2020-2024 CIP Great Lakes Water Authority GLWA FY 2020-2024 CIP 132019 CIP# Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

Phase Design and B	uild				Co	ontract N	Α		Statu	s Future F	Planned Start
Title Wick Rd BPS In	nproven	nents									
Phase Budget Wa	ter				Cost Allocation CTA						
Phase Status Futu	Jre Plant	ned Start					Funding S	ource B	ond F	Proceeds	
Start Date								Fund C	onstr	uction Bor	nd Fund
End Date						ι	Jseful Life >:	20Yrs? Y	es		
Cost E	stimatio	n Information				Tot. Fed	eral Loan A	mount			
	5	Cost Est. (Class			Pro	gram/Allov	vance To	ask In	formation	
1/1/	/2015	Cost Est. [ate	Project Manager							
CDM Smith		Cost Est. S	ource	CIP Number							
CDM Smith		Cost Est. F	repared By	D	escript	ion					
Cost Type		Fiscal Year	Expense	e	Fringe	BenefitNo	nPersonne		Со	mment	
Design-Build	ŀ	FY23	(\$979							
Design-Build	Ī	FY24	\$4	,421							
Task		Start Date	End Date	Dur	ation						
Scope Developmer	nt	3/31/2021	6/29/2021		90)					
Procurement		6/30/2021	6/30/2022		365	5					
Project Execution		7/1/2022	6/24/2027		1819						
Project Closeout		6/25/2027	9/23/2027		90)					
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	-	Total	
		0 (0		0	979	4,421		0	5,400	

132019 CIP#

Great Lakes Water Authority Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

Contract NA **Status** Future Planned Start Phase Design and Build **GLWA Salaries** Title Cost Allocation CTA Phase Budget Water **Phase Status** Future Planned Start Funding Source Bond Proceeds Start Date Fund Construction Bond Fund Useful Life >20Yrs? No **End Date** Tot. Federal Loan Amount \$0 **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2015 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith Fiscal Year Fringe Benefit NonPersonne Cost Type Expense Comment GI WA Salaries CIP2020 FY22 \$4 GLWA Salaries CIP2020 FY23 \$21 8 GLWA Salaries CIP2020 \$92 36 FY24 Prior Yr Actuals FY21 FY22 FY23 FY24 FY25+ Total FY19 FY20 133 0 0 0 6 30 0 169

GLWA FY 2020-2024 CIP Great Lakes Water Authority GLWA FY 2020-2024 CIP 132019 CIP# Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

Phase Design and B	uild				Co	ontract N	NΑ	Stat	us Future I	Planned S	Start
Title PowerUtility Su	Fitte PowerUtility SupplySwitchgearStudy/Design/Con						chgearTrans	mission and	Reservoir R	enewal c	ınd Reliability
Phase Budget Wat	ter			Cost Allocation CTA							
Phase Status Futu	ıre Planr	ned Start					Funding S	ource Bond	Proceeds		
Start Date		3/31	/2021					Fund Cons	truction Bor	nd Fund	
End Date		9/23	/2027				Useful Life >2	20Yrs? Yes			
Cost E	stimatio	n Information				Tot. Fed	leral Loan Ai	mount			
	5	Cost Est. C	Class			Pro	ogram/Allov	vance Task I	nformation		
12/27/	2017	Cost Est. D	ate	Р	roject	Manager					
2015 Water Maste	er Plan U	pd Cost Est. S	ource		CIP Number						
CDM		Cost Est. P	repared By	D	Description						
Cost Type		Fiscal Year	Expense	nse Fringe BenefitNonPersonr			onPersonne	C	Comment		
Design-Build	F	-Y23	1	\$0	J.						
Design-Build	F	-Y24		\$0							
Task		Start Date	End Date	Dur	ation						
Scope Developmen	t	3/31/2021	6/29/2021		90)					
Procurement		6/30/2021	6/30/2022		365	5					
Project Execution		7/1/2022	6/24/2027		1819						
Project Closeout		6/25/2027	9/23/2027		90)					
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
		0 0	0		0	0	0	0	0		
		Р	hase Total Ex	pense	es By F	(All figu	res are in \$1	,000's)			
			D EV 0				1D (AIL 6)		A	•	

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						6	1,009	4,555	0	5,570
2020	0	0		0	0	0	6	1,009	4,554	0	5,569

A-384

GLWA FY 2020-2024 CIP Great Lakes Water Authority Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

☐ Innovation ☐ Water MP Right Siz ☐ Reliability/Redund	lancy Project New To CIP							
	ng	Budget Class Lvl 1 Class Lvl 2	Water					
Date Original Busines	s Case Prepared 1/4/2018 ect Added to CIP 2018	Class Lvl 3	Pump Station/Reservoir Oakland County					
Project Significance	Existing gate valves, pumps, motors, and valve operators are beyond useful service life and require replacement to maintain reliable station.							
Scope of Work	Replace existing station pumps, motors, valves, v	ace existing station pumps, motors, valves, valve operators, and electrical						
Challenges	aintenance of station operation during construction.							



GLWA FY 2020-2024 CII Great Lakes Water Authority Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

PM	Weighted
	Score

57

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

RC Weighted Score

Score	Comment
	Commen
4	
4	
1	
3	
3	
3	
3	
2	
	4 4 1 3 3 3 3 3 2

132020 CIP#

Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

Phase GLWA Employees Project management						Con	tract N	A	Stat	r us Future I	Planned S	tart	
Title GLWA Salar	ies												
Phase Budget V	Phase Budget Water						Cost Allocation CTA						
Phase Status F	Future Planned Start							Funding So	ource Bond	l Proceeds			
Start Date									Fund Cons	truction Bor	nd Fund		
End Date							U	seful Life >2	OYrs? No				
Cos	Cost Estimation Information						Tot. Fede	eral Loan An	nount			\$0	
	5 Cost Est. Class				Program/Allowance Task Information								
1,	1/1/2015 Cost Est. Date			Р	Project Manager								
CDM Smith			Cost Est. So	ource	CIP Number								
CDM Smith			Cost Est. Pi	repared By	By Description								
Cost Type	е	Fis	scal Year	Expens	e	Fringe Be	enefitNo	nPersonne	C	Comment			
GLWA Salaries CII	P2020	FY2	2		\$0		0	0					
GLWA Salaries CII	P2020	FY2	3		\$0		0	0					
GLWA Salaries CII	P2020	FY2	4		\$0		0	0					
GLWA Salaries CIP2020 FY25+			\$75		30	42	2020CIP						
Prior Yr Actuals	FY	19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total			
		0	0	0		0	0	0	109	109			



Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

Contract NA **Status** Future Planned Start Phase Design and Build Franklin BPS - Isolation Gate Valves & Electrical Actuator Improvements Cost Allocation CTA Phase Budget Water Funding Source Bond Proceeds **Phase Status** Future Planned Start Start Date 10/4/2020 Fund Construction Bond Fund 3/29/2027 **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/15/2015 Cost Est. Date **CIP Number** Cost Est. Source 2015 WMPU Description Cost Est. Prepared By CDM Cost Type Fringe Benefil NonPersonne Fiscal Year Expense Comment Design-Build \$10,000 FY25+ 2020CIP Task Start Date **End Date** Duration Scope Development 10/4/2024 1/2/2025 90 1/3/2025 1/3/2026 365 Procurement **Project Execution** 1/4/2026 12/28/2028 1089 Project Closeout 12/29/2028 3/29/2029 90 FY22 FY23 FY24 FY25+ Prior Yr Actuals FY19 FY20 FY21 Total 0 0 0 0 Ω 010,000 10,000 Phase Total Expenses By FY (All figures are in \$1,000's)

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						846	2,009	7,315	0	10,170
2020	0	0		0	0	0	0	0	0	10,109	10,109



132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

☐ Innovation	Project Status Future Planned								
☐ Water MP Right Size	CIP Type Project								
☐ Reliability/Redund	lancy								
☐ NEWTP Repurposii	Project New To CIP								
Project Engineer/Ma	nager TBD	Budget	Water						
Mai	nager Grant Gartrell	Class Lvl 1	Water						
Managing	Dept Water Eng	Class Lvl 2	SCC						
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir						
Year Proje	ect Added to CIP 2018	Location	Lapeer County						
		Fund and Cost Center							
Project Significance	Significance Existing pumps, motors, VFDs and HVAC system need replacement in order to maintain reliability in the station's operation.								
Scope of Work	Replace existing VFDs with new, chiller system	VFD cooling, and replace o	existing station HVAC system.						
Challenges	Challenges VFD size is unusual in the marketplace and cooling systems are complex for the VFDs.								

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

PM	Weighted
	Score

41.8

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

RC Weighted Score

Score	Comment
4	
4	
1	
3	
3	
4	
3	
2	
	Score 4 4 1 3 4 3 4 2

132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

Phase Design and	nase Design and Build						Contract NA					s Future I	Planned	Start
Title Imlay BPS - R	Replace \	/FDs	, Pumps, Mo	otors and HV	AC									
Phase Budget W	/ater				Cost Allocation						CTA			
Phase Status Fu	uture Plar	nnec	l Start						Funding S	ource B	ond P	roceeds		
Start Date			4/2/	′2022						Fund	Constr	uction Bor	nd Fund	
End Date			9/25/	′2026				Us	eful Life >2	20Yrs? Y	'es			
Cos				Tot. Fe	der	al Loan Ar	mount							
	5		Cost Est. C	lass			P	rog	ram/Allow	ance T	ask In	formation		
1,	/1/2015		Cost Est. D	ate	F	Project A	Nanage	r						
2015 WMPU			Cost Est. So	ource	CIP Number									
CDM			Cost Est. Pi	repared By	Description Description									
Cost Type	9	Fis	scal Year	Expense	xpense Fringe		Benefith	nefitNonPersonne			Со	mment		
Design-Build		FY2	4	\$2	,000									
Design-Build		FY2	5+	\$10	,000				2	2020CIP				
Task		S	tart Date	End Date	Dui	ration								
Scope Developm	ent		4/2/2022	7/1/2022		90								
Procurement			7/2/2023	7/1/2024		365								
Project Execution			7/2/2024	6/26/2027		1089								
Project Closeout			6/27/2027	9/25/2027		90								
Prior Yr Actuals	FY1	9	FY20	FY21	FY	22	FY23		FY24	FY25	+	Total		
		0	0	0		0		С	2,000	10,0	000	12,000		

132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

hase GLWA Emp	ment	Contract NA					s Future I	Planned Start			
tle GLWA Salari	ies										
Phase Budget W	Vater			Cost Allocation CTA							
Phase Status Fo	uture Plar	ure Planned Start					Funding Sc	Bond I	Proceeds		
Start Date								Fund Consti	ruction Bor	nd Fund	
End Date						U	seful Life >2	OYrs? No			
Cost Estimation Information				Tot. Federal Loan Amount					\$0		
5 Cost Est. Class			Class	Program/Allowance Task Information							
1,	/1/2015	Cost Est. [Cost Est. Date		Project Manager						
CDM Smith		Cost Est. S	ource	CIP Number							
CDM Smith		Cost Est. F	repared By	By Description							
Cost Type	e	Fiscal Year	Expens	е	Fringe	e BenefitNor	nPersonne	Co	omment		
SLWA Salaries CIF	P2020	FY23		\$4		2	0				
SLWA Salaries CIF	P2020	FY24		\$71		28	4				
Prior Yr Actuals	FY1	9 FY20	FY21	FY:	22	FY23	FY24	FY25+	Total		
		0 (0		0	6	103	0	109		
		F	hase Total Ex	xpense	es By F	Y (All figure	es are in \$1,	000's)			

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

				,							
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019		0						6	12,103	0	12,109
2020		0	0	0	0	0	0	6	2,103	10,000	12,109

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

✓ Innovation	Project Status Future Planned								
☐ Water MP Right Size	zing CIP Type Project								
✓ Reliability/Redund	,								
☐ NEWTP Repurposii	Project New To CIP U	Project New To CIP $\ igsquare$							
Project Engineer/Ma	nager Eric Kramp	Budget	Water						
Mai	nager Grant Gartrell	Class Lvl 1	Water						
Managing	Dept Water Eng	Class Lvl 2	SCC						
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir						
Year Proje	ect Added to CIP 2018	Location	Wayne County - Outside Detroit						
		Fund and Cost Center							
Project Significance	Existing reservoir pumps, motors and associated valves are past their useful service life and require replacement to maintain station reliability. In addition, the existing header is heavily corroded and as a result also needs replacement.								
Scope of Work	Replace the station's reservoirs pumps, motors, valves, valve operators, and header with new.								
Challenges	hallenges Maintaining station operations during construction.								

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

PM Weighted Score

54.4

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	3	
Financial	3	
O&M	4	
Performance (Service Level/Reliability)	4	
Public Benefit	2	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

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

132022 CIP#

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

Phase Design and E	Build				Co	ontract N	A	State	us Future	Planned Start	
Title Joy Road BPS	- Replac	e Reservoir F	umps, Motors	and Is	olatior	n Valves					
Phase Budget Wo		Cost Allocation CTA									
Phase Status Future Planned Start				Funding Source Bond P							
Start Date	Start Date 4/2/2022			Fund Construction Bond Fund							
End Date		9/2	5/2026	Useful Life >20Yrs? Yes							
Cost	Estimatio	n Informatior	1	Tot. Federal Loan Amount							
	5	Cost Est.	Class	Program/Allowance Task Information							
1/15	/2015	Cost Est.	Date	Project Manager							
2015 WMPU	2015 WMPU Cost Est. Source		Source	CIP Number							
CDM Cost Est. Prepar		Prepared By	ed By Description								
Cost Type		Fiscal Year	Expens	e l	ringe	BenefitNo	nPersonne	С	omment		
Design-Build FY24			\$6	\$6,000 construction							
Task		Start Date	End Date	Durc	ation						
Scope Developme	nt	4/1/202	7/1/2022	2	91						
Procurement		7/1/202	7/1/2023	3	365	5					
Project Execution 7/1/1023 4/		3 4/1/2023	3 365152		<u> </u>						
Project Closeout		4/1/202	4 6/30/2024	1	90)					
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23	FY24	FY25+	Total		
		0	0		0	Ω	4 000	0	6,000	1	



Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

Phase GLWA Emplo	ment	Contract NA					us Future	Planned Start				
Title GLWA Salaries	S											
Phase Budget Water				Cost Allocation CTA								
Phase Status Fut	ure Plani	ned Start		Funding Source Bond Proceeds								
Start Date				Fund Construction Bond Fund								
End Date				Useful Life >20Yrs? No								
Cost I		Tot. Federal Loan Amount										
5 Cost Est. Class				Program/Allowance Task Information								
1/1	/2015	Cost Est. I	Date	P	roject <i>l</i>	Manager						
CDM Smith	CDM Smith Cost Est. Source			CIP Number								
CDM Smith Cost Est. Prepare			repared By	ed By Description								
Cost Type		Fiscal Year	Expense	pense Fringe BenefilNonPersonne Comn					omment			
	GLWA Salaries CIP2020 FY23		2, 40 0 1 10 0	\$4	90	2	0					
GLWA Salaries CIP2020 FY24		FY24		\$71		28	4					
Task		Start Date	End Date	Dur	ation							
Scope Developmer	nt	4/1/2022	7/1/2022		91							
Project Execution 7/1/2022 4		4/1/2024		640								
Project Closeout	ut 4/1/2024 6/30/2024			90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total			
		0 (0		0	6	103	0	109			
			hase Total Ex	pense	es By FY	(All figure	es are in \$1,0)00's)				
Draid	od Tota	al Evpopes	DV EV COL	20 IO C	rad ta	Drior CI	De / All fier	IKO O OKO	n ¢1 000'	(a)		

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0							6	6,103	0	6,109
2020	0	0		0	0	0	0	6	6,103	0	6,109



132023 CIP#

Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

☐ Innovation	Project Status Reclassified							
□ Water MP Right Siz	·							
☐ Reliability/Redunc	7.							
☐ NEWTP Repurposir	g Troject New 10 Cil -							
Project Engineer/Mar	ager TBD	Budget	Water					
Mar	ager Grant Gartrell	Class Lvl 1	Water					
Managing	Dept Water Eng	Class Lvl 2	SCC					
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir					
Year Proje	ct Added to CIP 2018	Location	Multiple Counties					
		Fund and Cost Center						
Project Significance	Project Significance This project is combined into a new overall Reservoir Rehabilitation Project.							
•	Scope of Work Conduct inspections and execute any necessary rehabilitation of the reservoirs that results from the inspection work as directed and approved by GLWA.							
Other Important Info	This project has been reclassified into Proje	ct 170801 within the Reservoir L	nspection Design and Rehabilitation					
•	Program 170800.	CT 17 0001 WITHIN THE RESERVOIL	inspection, besign and kendolination					



Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

PM Weighted	
Score	

65.4

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	1	
Financial	1	
O&M	3	
Performance (Service Level/Reliability)	3	
Public Benefit	3	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	5	

RC Weighted Score

47

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

132023 CIP#

Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

Phase Construction Contract NA Status Future Planned Start

Title Reservoir Inspection, Design & Rehabilitation @ Water Works Park and Northeast Water Treatment Plants; and Wick, Schoolcraft, Northwest, North Service Center, and Michigan Avenue Pumping Stations

Phase Budget	Water		Cos	st Allocation CTA
Phase Status	Future Plan	nned Start	Fund	ding Source Bond Proceeds
Start Date	1,13,133			Fund Construction Bond Fund
End Date			Useful	Life >20Yrs? Yes
Co	ost Estimatio	on Information	Tot. Federal La	oan Amount
	5	Cost Est. Class	Program	n/Allowance Task Information
12	2/13/2017	Cost Est. Date	Project Manager	
GLWA Engine	ering	Cost Est. Source	CIP Number	
Group		Cost Est. Prepared By	Description	

Task		Start Date	End Date	Duration				
Scope Developmen	t	9/26/2022	12/25/2022	9	0			
Procurement		12/26/2022	7/2/2023	18	38			
Project Execution		7/3/2023	6/26/2026	108	39			
Project Closeout		6/27/2026	9/25/2026	9	0			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

132023 CIP#

Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

Phase GLWA Emplo	yees Pro	oject mo	anagen	nent		C	ontract N	A	Sta	tus Future	Planned S	tart
Fitle GLWA Salaries	5											
Phase Budget Wa					Cost Alloc	cation CTA						
Phase Status Future Planned Start								Funding S	ource Bond	d Proceeds		
Start Date									Fund Con	struction Bor	nd Fund	
End Date					Useful Life >20Yrs? Yes							
Cost Estimation Information					Tot. Federal Loan Amount						\$0	
5 Cost Est. Class				ass			Pro	gram/Allow	ance Task	Information		
1/1/2015 Cost Est. Date CDM Smith Cost Est. Source CDM Smith Cost Est. Prepare			ate	Р	roject	Manager						
			ource	CIP Number								
			epared By	D	escrip	otion						
Cost Type		Fiscal	Year	Expens	е	Fringe	e BenefitNo	nPersonne	(Comment		
GLWA Salaries CIP2020 FY23			\$0		0	0						
GLWA Salaries CIP2020 FY24					\$0		0	0				
Prior Yr Actuals	FY19) F	Y20	FY21	FY2	22	FY23	FY24	FY25+	Total		
		0	0	0		0	0	0	0	0		

Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

Tot. Federal Loan Amount

Phase Design & Construction Assistance	struction Assistance	(Design &	Phase
----------------------------------------	----------------------	---	----------	-------

Contract NA

Status Future Planned Start

Title Reservoir Inspection, Design & Rehabilitation @ Water Works Park and Northeast Water Treatment Plants; and Wick, Schoolcraft, Northwest, North Service Center, and Michigan Avenue Pumping Stations

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

1/1/2015

Cost Estimation Information

i	
	Proie

Cost Allocation	СТА
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes

Program/Allowance Task Information

Project Manager

CIP Number

Description

CDM Smith CDM Smith	Cost Est. S	ource Prepared By	Descri
Task	Start Date	End Date	Duration
Scope Development	9/26/2020	12/25/2020	

Task	Start Date	End Date	Duration
Scope Development	9/26/2020	12/25/2020	90
Procurement	12/26/2020	12/26/2021	365
Project Execution	12/27/2021	6/26/2026	1642
Project Closeout			

Cost Est. Class

Cost Est. Date

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

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

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

		<u> </u>				<u></u>				, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						449	554	18,106	0	19,109
2020	0	0		0	0	0	0	0	0	0	0

GLWA F1 2020-2024 CIT Great Lakes Water Authority Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

☐ Innovation	Project Status Reclassified		
☐ Water MP Right Size	zing CIP Type Program		
☐ Reliability/Redund	dancy		
□ NEWTP Repurposi	Project New To CIP \square		
Project Engineer/Ma	nager TBD	Budget	Water
Mai	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	SCC
Date Original Busines	ss Case Prepared 1/4/2018	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2018	Location	Multiple Counties
		Fund and Cost Center	
Project Significance	Existing reservoirs need to be inspected and a MDEQ guidelines; and in order to assure that re		
Scope of Work	Conduct inspections and execute any necess work as directed and approved by GLWA.	ary rehabilitation of the res	ervoirs that results from the inspection
	E	70001 1111 11 11 11	
Other Important Info	This project has been reclassified into Project 1 Program 170800.	/0801 within the Reservoir I	nspection , Design and Rehabilitation



GLWA FT 2020-2024 CII Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

PM	Weighted
	Score

65.4

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	1	
Financial	1	
O&M	3	
Performance (Service Level/Reliability)	3	
Public Benefit	3	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	5	

RC Weighted Score

47

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

132024 CIP#

GLWA F1 2020-2024 CIT Great Lakes Water Authority Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Phase GLWA Emplo Title GLWA Salaries	•	oject mai	nager	ment		C	Contract N.	A	Stat	tus Futurel	Planned Sta	rt
Phase Budget Wa	ter							Cost Alloc	cation CTA			
Phase Status Futu	ure Plar	nned Start	•					Funding S	ource Bono	l Proceeds		
Start Date									Fund Cons	truction Bor	nd Fund	
End Date				Useful Life >20Yrs? No								
Cost Estimation Information					Tot. Federal Loan Amount						\$	0
5 Cost Est. Class							Pro	gram/Allow	ance Task	Information		
1/1,	/2015	Cost	Est. D	ate	Р	Project Manager						
CDM Smith		Cost	Est. S	ource	CIP Number							
CDM Smith		Cost	Est. P	repared By	D	escri	ption					
Cost Type		Fiscal Y	'ear	Expens	е	Fring	e Benefit <mark>No</mark>	nPersonne	C	Comment		
GLWA Salaries CIP20	020	FY23			\$0		0	0				
GLWA Salaries CIP20	020	FY24			\$0		0	0				
Prior Yr Actuals	FY1	9 F	/20	FY21	FY2	22	FY23	FY24	FY25+	Total		
		0	0	0		0	0	0	0	0		

132024 CIP#

Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Contract NA **Phase** Construction **Status** Future Planned Start Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road, Franklin, Haggerty and Joy Road **Phase Budget** Water Cost Allocation CTA **Phase Status** Future Planned Start Funding Source Bond Proceeds Start Date 9/26/2020 Fund Construction Bond Fund 9/25/2026 Useful Life >20Yrs? Yes **End Date** Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class Program/Allowance Task Information **Project Manager** 12/13/2017 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Engineering Description Cost Est. Prepared By Group

Cost Type		Fiscal Year	Expense	Frinç	ge Benefi	NonPer	sonne	C	Comment	
Construction	FY	1 24		\$0						
Task		Start Date	End Date	Duratio	1					
Scope Development		9/26/2022	12/25/2022		90					
Procurement		12/26/2022	7/2/2023	1	88					
Project Execution		7/3/2023	6/26/2026	10	89					
Project Closeout		6/27/2026	9/25/2026		90					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	F`	Y24	FY25+	Total	
		0 0	0	C		0	0	0	0	

132024 CIP#

Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Contract NA **Phase** Design & Construction Assistance **Status** Future Planned Start Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road, Franklin, Haggerty and Joy Road Phase Budget Water Cost Allocation CTA Funding Source Bond Proceeds **Phase Status** Future Planned Start Start Date **Fund** Construction Bond Fund **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** 1/1/2015 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith Fringe BenefilNonPersonne Cost Type Fiscal Year Expense Comment **Engineering Services** FY22 \$0 **Engineering Services** FY23 \$0 **Engineering Services** \$0 FY24 Task Start Date End Date Duration Scope Development 12/25/2020 90 9/26/2020 12/26/2020 12/26/2021 Procurement 365 **Project Execution** 12/27/2020 6/26/2025 1642 90 Project Closeout 6/27/2025 9/25/2025 Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total 00 0 0 0 0 0 Phase Total Expenses By FY (All figures are in \$1,000's)

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0						449	554	18,106	0	19,109

GLWA
Great Lakes Water Authority

132024 CIP#

Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		0	0	0	0	0	0	0	0



Northwest Booster Station Yard Piping Improvements

☐ Innovation

✓ Water MP Right Sizing

▼ Reliability/Redundancy

✓ NEWTP Repurposing

Project Status Future Planned

CIP Type Project

Project New To CIP ✓

Project Engineer/Manager Eric Kramp

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/21/2018

Year Project Added to CIP 2020

Budget Water

Class Lvl 1 Water

Class Lvl 2 SCC

Class LvI 3 Pump Station/Reservoir

Location City of Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Historical pumpage data for the Northeast WTP indicates that the maximum day demands for the Northeast service area can be as high as 190 MGD. With the upcoming decommissioning of treatment at the Northeast WTP, Water Works Park will provide 150 MGD of finished water to the Northeast high lift pumping system to provide service to the existing Northeast service area, which means that 40 MGD must be delivered from other water treatment plants during the maximum day demand conditions. Upgrades to the yard piping at the Northwest Booster Station would allow flows to be pumped from the Springwells WTP through the Northwest Booster Station to the Northeast Service Area to provide a portion of the needed 40 MGD. This project will provide the needed transfer of demand loads from Water Works Park to Springwells once Northeast WTP treatment is decommissioned.

Scope of Work Project includes construction of a new reservoir fill valve system to fill the existing reservoirs from Springwells. The project also includes replacement of the isolation valves and pumping units.

Challenges The project challenges include working with older piping and transmission valves. Isolation of piping to make connections to the existing piping system may be a challenge.

Project History The 2015 Water Master Plan proposed decommissioning of this booster station. However, the Master Plan assumed that the excess capacity at Water Works Park could fully supply the Northeast Service Area demands, which is not the case. For this reason, it will be necessary to use this station to provide maximum day demands from the Springwells WTP to the Northeast Service Area once decommissioning at the Northeast WTP is complete.

Related Project CIP 122017 - 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Lookup Driver 8 - Efficiency

Other Important Info This project highlights the need to reinforce the transmission system in order to reliably provide service after

132025 CIP#

Northwest Booster Station Yard Piping Improvements

treatment is decommissioned at the Northeast WTP.

Explanation This project provides for efficiencies in facilitating the decommissioning of treatment at the Northeast WTP.



Northwest Booster Station Yard Piping Improvements

PM Weighted Score

54.6

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

RC Weighted Score

63.6

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



Northwest Booster Station Yard Piping Improvements

Phase Design & Cor	nstructio	n Assistance		Contract TBD						Status	Future I	Planned	Start
Title Northwest Boo	oster Sto	ation Yard Pipir	ng Improvem	ents									
Phase Budget Wa	ter							Cost Alloc	cation	TA			
Phase Status Futu	Jre Plan	ned Start		Funding Source Bond Proceeds									
Start Date				Fund Construction Bond Fund									
End Date			Useful Life >20Yrs? Yes										
Cost E	stimatio	n Information				Tot. Fe	deı	al Loan Ar	mount				\$0
	5	Cost Est. C	Class	Program/Allowance Task Information									
1/1/	ate	Р	roject l	Manage	er								
CDM Smith	ource	CIP Number											
CDM Smith		Cost Est. P	repared By		escript	ion							
0.17		E' 13/			F ·	D (1)	_	D					
Cost Type	_	Fiscal Year	Expense	, ,				2000010	Con	nment			
Engineering Services		FY21		\$50				2020CIP					
Engineering Services		FY22		200					2020CIP				
Engineering Service:	S	FY23	1	250					2020CIP				
Task		Start Date	End Date	Dur	ation								
Scope Developmen	n†	10/1/2019	5/1/2020		213								
Procurement		5/1/2020	5/1/2021		365								
Project Execution		5/1/2021	4/1/2023		700								
Project Closeout		4/1/2023	6/30/2023		90								
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23		FY24	FY25+	-	Total		
			50		200	25	0				500		

132025 CIP#

Northwest Booster Station Yard Piping Improvements

Contract NA Phase GLWA Employees Project management **Status** Future Planned Start **GLWA Salaries** Title **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? Yes Tot. Federal Loan Amount \$0 **Cost Estimation Information** Program/Allowance Task Information 5 Cost Est. Class **Project Manager** 1/1/2015 Cost Est. Date **CIP Number** Cost Est. Source CDM Smith Description Cost Est. Prepared By CDM Smith

Task	Start Date	End Date	Duration
Scope Development	10/1/2019	5/1/2020	213
Procurement			
Project Execution	5/1/2020	4/1/2023	1065
Project Closeout	4/1/2023	6/30/2023	90



CIP

2020

FY16

FY17

0

0

FY18

FY19

FY20

GLWA FY 2020-2024 CIP

Northwest Booster Station Yard Piping Improvements

Phase Construction)				Со	ntract	TBD	Stat	us Future	Planned Start		
Title Northwest Bo	oster Sta	tion Yard Pipin	g Improvem	ents								
Phase Budget Wo	ater						Cost Allo	cation CTA				
Phase Status Fut	ure Planr	ned Start		Funding Source Bond Proceeds								
Start Date				Fund Construction Bond Fund								
End Date				Useful Life >20Yrs? Yes								
Cost I	Estimatio	n Information		Tot. Federal Loan Amount \$0								
	5	Cost Est. C	lass	Program/Allowance Task Information								
1/1	/2015	Cost Est. D	ate	Р	roject A	Managei	,					
CDM Smith	ource	CIP Number										
CDM Smith	repared By	red By Description										
			_				_	_				
Cost Type Construction	-	Fiscal Year FY22	Expense					2020CIP	Comment			
Construction		-122 -Y23	•	\$1,500 \$3,500				2020CIP				
Task	ľ	Start Date	End Date		ation			2020 011				
Scope Developmen	nt	5/1/2021	11/1/2021	Dui	184							
Procurement		11/1/2021	5/1/2022		181							
Project Execution		5/1/2022	4/1/2023		335							
Project Closeout		4/1/2023	6/30/2023		90							
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total			
				1	,500	3,500)		5,000			
		P	hase Total Ex	pense	es By FY	(All figu	res are in \$1	,000's)				
Proie	ect Toto	al Expenses	By FY Cor	npai	red to	Prior C	CIPs (All fic	ures are	in \$1.000	's)		

۸	1	1	2	

50

FY21

FY23

3,750

FY24

FY25

Total

5,500

FY22

1,700

Water Master Plan Update

Pro	oject Engineer/Manager
	NEWTP Repurposing
	Reliability/Redundancy
	Water MP Right Sizing
	Innovation

Project Status Closed

CIP Type Project

Project New To CIP \Box

Previous Water Master Plan



Grant Gartrell

Explanation N/A - Active

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/18/2010

Year Project Added to CIP 2010

Budget Water

Class Lvl 1 Water

Class Lvl 2 General Purpose

Class Lvl 3 General Purpose

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Road map to maintain and improve the overall system performance on a cost-efficient basis
•	This project consists of the update of the 2004 Water Master Plan including a review of current and ongoing studies, regulatory mandates under the Clean Water Act and State of Michigan, contractual obligations to the customers and Department policies.
Challenges	N/A - Active
Lookup Driver	N/A - Active



Water Master Plan Update

Phase not applied	cable					Cont	ract N	٧A	Stat	tus	Closed Out	
Title Prior Year <i>i</i>	Actual E	xpense	·S									
\$330 FY18 Back	ed out t	o recor	ncile LTD									
Phase Budget	Water							Cost Allo	cation CTA			
Phase Status	Closed	Out						Funding S	ource			
Start Date									Fund			
End Date							ı	Useful Life >:	20Yrs?			
Co	ost Estim	ation In	nformation			Т	ot. Fed	eral Loan Aı	mount			
	,	5	Cost Est. C	lass			Pro	ogram/Allov	vance Task	Infor	mation	
	1/1/201	7	Cost Est. D	ate	P	roject Mo	ınager					
GLWA			Cost Est. So	ource	C	CIP Numbe	er					
GLWA			Cost Est. Pr	epared By	D	escription	า					
Cost Typ	oe	Fis	scal Year	Expens	e	Fringe Be	nefitNo	onPersonne		Comr	nent	
Unknown		FY1	8-		\$222			I	FY16			
Unknown		FY1	8-		\$108			I	FY17			
Prior Yr Actua	ls I	FY19	FY20	FY21	FY2	22 F	Y23	FY24	FY25+	To	otal	
	0										0	



Water Master Plan Update

hase Study							Contract	NA	4	S	tatus	Closed	Out	
tle Water Master	Plan U	odate	Э											
Phase Budget Wa	ıter								Cost Alloc	cation CT	Α			
Phase Status Clo	sed O	J†			Funding Source Revenue Financed Capi								ed Capit	al
Start Date					Fund Improvement & Extension Fu								Fun	
End Date	End Date					Useful Life >20Yrs? No								
Cost E	stimat	ion In	formation				Tot. Fe	deı	ral Loan An	mount				
	5		Cost Est. C	lass			P	rog	gram/Allow	ance Ta	sk Info	rmation		
Cost Est. Date				ate	Project Manager									
			Cost Est. So	ource	CIP Number									
			Cost Est. Pr	epared By)escri _l	otion							
Cost Type		Fis	scal Year	Expens	e	Fring	e Benefill	lor	Personne		Con	nment		
Construction		FY2	4		\$0									
ngineering Service	es .	FY2	4		\$0									
Naterials		FY2	4		\$0									
Other		FY2	4		\$0									
Prior Yr Actuals	FY	9	FY20	FY21	FY:	22	FY23		FY24	FY25+		Total		
		0	0	0		0		0	0		0	0		



Water Master Plan Update

hase GLWA Em _l itle GLWA Sala	. ,	ject manager	ment		Contract N	A	State	us Closed (Out				
Phase Budget						Cost Alloc	cation CTA						
Phase Status (Funding S	ource Rever	nue Finance	d Capital				
Start Date							Fund Impro	vement & E	xtension Fun				
End Date					l	seful Life >2	20Yrs? No						
Co	st Estimatio	n Information			Tot. Fede	eral Loan Ar	nount		\$0				
	5	Cost Est. C	lass	Program/Allowance Task Information									
1	1/1/2017	Cost Est. D	ate	Project Manager									
GLWA		Cost Est. S	ource	CIP Number									
GLWA		Cost Est. P	repared By	Desc	ription								
Cost Typ	ре	Fiscal Year	Expens	e Frin	ge BenefitNo	nPersonne	С	omment					
GLWA Salaries Cl	IP2020 F	-Y24		\$0	0	0							
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total					
		0 0	0	(0	0	0	0					
		P	hase Total Ex	kpenses By	y FY (All figure	es are in \$1,	000's)						
Pro	oject Toto	al Expenses	By FY Co	mpared	to Prior C	Ps (All fig	ures are i	n \$1,000's					
CID EVI			EV10			YOO EY		_					

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		290							0	0	290
2019	C	330							0	0	330
2020	C	0	0	0	0	0	0	0	0	0	0



Water Treatment Plant / Pump Station Allowance

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redunction	dancy Cir Type Allowance	GLWA Water Servic Are				
□ NEWTP Repurposin	Project New To CIP		Plant 1			
Project Engineer/Mai	nager Grant Gartrell	Budget	Water			
Mai	nager Grant Gartrell	Class Lvl 1	Water			
Managing	Dept Water Eng	Class LvI 2	Programs			
Date Original Busines	ss Case Prepared 10/11/2016	Class Lvl 3				
Year Proje	ect Added to CIP 2012	Location Multiple Counties				
		Fund and Cost Center	Water - 5519-882111			
	This allowance is reserved for unplanned, emergency and critical project needs that need to be addressed quickly.					
•	This allowance is reserved for unplanned, enquickly.	nergency and critical project	needs that need to be addressed			
	•	critical projects that may occu n. These projects may include to provide sufficient water qu	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			
Scope of Work	quickly. This project is an allowance for unplanned, or Booster Pump Stations throughout the system key assets as required to allow the Authority	critical projects that may occu n. These projects may include to provide sufficient water qu eral and state requirements u	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			
Scope of Work	quickly. This project is an allowance for unplanned, or Booster Pump Stations throughout the system key assets as required to allow the Authority customer demands in accordance with fed Close coordination with operations and ability.	critical projects that may occu n. These projects may include to provide sufficient water qu eral and state requirements u	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			
Scope of Work Challenges	quickly. This project is an allowance for unplanned, of Booster Pump Stations throughout the system key assets as required to allow the Authority customer demands in accordance with fed Close coordination with operations and abilin/a	critical projects that may occu n. These projects may include to provide sufficient water qu eral and state requirements u	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			
Scope of Work Challenges Project History	quickly. This project is an allowance for unplanned, of Booster Pump Stations throughout the system key assets as required to allow the Authority customer demands in accordance with fed Close coordination with operations and abilin/a none	critical projects that may occu n. These projects may include to provide sufficient water qu eral and state requirements u	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			
Scope of Work Challenges Project History Related Project	quickly. This project is an allowance for unplanned, of Booster Pump Stations throughout the system key assets as required to allow the Authority customer demands in accordance with fed Close coordination with operations and abilin/a none Varies	critical projects that may occu n. These projects may include to provide sufficient water qu eral and state requirements u	or at the Water Treatment Plants and repair, replacement or rehabilitation of ality, quantity and pressure to meet			



Water Treatment Plant / Pump Station Allowance

PM Weighted Score

68.2

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	4	
Financial	4	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

64.4

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	5	
O&M	0	
Performance (Service Level/Reliability)	5	
Public Benefit	3	
Public Health & Safety	4	
Regulatory (Environmental/Legal)	2	



Water Treatment Plant / Pump Station Allowance

Tot. Federal Loan Amount

Phase Construction Contract CON-153 Status Active

Title CON-153: Water Works Park WTP Raw Water Sampling Improvements

Phase Budget	Water
Phase Status	Active
Start Date	12/1/2016
End Date	3/15/2018

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

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

Program/Allowance Task Information

Project Manager
CIP Number

Description

Tim Kuhns 170110

This project will involve the replacement of the entire raw water sampling system, including chlorine and fluoride analyzers, that are used to sample and analyze the raw water that is conveyed to the Northeast and Springwells water treatment plants. The existing system is cumbersome to operate, maintain and calibrate for accuracy due to its design and location. Additionally, the existing system does not have a sample faucet in the laboratory. This project adds this feature so that the chemists can more readily collect and analyze samples in the lab to verify the on-line chlorine and fluoride analyzer results.

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$0			2020CIP
Construction	FY20	\$0			2020CIP
Construction	FY21	\$2,500			2020CIP
Construction	FY22	\$0			2020CIP
Construction	FY23	\$0			2020CIP

170100 CIP#

Water Treatment Plant / Pump Station Allowance

Cost Type		Fiscal Year	Expense)	Fringe	Benefit	NonPerson	ne	C	Comment		
Construction	F	Y24		\$0					2020CIP			
Construction	F	-Y25+		\$0					2020CIP			
Task		Start Date	End Date	Dur	ation							
Project Execution		7/1/2020	4/30/2021		303	3						
Project Closeout		5/1/2021	6/30/2021		60)						
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24		FY25+	Total		
		0 0	2,500		0		0	0	0	2,500		

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

Phase Construction Contract SCP-SP-009 Status Closed Out

Title SP-009: Weiss: 1958 Sedimentation Basin

Phase Budget				Cost Allocation CTA				
Phase Status					Funding Source	Bond Proceeds		
Start Date				Fund Construction Bond Fund				
End Date	,			Useful Life >20Yrs? Yes				
Cost Estimation Information			nformation	Tot. Fed	eral Loan Amount			
		1	Cost Est. Class	Pro	ogram/Allowance	Task Information		
	Cost Est. Date		Cost Est. Date	Project Manager				
			Cost Est. Source	CIP Number	170118			
			Cost Est. Prepared By	Description				



Water Treatment Plant / Pump Station Allowance

Phase Design Build Assistance Contract SCP-CS-1692 Status Active

Title SCP-CS-1692: OHM Advisors: Phosphoric Acid

Phase Budget	Water
Phase Status	Active
Start Date	10/1/2014
End Date	6/30/2016

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

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

Program/Allowance Task Information

Project Manager
CIP Number
Description

Ella Dabao 170120

Engineering Design and Construction Phase Services for the replacement of the existing phosphoric acid feed system equipment, replacement of chlorine feed system valves, and concrete restoration for the phosphoric acid secondary containment area.

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0



Water Treatment Plant / Pump Station Allowance

Phase Construction Contract SCP-NE-017 Status Closed Out

Title SCP-NE-017: Weiss Construction: Phosphor

170105 - Projects Capitalized/Expensed @FY18 \$1,936						
Phase Budget	Water					
Phase Status	Closed Out					
Start Date		7/27/2015				
End Date		3/27/2017				
Co	Cost Estimation Information					
	1	Cost Est. Class				
		Cost Est. Date				
		Cost Est. Source				
		Cost Est. Prepared By				

Cost Allocation	СТА
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager Zahid Jawadi

CIP Number 170105

This project involves replacement of the phosphoric acid feed system piping, metering pumps and day tanks, replacement of one heater coil inside an existing steam generator, replacement of steam and hot water heating units in the pumping building, filter building and administration building, and replacement of condensate return pumping units at various locations through the Northeast Water Treatment Plant

Task		Start Date	End Date	Duration				
Project Execution		1/1/2017	1/2/2017		1			
Project Closeout		1/3/2017	4/3/2017	9	PO 0			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

Description



Prior Yr Actuals

FY19

1,572

FY20

116

FY21

0

GLWA FY 2020-2024 CIP

Water Treatment Plant / Pump Station Allowance

Status Future Planned Start Contract CON-225 **Phase** Construction CON-225 Orion Booster Station Cost Allocation CTA Phase Budget Water **Phase Status** Future Planned Start Funding Source Bond Proceeds Start Date Fund Construction Bond Fund Useful Life >20Yrs? Yes **End Date** Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class **Program/Allowance Task Information Project Manager** Jorge Nicolas 11/1/2017 Cost Est. Date **CIP Number** 170124 Cost Est. Source Consultant Description Cost Est. Prepared By Cost Type Fiscal Year Fringe BenefitNonPersonne Expense Comment \$1,572 Construction FY19 FY20 \$116 Construction FY21 \$0 Construction **Engineering Services** FY22 \$0 2020CIP Task Start Date **End Date** Duration Project Execution 7/2/2018 7/26/2019 389 90 Project Closeout 7/27/2019 10/25/2019

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

0

FY23

0

FY22

FY25+

0

FY24

0

Total

1,688

170100 CIP#

Water Treatment Plant / Pump Station Allowance

Construction SCP-LH-398: Phosph	oric Acid Tank Fill Lines	Contract L	H-398	Status Pending Close-out		
Phase Budget Water		Cost Allocation CTA				
Phase Status Pending	Close-out		Bond Proceeds			
Start Date	Start Date 10/26/2015		Fund Construction Bond			
End Date	9/16/2016	l	Jseful Life >20Yrs?	Yes		
Cost Estima	tion Information	Tot. Fede	eral Loan Amount			
1	Cost Est. Class	Pro	gram/Allowance	Task Information		
	Cost Est. Date	Project Manager	Todd King			
	Cost Est. Source	CIP Number	170106			
	Cost Est. Prepared By	Description	phosphoric acid There are two fill	ves the replacement of the I fill lines at the Lake Huron WTP. Iines and one has failed. The s old and have reached the ice life.		



Project Execution

Project Closeout

GLWA FY 2020-2024 CIP

Water Treatment Plant / Pump Station Allowance

Phase Design & Construction Assistance

Contract CS-1656

Status Active

Title CS-1656: Applied Science: Flow Measurement

Phase Budget	Water
Phase Status	Active
Start Date	5/27/2014
End Date	6/30/2018

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

7/19/2014

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	

Program/Allowance Task Information

Project Manager Jorge Nicolas

CIP Number 170102

Description The objectives of the

The objectives of this project are to design and oversee construction of water production flow meters at Northeast, Southwest, and Springwells Water Treatment Plants.

Cost Type	Fiscal Year	Expense	Fringe I	BenefitNonPersonne	Comment
Engineering Services	FY19	\$3	334		
Engineering Services	FY20		\$10		
Task	Start Date	End Date	Duration		
Scope Development	7/19/2014	10/17/2014	90		
Procurement	10/18/2014	10/18/2015	365		

1838

90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	334	10	0	0	0	0	0	344	

7/31/2019

8/1/2019 10/30/2019



Water Treatment Plant / Pump Station Allowance

Phase To Be Determined Contract NA Status Future Planned Start

Title Unallocated Water Treatment Plant / Pump Station Allowance

Phase Budget	Water
Thase boager	Walei
Phase Status	Future Planned Start
Start Date	
End Date	

Cost Estimo	tion Information
5	Cost Est. Class
1/1/2018	Cost Est. Date
GLWA	Cost Est. Source
GLWA	Cost Est. Prepared By

Cost A	Allocation CTA					
Funding	g Source Bond Proceeds					
	Fund Construction Bond Fund					
Useful Life	e >20Yrs? Yes					
Tot. Federal Loan	n Amount					
Program/Allowance Task Information						
Project Manager						

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$1,000			
Construction	FY20	\$2,700			
Construction	FY21	\$326			
Construction	FY22	\$3,000			
Construction	FY23	\$3,000			
Construction	FY24	\$3,000			
Construction	FY25+	\$15,000			2020CIP

CIP Number

Description

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,000	2,700	326	3,000	3,000	3,000	15,000	28,026



Water Treatment Plant / Pump Station Allowance

Phase Design & Construction Assistance

Contract CS-1738

Status Active

Title CS-1738: Alfred Benesch: Orion & Newberg

Phase Budget	Water
Phase Status	Active
Start Date	6/5/2015
End Date	6/2/2017

Cost Estimation Information						
1 Cost Est. Class						
11/1/2016	Cost Est. Date					
Consultant	Cost Est. Source					
	Cost Est. Prepared By					

Cost Allocation	СТА
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	

Program/Allowance Task Information

Project Manager
CIP Number

Description

Jorge Nicolas

Design, construction administration, and resident project representative services to increase Orion station pumping capacity and to provide an emergency bypass at the Newburgh pumping station.

Total

0

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$0			
Construction	FY20	\$0			
Construction	FY21	\$0			

lask		St	art Date	End Date	Duration			
Project Execution		1	1/16/2016	7/23/2018	61	14		
Project Closeout			7/24/2018	10/1/2018	· ·	59		
Prior Yr Actuals	FY19		FY20	FY21	FY22	FY23	FY24	FY25+
		0	C	0	0	0	0	

170100 CIP#

Water Treatment Plant / Pump Station Allowance

Phase Construction Contract SCP-DWS-059 Status Closed Out

Title SCP-DWS-059: CA Hull: Intake Lagoon

		Expensed @FY18 \$298K						
Phase Budget Water			CTA					
Phase Status Closed Out			Funding Source	Bond Proceeds				
Start Date	Start Date 6/10/2016			Fund Construction Bond Fund				
End Date	End Date 12/1/2016		U	Useful Life >20Yrs? Yes				
Cost Estimation Information		Tot. Federal Loan Amount						
	2 Cost Est. Class			Program/Allowance Task Information				
		Cost Est. Date	Project Manager	Grant Gartrell				
		Cost Est. Source	CIP Number	170107				
		Cost Est. Prepared By	Description	Construct structural improvements to the mentrance bridge and intake building that provides access to GLWA's water supply intand lagoon on Belle Isle. This intake supplier raw water to three of GLWA's water treatment plants: Northeast, Springwells, and Water W Park.				



Water Treatment Plant / Pump Station Allowance

Phase Design & Construction Assistance

0

0

0

Contract CS-1432A

Status Closed Out

Title CS-1432A Belle Isle Water Station

70103						
Phase Budget Water			СТА			
Phase Status Closed Out			Funding Source	Bond Proceeds		
Start Date	2/1/2016	Fund Construction Bond Fur				
End Date	8/1/2018	l	Yes			
Cost Estimation	n Information	Tot. Federal Loan Amount				
5	Cost Est. Class	Pro	Program/Allowance Task Information			
1/1/2018	Cost Est. Date	Project Manager	Todd King			
GLWA	Cost Est. Source	CIP Number	170103			
GLWA	Cost Est. Prepared By	Description	Construct the Replacement and Reinforcement of the three 90 ft-long Belle Isle Intake Ice Booms per the design documents prepared by Benesch under CS-1432A Task 45.			

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

0

0

0

0

0

170100 CIP#

Water Treatment Plant / Pump Station Allowance

nase Budget Water			Cost Allocation	СТА	
Phase Status Active			Funding Source	Revenue Financed Capital	
Start Date	7/10/2014		Fund	Improvement & Extension Fun	
End Date	4/1/2015	ι	Jseful Life >20Yrs?	No	
Cost Estimation Information		Tot. Fede	eral Loan Amount		
1	Cost Est. Class	Program/Allowance Task Information			
	Cost Est. Date	Project Manager	Zahid Jawadi		
	Cost Est. Source	CIP Number	170117		
Cost Est. Prepared By				lves installation of new empressor system at Northeast	



Water Treatment Plant / Pump Station Allowance

Phase Construction Contract DWS-063 Status Active

0

0

0

Title DWS-063 Adams Road Water Isolation Gate

Phase Budget	Water			CTA	
Phase Status	Active			Bond Proceeds	
Start Date		11/1/2017	Fund		Construction Bond Fund
End Date 6/30/2019		U	Iseful Life >20Yrs?	Yes	
Co	ost Estimation	Information	Tot. Fede	eral Loan Amount	
	5	Cost Est. Class	Pro	gram/Allowance	Task Information
	1/1/2018	Cost Est. Date	Project Manager	Biren Saparia	
			CID Number	170100	

GLWA	Cost Est. Source	CIP Number	170108
S LWA	Cost Est. Prepared By		Renovation and Upgrade of Suction and Discharge valves for Adams Road Water
			Booster Station.

Cost Type	Fiscal Year		Expense			ge Bene	fitNo	NonPersonne	Comment						
Construction		FY19			\$0										
Prior Yr Actuals	FY19	7	FY20	FY21	F'	(22	FY2	3	FY24	FY	25+		Total		

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

0

0

0

0

0

170100 CIP#

Water Treatment Plant / Pump Station Allowance

Contract SW-011 Phase Construction **Status** Pending Close-out **Title** SW-011, Alfred Benesh: Heating Improvements **Phase Budget** Water Cost Allocation CTA Phase Status Pending Close-out Funding Source Bond Proceeds Fund Construction Bond Fund Start Date **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Program/Allowance Task Information 5 Cost Est. Class **Project Manager** 1/1/2018 Cost Est. Date **CIP Number** 170111 Cost Est. Source **GLWA** Description Cost Est. Prepared By GLWA

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

170100 CIP#

Water Treatment Plant / Pump Station Allowance

	Contract	5-1630	Status	Closed Out
ch: Master Specs				
		Cost Allocation	СТА	
		Funding Source	Revenue	e Financed Capital
		Fund	Improve	ment & Extension Fun
	U	seful Life >20Yrs?	No	
n Information	Tot. Fede	eral Loan Amount		
Cost Est. Class	Pro	gram/Allowance	Task Info	rmation
Cost Est. Date	Project Manager			
Cost Est. Source	CIP Number	170101		
Cost Est. Prepared By	Description			
	n Information Cost Est. Class Cost Est. Date Cost Est. Source	n Information Cost Est. Class Cost Est. Date Cost Est. Source CIP Number	Cost Allocation Funding Source Fund Useful Life >20Yrs? In Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Source Cost Est. Source Cost Allocation Fund Useful Life >20Yrs? Tot. Federal Loan Amount Program/Allowance Project Manager CIP Number 170101	Cost Allocation CTA Funding Source Revenue Fund Improve Useful Life >20Yrs? No Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source

170100 CIP#

GLWA FY 2020-2024 CIP

Water Treatment Plant / Pump Station Allowance

Contract NA Phase GLWA Employees Project management Status Active **GLWA Salaries** Title **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** Cost Est. Class Program/Allowance Task Information 5 **Project Manager** 1/1/2018 Cost Est. Date **CIP Number** Cost Est. Source **GLWA** Description Cost Est. Prepared By GLWA

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY19	\$120	48	6	
GLWA Salaries CIP2020	FY19	\$0	0	0	DWS-063
GLWA Salaries CIP2020	FY19	\$0	0	0	
GLWA Salaries CIP2020	FY20	\$120	48	6	
GLWA Salaries CIP2020	FY20	\$0	0	0	
GLWA Salaries CIP2020	FY21	\$120	48	6	

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	174	174	174					522



GLWA

GLWA FY 2020-2024 CIP

Water Treatment Plant / Pump Station Allowance

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	
Start Date			Fund	
End Date			Useful Life >20Yrs?	
Co	ost Estimatio	n Information	Tot. Federal Loan Amount	
	5	Cost Est. Class	Program/Allowance Task Information	
	1/1/2018	Cost Est. Date	Project Manager	
GLWA		Cost Est. Source	CIP Number	

Description

Cost Est. Prepared By

Cost Type	Fiscal Year	Expense	Fringe Benefit NonPersonne	Comment
Construction	FY18-	\$259		170107 - SCP-DWS-059
Construction	FY18-	\$263		170103 - SCP-CON-094
Construction	FY18-	\$126		170104 - CS-1738
Engineering Services	FY18-	\$132		170109 - CS-187
Engineering Services	FY18-	\$45		170104 - CS-1738
Engineering Services	FY18-	\$15		170107 - SCP-DWS-059
Engineering Services	FY18-	\$64		170102 - CS-1656
Engineering Services	FY18-	\$16		170103 - SCP-CON-094
Engineering Services	FY18-	\$6		170105 - SCP-NE-017
Engineering Services	FY18-	\$27		170120 - SCP-CS-1692
Unknown	FY18-	\$1		170108 - Balance at Start of FY1
Unknown	FY18-	\$164		170104 - Balance at Start of FY1
Unknown	FY18-	\$87		170120 - Balance at Start of FY1
Unknown	FY18-	\$269		170102 - Balance at Start of FY1
Unknown	FY18-	\$6		170103 - Balance at Start of FY1



Water Treatment Plant / Pump Station Allowance

Cost Type	F	iscal Year	Expens	е	Fringe Benefit	NonPersonne	(Comment	
Unknown	FY1	8-		\$13			170107 - Bal	ance at Sta	rt of FY1
Unknown	FY1	8-	\$1	,950			170105 - Bal	ance at Sta	rt of FY1
Unknown	FY1	8-	\$2	2,920			170109 - Bal	ance at Sta	rt of FY1
Unknown	FY1	8-		\$226			170117 - Bal	ance at Sta	rt of FY1
GLWA Salaries CIP20	20 FY1	8-		\$22	7	0	170104 - CS-	-1738	
GLWA Salaries CIP20	20 FY1	8-		\$1	1	0	170109 - CS-	-187	
GLWA Salaries CIP20	20 FY1	8-		\$2	1	0	170110 - CC	N-153	
GLWA Salaries CIP20	20 FY1	8-		\$2	1	0	170105 - SPC	C-NE-017	
GLWA Salaries CIP20	20 FY1	8-		\$12	5	0	170120 - SCI	P-CS-1692	
GLWA Salaries CIP20	20 FY1	8-		\$1	1	0	170103 - SPC	C-CON-094	
GLWA Salaries CIP20	20 FY1	8-		\$1	1	0	170102 - CS-	-1656	
GLWA Salaries CIP20	20 FY1	8-		\$8	3	0	170107 - SPC	C-DWS-059	
Prior Yr Actuals	FY19	FY20	FY21	FY2	22 FY23	FY24	FY25+	Total	
6,635								6,635	



Water Treatment Plant / Pump Station Allowance

Contract CS-187 Status Active Phase Study

CIMA CC 107, FV From Down Motor Intole

IIIE GLWA-CS-	10/. FK ENG. K	aw water intake			
Was formerly G	LWA-SCP-CS-	1623, change order adde	ed funds and changed	contract number	to GLWA-CS-187.
Phase Budget	Water			Cost Allocation	СТА
Phase Status	Active			Funding Source	Revenue Financed Capital
Start Date		3/17/2014		Fund	Improvement & Extension Fun
End Date		12/12/2019	l	Jseful Life >20Yrs?	No
Co	ost Estimation	Information	Tot. Fede	eral Loan Amount	
	5	Cost Est. Class	Pro	gram/Allowance	Task Information
		Cost Est. Date	Project Manager	Maher Abbasi	
		Cost Est. Source	CIP Number	170109	
		Cost Est. Prepared By	Description		lves the comprehensive dition assessment and

nsive engineering evaluation of GLWA's three raw water intakes, raw water conveyance tunnels and related raw water facilities (gate structures and tunnel access shafts) by a licensed professional engineering firm with significant experience in geotechnical, tunnel and structural engineering evaluations and condition assesments.

Cost Type	F	iscal Year	Expense)	Fringe	Benefit	NonPersonne		Comment	
Engineering Services	FY	19		\$96				2020CIP		
Task		Start Date	End Date	Dur	ation					
Project Execution		6/23/2017	12/12/2019		902	2				
Project Closeout		12/13/2019	3/1/2020		79)				
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total	
	96	5							96	



Water Treatment Plant / Pump Station Allowance

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

nase Design	Contract CS-16	Status Closed Out
CS-1674: Testing Engineers: Roof Inspect		
Phase Budget Water	Co	ost Allocation CTA
Phase Status Closed Out	Fu	anding Source Revenue Financed Capital
Start Date		Fund Improvement & Extension Fun
End Date	Usefu	ul Life >20Yrs? No
Cost Estimation Information	Tot. Federal	Loan Amount
5 Cost Est. Class	Progra	m/Allowance Task Information
Cost Est. Date	Project Manager	
Cost Est. Source	CIP Number 17	0116
Cost Est. Prepared By	Description	



Water Treatment Plant / Pump Station Allowance

Phase Construction

Contract SCP-CON-094 Status Closed Out

Title SCP-CON-094: Z Contr: Belle Isle Water Station

Projects Capitalized/Expensed @FY18 \$287K

Phase Budget Water

Cost Allocation CTA

Funding Source Bond Proceeds

 Start Date
 2/1/2016

 End Date
 8/1/2018

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

Funding Source Bond Proceeds

Fund Construction Bond Fund

Useful Life >20Yrs? Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager Todd King

CIP Number 170103

Description Construct the Replacement and

Reinforcement of the three 90 ft-long Belle Isle Intake Ice Booms per the design documents prepared by Benesch under CS-1425A Task 45.

Task		Start Date	End Date	Duration				
Project Execution		7/19/2017	7/19/2018	36	5			
Project Closeout		7/20/2018	10/11/2018	8	3			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

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

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		10,000	10,000	20,000	20,000	19,650	12,645		0	0	92,295
2019	0	6,777	1,597	4,296	3,058	3,144	3,000	3,000	15,000	0	39,872
2020	0	0	6,635	3,176	3,000	3,000	3,000	3,000	3,000	15,000	39,811



Explanation N/A - Under Procurement

GLWA FY 2020-2024 CIP

170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

☐ Innovation	Project Status Active	Example of concre testi	
☐ Water MP Right Si	CIP Type Allowance		
☐ Reliability/Redund			
□ NEWTP Repurposi	ng Project New To CIP		
Project Engineer/Ma	nager Peter Fromm	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Programs
Date Original Busines	ss Case Prepared 6/26/2014	Class Lvl 3	Programs
Year Proj	ect Added to CIP 2014	Location	Multiple Counties
		Fund and Cost Center	Water - 5519-882111
Project Significance	Provides readily accessible, qualified testing of	and inspection services for u	nforeseen and minor projects
Scope of Work	This engineering/technical services contract in geotechnical investigations and related geotechnical media sampling and testing, so inspection, computer-aided design, and contract in the services	technical engineering, consolis sampling and testing, lar	struction materials sampling and testing,
Challenges	N/A - Under Procurement		
Project History	Given the size and age of the system, as-need define problems that arise and must be address.	·	• • •
Related Project	TBD		
Lookup Driver	N/A - Under Procurement		
Other Important Info	n/a		

As Needed Construction Materials, Environmental Media and Special Testing Services,

PM	Weighted
	Score

20

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

RC Weighted Score

20

Score	Comment
1	
1	
1	
1	
1	
1	
1	
1	
	Score

170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

Phase Study and De	esign an	d Construction	n Assistance		Co	ntract	CS-	201		Statu	s Under I	Procuren	nent
itle CS-201 As Nee Other Technic			terials, Enviro	nment	al Med	dia and	Spe	cial Testir	ng Servi	ces, C	onstructio	n Inspec	tion, and
Now CS-201													
Phase Budget Wa	iter							Cost Allo	cation (CTA			
Phase Status Und	der Proc	urement		Funding Source Revenue Financed Capital								tal	
Start Date				Fund Improvement & Extension Fu								n Fun	
End Date							Use	eful Life >	20Yrs?	10			
Cost E	stimatio	n Information				Tot. Fe	der	al Loan A	mount				
	5	Cost Est. C	Class			P	rogi	ram/Allov	vance T	ask In	formation		
1/1,	/2017	ate	Project Manager										
GLWA		Cost Est. S	ource	C	IP Num	nber							
GLWA		Cost Est. P	repared By	De	escript	ion							
Cost Type		Fiscal Year	Expense	e	Fringe	Benefit	Vonl	Personne		Сс	omment		
Engineering Service	:S	FY19		\$400									
Engineering Service	s I	FY20		\$500									
Engineering Service	:S	FY21	`	\$500									
Task		Start Date	End Date	Durc	ation								
Scope Developmer	n†	6/1/2017	9/29/2017	,	120								
Procurement		5/22/2018	3	235									
Project Execution		5/23/2018	7/5/2021		1139								
Project Closeout		7/6/2021	10/4/2021		90								
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23		FY24	FY25	+	Total		
	4	400 500	500		0		0	0		0	1,400		



170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

Phase not applicable Fithe Prior Year Actua		es			(Contract N	Α	Stat	us Close	d Out			
Phase Budget Wate	er						Cost Alloc	ation CTA					
Phase Status Close	ed Out			Funding Source									
Start Date						Fund							
End Date						U	Jseful Life >2	OYrs?					
Cost Est	imation Ir	nformation				Tot. Fede	eral Loan An	nount			\$0		
	5	Cost Est. C	lass		Program/Allowance Task Information								
1/1/2	015	Cost Est. D	ate	Project Manager									
GLWA		Cost Est. So	ource	CIP Number									
GLWA		Cost Est. Pi	epared By	D)escri	ption							
Cost Type	Fi	scal Year	Expense	e	Fring	e BenefilNo	nPersonne	С	omment				
GLWA Salaries CIP202	20 FY1	8-		\$2			0 1	70201					
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23	FY24	FY25+	Total				
2									2	2			

As Needed Construction Materials, Environmental Media and Special Testing Services,

Phase GLWA Employ	yees Pro	oject manage	ment		Co	ontract N	A	Stat	us Active			
Title GLWA Salaries												
Phase Budget Wa	ter			Cost Allocation CTA								
Phase Status Act	ive			Funding Source Revenue Financed Capital								
Start Date				Fund Improvement & Extension Fun								
End Date				Useful Life >20Yrs? No								
Cost E	stimatic	on Information				Tot. Fede	eral Loan An	nount		\$0		
	5	Cost Est. (Class	Program/Allowance Task Information								
1/1/	1/1/2015 Cost Est. Date					Manager						
GLWA		Cost Est. S	ource	CIP Number								
GLWA		Cost Est. F	repared By	ed By Description								
Cost Type		Fiscal Year	Expens	e	Fringe	BenefitNo	nPersonne	C	omment			
GLWA Salaries CIP20	020	FY19		\$50		20	2					
GLWA Salaries CIP20	020	FY20		\$50		20	2					
GLWA Salaries CIP20	020	FY21		\$50		20	2					
Prior Yr Actuals	Yr Actuals FY19 FY20 FY21		FY21	FY22		FY23	FY24	FY25+	Total			
	72 72 7					0	0	0	216			
		F	hase Total E	(pense	es By F	Y (All figure	es are in \$1,	000's)				

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

										, /	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			500	500	500				0	0	1,500
2019	0		172	472	572	572				0	1,788
2020	0	0	2	472	572	572	0	0	0	0	1,618



Water Treatment Plant Automation Program

☐ Innovation	Project Status Active		
☐ Water MP Right Si	CIP Type Program		
☐ Reliability/Redund			
□ NEWTP Repurposi	Project New To CIP	y Budget Water	
Project Engineer/Ma	nager Jeffrey Dorsey	Budget	Water
Ma	nager Terry Daniel	Class Lvl 1	Water
Managing	Dept Water Eng	Class LvI 2	Programs
Date Original Busines	ss Case Prepared 4/27/2017	Class LvI 3	Programs
Year Proj	ect Added to CIP 2017	Location	Multiple Counties
		Fund and Cost Center	Water - 5519-882111
riojeci signilicance	The automation design and construction projection process data conditions, station needs, GLWA identified needs, recommended improvement scoring tool, and scheduling for making the imassociated with each project established und	mission critical assets, alter ts to address the needs, pri provements along with ass	native improvement options to address oritized projects based on the GLWA CIP
Scope of Work	The purpose of this project is to implement the increments with an estimated cost of \$1 million		
Challenges	Standardization of multiple different data prod problem.	cess equipment already ins	talled throughout the 5 plants could be a
Project History	The GLWA Water Operations division is compriranging from intake, sedimentation, chlorination organizational objectives is to provide the tree main drivers for increased efficiency in data maintenance cost. The recommendations from pumping stations over the next 20-year planniare required to be prioritized in 5-year incrementations.	on, filtration and distribution atment plants with automat nonitoring and regulatory re in this assessment will be the ing period. In addition, the i	n systems. One of the directives from the tion. This automation would be one of the eporting and reduced workload and e catalyst for automation projects at the
Related Project	n/a		
Lookup Driver			
Other Important Info	n/a		

170300 CIP#

Water Treatment Plant Automation Program

Explanation This automation would be one of the main drivers for increased efficiency in data monitoring and regulatory reporting and reduced workload and maintenance cost.



Water Treatment Plant Automation Program

Phase not applicable			C	Contract	NA	Stat	us Closed	Out			
Title Prior Year Actual Ex	penses										
Phase Budget Water					Cost Allo	cation CTA					
Phase Status Closed C	Out		Funding Source								
Start Date			Fund								
End Date					Useful Life >	20Yrs?					
Cost Estima	tion Information			Tot. Fe	deral Loan A	mount					
5	Cost Est. Cl	ass	Program/Allowance Task Information								
1/1/2017	Cost Est. Do	ıte	Project Manager								
GLWA	Cost Est. So	urce	CIP Nu	mber							
GLWA	Cost Est. Pre	epared By	Descri	otion							
Cost Type	Fiscal Year	Expense	Fring	e Benefiti	VonPersonne	С	omment				
Engineering Services	FY18-	\$1,36	4			FY18					
Unknown	\$10	3			FY17						
Prior Yr Actuals FY	′19 FY20	FY21 I	FY22	FY23	FY24	FY25+	Total				
1,377							1,377				



Water Treatment Plant Automation Program

Phase GLWA En	nployees P	roject manager	nent		Contract	NA	Status	Active				
fitle GLWA Salo	aries											
Phase Budget	Water					Cost Allo	cation CTA					
Phase Status Active					Funding Source Revenue Financed Capital							
Start Date							Fund Improve	ment & Extensior	า Fun			
End Date						Useful Life >	20Yrs? No					
C	ost Estimat	ion Information			Tot. Fe	deral Loan A	mount		\$0			
	5	Cost Est. C	lass		P	rogram/Allov	vance Task Info	rmation				
	1/1/2017	Cost Est. D	ate	Project Manager								
GLWA		Cost Est. So	ource	CIP Number								
GLWA		Cost Est. P	repared By	D	escription							
Cost Ty	ре	Fiscal Year	Expens	е	Fringe Benefit	VonPersonne	Com	ment				
SLWA Salaries CIP2020 FY19		\$42	17	2								
GLWA Salaries (LWA Salaries CIP2020 FY20		\$42	17	2							
									1			

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY19	\$42	17	2	
GLWA Salaries CIP2020	FY20	\$42	17	2	
GLWA Salaries CIP2020	FY21	\$42	17	2	
GLWA Salaries CIP2020	FY22	\$42	17	2	
GLWA Salaries CIP2020	FY23	\$10	4	0	

Prior Yr Actu	uals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		61	61	61	61	14	0	0	258



Water Treatment Plant Automation Program

Phase Construction Contract NA Status Future Planned Start

Title Unallocated Water Treatment Plant Automation Program

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

Cost Estimation Information						
5	Cost Est. Class					
1/1/2017	Cost Est. Date					
GLWA	Cost Est. Source					
GLWA	Cost Est. Prepared By					

	Cost Allocation	CTA
I	Funding Source	Revenue Financed Capital
	Fund	Improvement & Extension Fun
Use	eful Life >20Yrs?	No
Tot. Feder	al Loan Amount	
Progr	ram/Allowance	Task Information
Project Manager		

Cost Type	Fiscal Year	Expense	Fringe BenefitNon	Personne	Comment
Construction	FY20	\$1,500			
Construction	FY21	\$1,500			
Construction	FY22	\$1,500			
Construction	FY23	\$1,500			
Construction	FY24	\$105			

CIP Number

Description

Task	Start Date	End Date	Duration
Project Execution	5/31/2017	5/30/2022	1825
Project Closeout	5/31/2022	8/29/2022	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	1,500	1,500	1,500	1,500	105	0	6,105



Water Treatment Plant Automation Program

Contract CS-108 Status Pending Close-out Phase Design **Title** CS-108, Arcadis, WTP Automation CS-108 Arcadis of Michigan Phase Budget Water Cost Allocation CTA Phase Status Pending Close-out Funding Source Revenue Financed Capital Start Date 1/1/2017 Fund Improvement & Extension Fun 5/31/2017 Useful Life >20Yrs? No **End Date** Tot. Federal Loan Amount **Cost Estimation Information** Program/Allowance Task Information Cost Est. Class **Project Manager** Jeffrey Dorsey 1/1/2017 Cost Est. Date **CIP Number** 170301 Cost Est. Source **GLWA** Description Project was formerly 170113. This project will Cost Est. Prepared By **GLWA** provide auditing and a condition assessment of process data networks at each water plant. Additionaly, it will provide recommendations on the conductivity of each process area within those plants using the model of Ovation as supervisroy monitoring and or control and PLC's for process control where applicable.

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

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

		<u> </u>		<i>-</i> ,		<u></u>				, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			1,500	1,500	1,500	1,500	1,500		0	0	7,500
2019	0	13	1,425	61	1,561	1,561	1,561	1,514	105	0	7,801
2020	0	0	1,377	61	1,561	1,561	1,561	1,514	105	0	7,740



Water Transmission Improvement Program

	Innovation
	Water MP Right Sizing
✓	Reliability/Redundancy
	NEWTP Repurposing

Project Status Active

CIP Type Program

Project New To CIP $\ \square$

Example of a failed water main



Project Engineer/Manager Todd King

Manager Todd King

Managing Dept Field Services

Date Original Business Case Prepared 4/27/2017

Year Project Added to CIP 2010

Budget Water

Class Lvl 1 Water

Class Lvl 2 Programs

Class LvI 3 Programs

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Assessing, rehabilitating or replacing aging transmission mains in the water system
Scope of Work	This project is a yearly funding allocation for the design and/or construction work for the rehabilitation or replacement/construction of aging water transmission lines and all appurtenances, connections and related structures.
Challenges	May require shut down of large pumps, isolation or shutdown of large mains etc.
Project History	There are many critical assets that are required to be operated in the transmission system and this yearly allowance is needed to meet the critical needs of these assets.
Related Project	n/a
Lookup Driver	
Other Important Info	O&M manuals, GIS, Section Maps and Gate Books are available for reference



Water Transmission Improvement Program

PM Weighted Score

56.4

Criteria	Score	Comment
Condition	3	
Efficiency and Innovation	1	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	2	
Public Benefit	5	
Public Health & Safety	5	
Regulatory (Environmental/Legal)	1	

RC Weighted Score

0

Criteria	Score	Comment
Condition		
Efficiency and Innovation		
Financial		
O&M		
Performance (Service Level/Reliability)		
Public Benefit		
Public Health & Safety		
Regulatory (Environmental/Legal)		
		· ·



Prior Yr Actuals

FY19

755

FY20

1,205

FY21

1,655

GLWA FY 2020-2024 CIP

Water Transmission Improvement Program

Phase Construc	ase Construction			Contract NA				Status	Future Planned Sta	rt
Title Unallocate	ed Water Tr	ansmission Imp	rovement Pr	ogran	n					
Phase Budget	Water			Cost Allocation CTA						
Phase Status	Future Plan	Future Planned Start				Funding	Source	Bond Pro	oceeds	
Start Date							Fund (Constru	ction Bond Fund	
End Date						Useful Life	>20Yrs?	es es		
Co	ost Estimatio	on Information			Tot. F	ederal Loan <i>A</i>	Amount			
	5	Cost Est. C	lass			Program/Allo	wance T	ask Info	ormation	
	1/1/2015	Cost Est. D	ate	Р	roject Manag	jer				
CDM Smith		Cost Est. S	ource	C	CIP Number					
CDM Smith		Cost Est. P	repared By	D	escription					
Cost Ty	pe	Fiscal Year	Expense		Fringe Benef	i NonPersonne)	Con	nment	
Construction		FY19		\$755						
Construction		FY20	\$1	,205						
Construction		FY21	·	,655						
Construction		FY22	·	,655						
Construction		FY23	·	,655						
Construction		FY24	·	,655						
Construction		FY25+	\$100	0,000			2020CIP	'		
Task	,	Start Date	End Date	Dur	ation					
Scope Develop	ment									
Procurement										
Project Executio	n									
Project Closeou	†									

FY23

1,655

FY24

1,655

FY25+

100,000

Total 108,580

FY22

1,655

Procurement

Project Execution
Project Closeout

GLWA FY 2020-2024 CIP

Water Transmission Improvement Program

Phase Design					Co	ntract N	Α		Status	Future Planned Start	ţ
Title Water Tran	nsmission Ir	mprovement Pr	ogram								
Phase Budget	Water				Cost Allocation CTA						
Phase Status	Future Pla	nned Start					Funding S	ource	Bond Pr	oceeds	
Start Date								Fund	Constru	ction Bond Fund	
End Date	ate					l	seful Life >2	20Yrs?	Yes		
Cost Estimation Information				Tot. Federal Loan Amount							
	5	Cost Est. C	Class			Pro	gram/Allow	vance 1	ask Info	ormation	
	1/1/2015 Cost Est. Dat		ate	Project Manager							
CDM Smith		Cost Est. Source		C	CIP Number						
CDM Smith		Cost Est. P	repared By		Descript	ion					
Cost Ty	pe	Fiscal Year	Expens	e	Fringe	BenefitNo	nPersonne		Con	nment	
Engineering Ser	vices	FY19		\$100							
Engineering Ser	vices	FY20		\$150							
Engineering Ser	vices	FY21		\$200							
Engineering Ser	vices	FY22		\$200							
Engineering Ser	vices	FY23		\$200							
Engineering Ser	vices	FY24		\$200							
Task	(Start Date	End Date	Dur	ration						
Scope Develop	ment										

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	100	150	200	200	200	200	0	1,050



Water Transmission Improvement Program

Phase Construction Contract DBW-070 Status Cancelled

Title DBW-070 Weiss: Lapper County Chlor Booster

170403 -Expens	es Reallocat	ed					
Phase Budget	Water		Cost Allocation CTA				
Phase Status	Cancelled		Funding Source Bond Proceeds				
Start Date				Fund Construction Bond Fund			
End Date			U	seful Life >20Yrs? Yes			
Cost Estimation Information			Tot. Federal Loan Amount				
	5	Cost Est. Class	Pro	gram/Allowance Task Information			
	1/1/2015	Cost Est. Date	Project Manager				
CDM Smith		Cost Est. Source	CIP Number	170403			
CDM Smith		Cost Est. Prepared By	Description	DBW-070 Weiss: Lapper County Chlor Booster			

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0



GLWA Salaries CIP2020

FY23

GLWA FY 2020-2024 CIP

Water Transmission Improvement Program

hase GLWA Employees itle GLWA Salaries	Project manage	ment		Contract	NA	Status	Active	
Phase Budget Water					Cost Alloc	ation CTA		
Phase Status Active					Funding Sc	Bond Prod	ceeds	
Start Date						Fund Construct	ion Bond Fund	
End Date					Useful Life >2	OYrs? No		
Cost Estimation Information				Tot. Federal Loan Amount				\$0
5	5 Cost Est. Class			Program/Allowance Task Information				
1/1/2015	Cost Est. Date		P	Project Manage	r			
CDM Smith	Cost Est. S	ource	C	CIP Number				
CDM Smith	Cost Est. P	repared By	0	Description				
Cost Type	Fiscal Year	Expens	е	Fringe Benefit	VonPersonne	Comr	nent	
GLWA Salaries CIP2020	FY19		\$100	40	5			
GLWA Salaries CIP2020	FY20		\$100	40	5			
GLWA Salaries CIP2020	FY21		\$100	40	5			
GLWA Salaries CIP2020	FY22		\$100	40	5			

GLWA Salaries CIP2	020 FY2	4		\$100	40	5				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	145	145	145	145	145	145	0	870		

40

\$100

170400 CIP#

Water Transmission Improvement Program

Phase Construction Contract SCP-DWS-018 Status Cancelled

Title SCP-DWS-018: Z Contract: Ypsilanti Pumping Station By-Pass Valve

170401- Expense	es Reallocate	d					
Phase Budget	Water			Cost Allocation	CTA		
Phase Status	Cancelled			Funding Source	Bond Proceeds		
Start Date				Fund	Construction Bond Fund		
End Date			U	seful Life >20Yrs?	Yes		
Cost Estimation Information			Tot. Federal Loan Amount				
	5	Cost Est. Class	Prog	gram/Allowance	Task Information		
	1/1/2015	Cost Est. Date	Project Manager	Eric Kramp			
CDM Smith		Cost Est. Source	CIP Number	170401			
CDM Smith		Cost Est. Prepared By	Description				



Water Transmission Improvement Program

Phase Construction Contract NA Status Pending Close-out

Title Internal Inspection of GLWA 84" Transmission Main in Troy

Phase Budget	Water					
Phase Status	Pending Close-out					
Start Date	11/21/2016					
End Date	9/30/2017					
Cost Estimation Information						

Cost Estimation Information								
5	Cost Est. Class							
1/1/2015	Cost Est. Date							
CDM Smith	Cost Est. Source							
CDM Smith	Cost Est. Prepared By							

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
Useful Life >20Yrs?	Yes
Tot. Federal Loan Amount	

Program/Allowance Task Information

Project Manager	Biren Saparia
CIP Number	170402
Description	Manned visual, sounding and electromagnetic inspection of 84" water main

Task		Start Date	End Date	Duration					
Scope Developmen	nt	11/13/2016	11/15/2016		2				
Procurement		11/16/2016	11/21/2016		5				
Project Execution		11/22/2016	8/30/2017	28	81				
Project Closeout		9/1/2017	9/30/2017	7	29				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	0	0	



Water Transmission Improvement Program

hase not applicable			Contract NA				us Closec	1001			
itle Prior Year Actual Exp	penses										
Phase Budget Water					Cost Allo	cation CTA					
Phase Status Closed O		Funding Source									
Start Date					Fund						
End Date				Useful Life >	20Yrs?						
Cost Estimat	Cost Estimation Information				Tot. Federal Loan Amount						
5	Cost Est. (Class		P	rogram/Allov	wance Task I	nformation	1			
1/1/2015	Cost Est. I	Date	Pre	oject Manage	er						
CDM Smith				IP Number							
		ed By Description									
CDM Smith	Cost Est. I	Prepared By	De	escription							
	Cost Est. I			-	VonPersonne	С	omment				
CDM Smith Cost Type Construction		Expense		Fringe Benefit	NonPersonne	C 170403 - DBW					
Cost Type Construction	Fiscal Year	Expense	e F	-	NonPersonne		V-070				
Cost Type	Fiscal Year FY18-	Expense	e F \$573	-	NonPersonne	170403 - DBW	V-070 S-018				
Cost Type Construction Construction	Fiscal Year FY18- FY18-	Expense	∋ F \$573 \$359	-	NonPersonne	170403 - DBW 170401 - DWS	V-070 S-018 -292	art of FY1			
Cost Type Construction Construction Engineering Services	Fiscal Year FY18- FY18- FY18-	Expense	e F \$573 \$359 \$35	-	NonPersonne	170403 - DBW 170401 - DWS 170402 - PO4	V-070 S-018 292 ance at sta				
Cost Type Construction Construction Engineering Services Unknown	Fiscal Year FY18- FY18- FY18- FY18-	Expense	9 F \$573 \$359 \$35 \$121	-	NonPersonne	170403 - DBW 170401 - DWS 170402 - PO4 170402 - Balc	V-070 S-018 292 ance at sta ance at sta	art of FY1			
Cost Type Construction Construction Engineering Services Unknown Unknown	Fiscal Year FY18- FY18- FY18- FY18- FY18- FY18-	Expense	\$573 \$359 \$35 \$121 \$580	-	NonPersonne	170403 - DBW 170401 - DWS 170402 - PO4 170402 - Balc 170403 - Balc	V-070 S-018 292 ance at sta ance at sta	art of FY1			
Cost Type Construction Construction Engineering Services Unknown Unknown Unknown	Fiscal Year FY18- FY18- FY18- FY18- FY18- FY18- FY18- FY18-	Expense	\$573 \$359 \$35 \$121 \$580 \$374	Fringe Benefill	NonPersonne FY24	170403 - DBW 170401 - DWS 170402 - PO4 170402 - Balc 170403 - Balc 170401 - Balc	V-070 S-018 292 ance at sta ance at sta	art of FY1			

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			10,000	11,000	9,000	11,000	9,000		0	0	50,000
2019	0	1,075	229	1,000	1,500	2,000	2,000	2,000	2,000	0	11,804

GLWA
Great Lakes Water Authority

GLWA FY 2020-2024 CIP

170400 CIP#

Water Transmission Improvement Program

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	156	1,000	1,500	2,000	2,000	2,000	2,000	100,000	110,656

Transmission System Valve Rehabilitation and Replacement Program

	Innovation
	Water MP Right Sizing
~	Reliability/Redundancy
	NEWTP Repurposing

Project Status Active

CIP Type Program

Project New To CIP $\ \square$

A large valve for a transmission pipe



Project Engineer/Manager Todd King

Manager Todd King

Managing Dept Field Services

Date Original Business Case Prepared 7/29/2016

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Programs

Class Lvl 3 Programs

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Replacement/Rehabilitation of GLWA Transmission System Gate Valves will aid in implementing a regular valve exercising program as recommended by AWWA as well as increase the reliability of the transmission system.						
Scope of Work	Evaluate the existing conditions, provide the necessary replacement/ rehabilitation option, design and implement them.						
Challenges	May require shutdown of large transmission mains.						
Project History	There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program in past 15 years in the DWSD/GLWA System.						
Related Project	CON-181, Water Transmission Main Assessment Repair						
Lookup Driver	1 - Condition						
Other Important Info	GIS, Section Maps and Gate Books are available for reference						
Explanation	Conditions of many of the gate valves are unknown and unreliable.						



Transmission System Valve Rehabilitation and Replacement Program

PM Weighted Score

69.4

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

RC Weighted Score

8.66

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

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

Phase not appli	cable)				Contract	N/	4	Sta	tus Clo	sed Out	
Title Prior Year	Actuc	al Expense	es .									
Phase Budget	Phase Budget Water				Cost Allocation CTA							
Phase Status	Phase Status Closed Out							Funding S	ource			
Start Date	Start Date							Fund				
End Date	End Date Cost Estimation Information						U	seful Life >	20Yrs?			
Co					Tot. Federal Loan Amount							\$0
	5 Cost Est. Class			lass	Program/Allowance Task Information							
	1/1/2	015	Cost Est. D	ate	Р	roject Manaç	ger					
CDM Smith			Cost Est. So	ource	CIP Number By Description							
CDM Smith			Cost Est. Pr	epared By								
Cost Ty	pe	Fi	scal Year	Expens	e	Fringe Benef	itNor	nPersonne	(Commer	nt	
Construction FY18-		\$3	3,429				170502 - CC	N-181				
GLWA Salaries C	CIP202	20 FY1	8-		\$1				170502 - CC	N-181		
Prior Yr Actua	ls	FY19	FY20	FY21	FY	22 FY23		FY24	FY25+	Tota	I	
3,	430									3,4	430	

CDM Smith

CDM Smith

GLWA FY 2020-2024 CIP

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

Phase Construction Contract CON-181 Status Active

CON-181 Transmission System Valve Replacement/Rehabilitation

Water Transmiss	sion Main A	Assessment/Repair - 17	0502 -	Projects Capitalized/Ex	pensed @FY18 \$3	3,182K
Phase Budget	Water				Cost Allocation	СТА
Phase Status	Active				Funding Source	Bond
Start Date		8/1/2017			Fund	Const
End Date		6/30/2019		U	seful Life >20Yrs?	Yes
Co	ost Estimat	tion Information		Tot. Fede	eral Loan Amount	
	5	Cost Est. Class		Pro	gram/Allowance	Task I
	1/1/2015	Cost Est. Date		Project Manager	Todd King	

Funding Source Bond Proceeds

Fund Construction Bond Fund

Program/Allowance Task Information

Todd King

CIP Number

170502

Description Cost Est. Prepared By

Cost Est. Source

This Contract is to perform the as needed evaluation of the existing conditions of the transmission system valves, provide the replacement/rehabilitation options, design and installation.

Cost Type	Fiscal Year	Expense	Fringe Benefit	VonPersonne	Comment
Construction	FY19	\$4,000			
Construction	FY20	\$4,000			
Construction	FY21	\$3,274			
Construction	FY22	\$3,274			2020CIP

Task	Start Date	End Date	Duration
Scope Development	7/1/2018	9/30/2018	91
Procurement	9/30/2018	2/26/2021	880
Project Execution	2/26/2021	2/25/2026	1825
Project Closeout	2/25/2026	5/26/2026	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	4,000	4,000	3,274	3,274	A-465	0	0	14,548

Transmission System Valve Rehabilitation and Replacement Program

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

Phase	Design and Build	Contract NA Status	Active
-------	------------------	--------------------	--------

Title Unallocated Transmission System Valve Assessment and Rehabilitation/Replacement

Phase Budget Water		Cost Alle	ocation CTA
Phase Status Active		Funding	Source Bond Proceeds
Start Date	8/1/2017		Fund Construction Bond Fund
End Date	7/30/2019	Useful Life	>20Yrs? Yes
Cost Estima	ion Information	Tot. Federal Loan /	Amount
5	Cost Est. Class	Program/Alla	wance Task Information
1/1/2015	Cost Est. Date	Project Manager	
CDM Smith	Cost Est. Source	CIP Number	
CDM Smith	Cost Est. Prepared E	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY22	\$726			
Design-Build	FY23	\$4,000			
Design-Build	FY24	\$4,000			
Design-Build	FY25+	\$10,000			2020CIP

Task		Start Date	End Date	Duration				
Scope Development		7/1/2018	9/30/2018	91				
Procurement		9/30/2018	2/26/2021	880				
Project Execution		2/26/2021	2/25/2026	1825				
Project Closeout		2/25/2026	5/26/2026	90				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	() 0	0	726	4 000	4 000	10 000	18 726

Transmission System Valve Rehabilitation and Replacement Program

e GLWA Sala	IIIES									
Phase Budget	Water					Cost Alloc	ation CTA			
Phase Status	Active					Funding So	urce Bond	Proceeds		
Start Date							Fund Cons	truction Bond	d Fund	
End Date					U	seful Life >20	OYrs? No			
Со	st Estimation II	nformation			Tot. Fede	ral Loan Am	ount		\$0	
	5 Cost Est. Class				Program/Allowance Task Information					
	1/1/2015	Cost Est. Da	te	Project Manager						
CDM Smith		Cost Est. So	urce	CIP Number						
CDM Smith		Cost Est. Pre	epared By	Descrip	otion					
Prior Yr Actuals	s FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		

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

	11010	ci ioiai i	-Apenses	, , , , , ,	ompare	a 10 1 1101		90.03	are mr q	,000 3)	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			2,930	3,100	3,100	3,100	3,100		0	0	15,330
2019	0		2,000	4,000	4,000	3,274	726	4,000	4,000	0	22,000
2020	0	0	3,430	4,000	4,000	3,274	4,000	4,000	4,000	10,000	36,704

Water Transmission Main Asset Assessment Program

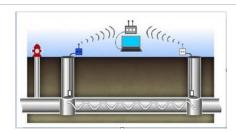
V	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
	NEWTP Repurposing

Project Status Active

CIP Type Program

Project New To CIP \Box

Example of pressure main assessment technology



Project Engineer/Manager Todd King

Manager Todd King

Managing Dept Field Services

Date Original Business Case Prepared 8/2/2016

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Programs

Class Lvl 3 Programs

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance Many of the water mains serving the GLWA service area were installed in the early part of the 20th century or the later part of the 19th century, and are now reaching the end of their useful life span. This project will pilot and utilize new technologies to accurately identify the condition of these buried assets by constructing access ways for inspection and the installation of sensors and fiber optic cables for real-time monitoring of condition. It's essential for cost-efficient repair and replacement programs which in turn will increase the reliability and performance of the system.

Scope of Work Construct access structures and utilize new technology to evaluate the existing conditions of the transmission system. Construction of in place sensors and cables may be necessary to adequately access condition. Provide the necessary recommendation for replacement and rehabilitation.

Challenges Gaining access to inspect buried pipes is difficult, disruptive and costly. However, there are ways to monitor and test the condition of the piping and methods of performing condition assessment

Project History There are many critical assets that are required to be operated in the transmission main, but the authority doesn't know the existing conditions. For planning purposes, information about the actual condition of pipes is needed and there has not been a regular condition assessment program related to the transmission System (pipes greater than 24").

Related Project n/a

Lookup Driver 1 - Condition

Other Important Info *Innovation Note: Consider new techniques for water main assessment. GIS, Section Maps and Gate Books are available for reference

Water Transmission Main Asset Assessment Program

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



Water Transmission Main Asset Assessment Program

hase GLWA Em	ploye	es Projec	t manager	nent		C	Contract N	A	St	atus	Active		
itle GLWA Sala	aries												
Phase Budget	Water	-						Cost Alloc	cation CT/	4			
Phase Status	Active)						Funding S	ource Rev	/enu	Je Financ	ed Capi	tal
Start Date	Start Date								Fund Imp	orov	ement &	Extensio	n Fun
End Date							U	seful Life >2	20Yrs? No				
Со	st Esti	mation In	nformation				Tot. Fede	eral Loan Ar	mount				\$0
		5	Cost Est. C	lass			Pro	gram/Allow	ance Tas	k Inf	ormation		
			Cost Est. D	ate	Р	roject	Manager						
			Cost Est. So	ource	C	IP Nu	mber						
			Cost Est. P	repared By	D	escrip	otion						
Cost Typ	oe .	Fi:	scal Year	Expens	е	Fringe	e BenefitNo	nPersonne		Со	mment		
GLWA Salaries C	IP2020) FY1	9		\$84		33	4					
GLWA Salaries C	IP2020	FY2	0		\$84		33	4					
GLWA Salaries C	IP2020	FY2	1		\$84		33	4					
GLWA Salaries C	IP2020) FY2:	2		\$84		33	4					
GLWA Salaries C	IP2020	FY2	3		\$84		33	4					
GLWA Salaries C	IP2020	FY2	4		\$84		33	4					
Prior Yr Actual	S	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+		Total		
		121	121	121		121	121	121)	726		

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



Water Transmission Main Asset Assessment Program

Contract NA **Status** Future Planned Start Phase Design and Build

Title Unallocated Water Transmission Main Asset Assessment Program

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

Cost Estima	tion Information
5	Cost Est. Class
8/1/2018	Cost Est. Date
	Cost Est. Source
	Cost Est. Prepared By

	Cost Allocation	CTA
	Funding Source	Revenue Financed Capital
	Fund	Improvement & Extension Fun
Us	seful Life >20Yrs?	No
Tot. Feder	ral Loan Amount	
Prog	gram/Allowance	Task Information
Project Manager		
CIP Number		
Description		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY19	\$2,379			
Design-Build	FY20	\$2,879			
Design-Build	FY21	\$3,879			
Design-Build	FY22	\$3,879			
Design-Build	FY23	\$4,879			
Design-Build	FY24	\$4,879			
Design-Build	FY25+	\$25,000			2020CIP

Task	Start Date	End Date	Duration
Scope Development	7/1/2018	9/30/2018	91
Procurement	9/30/2018	2/26/2021	880
Project Execution	2/26/2021	2/25/2026	1825
Project Closeout	2/25/2026	5/26/2026	90

Prior Yr Actuals	FY19 FY20		FY21	FY22	FY23	FY24	FY25+	Total
	2,379	2,879	3,879	3,879	4,879	4,879	25,000	47,774



Water Transmission Main Asset Assessment Program

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

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			2,626	2,000	2,000	2,000	2,000		0	0	10,626
2019	0		2,627	2,501	3,001	4,001	4,001	5,001	5,001	0	26,133
2020	0	0		2,500	3,000	4,000	4,000	5,000	5,000	25,000	48,500



Explanation N/A - Pending Closeout

Reservoirs Inspection, Repair and Rehabilitation Program

170700 CIP#

☐ Innovation☐ Water MP Right Si☐ Reliability/Redund☐ NEWTP Repurposit	dancy Project New To CIP	A GLWA reserv	oir
Project Engineer/Ma	nager Timothy Kuhns	Budget	Water
Ma	nager Grant Gartrell	Class Lvl 1	Water
Managing	Managing Dept Water Eng		Programs
Date Original Busines	ss Case Prepared 4/23/2007	Class Lvl 3	Programs
Year Proj	ect Added to CIP 2007	Location	Multiple Counties
		Fund and Cost Center	Water - 5519-882111
Project Significance	Identifying issues that may have a direct im	pact on water quality due to i	nterior/exterior structural failure
Scope of Work	The work provides for all Pumping Stations, s and upgrades, and management services construction, and furnishing all construction	related to construction includi	ng award of contract, inspection during
Challenges	Challenges N/A - Pending Closeout		
Lookup Driver	N/A - Pending Closeout		



Reservoirs Inspection, Repair and Rehabilitation Program

PhaseProject ManagementContractDWS-874StatusClosed OutTitleDWS-874 Unallocated Booster Stations and Reservoirs Inspection, Rehabilitation and Inspection Repair Program

Projects Capita	lized/Ex	(pensec	1 @FY18 \$12,977K				
Phase Budget	Water				Cost Allocation	CTA	
Phase Status	Closed	Closed Out			Funding Source	Bond Proceeds	
Start Date		7/3/2013			Fund	Construction Bond Fund	
End Date		10/30/2019		U	seful Life >20Yrs?	Yes	
Co	ost Estin	nation lı	nformation	Tot. Fede	ral Loan Amount		
		5	Cost Est. Class	Prog	gram/Allowance	Task Information	
			Cost Est. Date	Project Manager			
			Cost Est. Source	CIP Number	170701		
			Cost Est. Prepared By	Description			

Task		Start Date	End Date	Duration				
Project Execution		1/1/2017	1/2/2017		1			
Project Closeout		1/3/2017	4/3/2017	9	0			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

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



Reservoirs Inspection, Repair and Rehabilitation Program

Phase not applic	able				C	Contract 1	VA	Sta	tus Closed	Out
Title Prior Year A	ctual Expe	enses								
Phase Budget V	Vater						Cost Allo	cation CTA		
Phase Status (Closed Ou	†		Funding Source						
Start Date							Fund			
End Date							Useful Life >	20Yrs?		
Cost Estimation Information						Tot. Fed	leral Loan A	mount		
5 Cost Est. Class			lass			Pro	ogram/Allov	wance Task	Information	
1	/1/2015	Cost Est. D	Cost Est. Date		Project Manager					
CDM Smith		Cost Est. Source		CIP Number						
CDM Smith		Cost Est. P	repared By	D	escrip	otion				
Cost Typ	е	Fiscal Year	Expens	se Fringe BenefilNonPersonne				(Comment	
Construction		FY18-		\$63	_		FY18 DWS-874		74	
Unknown		FY18-	\$1	,359				FY16		
Unknown		FY18-	\$1	,492				FY1 <i>7</i>		
Unknown		FY18-	\$10),063				Pre-Bifurcati	ion	
Prior Yr Actuals	FY19	9 FY20	FY21	FY	22	FY23	FY24	FY25+	Total	
12,97	77								12,977	
		P	hase Total Ex	(pense	es By I	FY (All figu	res are in \$1	,000's)		
Pro	niect Int	al Expenses	By FY Co	mna	red t	o Prior C	'IPe (ΔII fia	TILLES CITE	in \$1 000'	<u>c)</u>

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	9571	2,316	88						0	0	11,975
2019	0	12,914	1,417							0	14,331
2020	0	0	12,977	0	0	0	0	0	0	0	12,977

☐ Innovation	Project Status Active	
☐ Water MP Right Size	cip Type Program	
✓ Reliability/Redund		
☐ NEWTP Repurposin	Project New To CIP	
Project Engineer/Mai	nager Eric Kramp	Budget Water
Mai	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 Programs
Date Original Busines	ss Case Prepared 10/12/2016	Class Lvl 3 Programs
Year Proje	ect Added to CIP 2016	Location Multiple Counties
		Fund and Cost Center
	Project. This new project is being managed ago	ervoir Rehabilitation except 170800 into a single, Omnibus CIP ainst a overall repair schedule to mitigate conflicts in the to the the third that the conflicts in the conflict in t
Scope of Work	Project. This new project is being managed ago transmission system so as to minimize the impac at Booster Stations and Water Treatment Plants.	ainst a overall repair schedule to mitigate conflicts in the at for MDEQ Mandated inspections and repairs to GLWA Reservoirs
Scope of Work Challenges	Project. This new project is being managed ago transmission system so as to minimize the impact at Booster Stations and Water Treatment Plants. The contract will provide inspection and maintesystem. Considerable plant, transmission system, and Ju	ainst a overall repair schedule to mitigate conflicts in the t for MDEQ Mandated inspections and repairs to GLWA Reservoirs
Scope of Work Challenges	Project. This new project is being managed ago transmission system so as to minimize the impact at Booster Stations and Water Treatment Plants. The contract will provide inspection and maintesystem. Considerable plant, transmission system, and Ju	cinst a overall repair schedule to mitigate conflicts in the st for MDEQ Mandated inspections and repairs to GLWA Reservoirs enance of the existing 23 of 33 potable water storage tanks in the purisdiction Haven Authority buy-in is required to perform this challenge for GLWA and its predecessor agency.
Scope of Work Challenges Project History	Project. This new project is being managed ago transmission system so as to minimize the impacat Booster Stations and Water Treatment Plants. The contract will provide inspection and maintesystem. Considerable plant, transmission system, and Jucontract. Isolation of the Reservoir has been a contract.	cainst a overall repair schedule to mitigate conflicts in the st for MDEQ Mandated inspections and repairs to GLWA Reservoirs enance of the existing 23 of 33 potable water storage tanks in the visidiction Haven Authority buy-in is required to perform this challenge for GLWA and its predecessor agency.
Scope of Work Challenges Project History	Project. This new project is being managed ago transmission system so as to minimize the impact at Booster Stations and Water Treatment Plants. The contract will provide inspection and maintagetem. Considerable plant, transmission system, and Jucontract. Isolation of the Reservoir has been a contract.	cainst a overall repair schedule to mitigate conflicts in the st for MDEQ Mandated inspections and repairs to GLWA Reservoirs enance of the existing 23 of 33 potable water storage tanks in the visidiction Haven Authority buy-in is required to perform this challenge for GLWA and its predecessor agency.

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

PM Weighted Score

62.8

Criteria	Score	Comment
Condition	4	
Efficiency and Innovation	3	
Financial	1	
O&M	5	
Performance (Service Level/Reliability)	4	
Public Benefit	1	
Public Health & Safety	2	
Regulatory (Environmental/Legal)	4	



170800 CIP#

Phase Construction						Co	ontract	TBD		Statu	F uture	Planned	Start
Title Construction													
Phase Budget Wa	ter							Cost All	ocation	СТА			
Phase Status Futi	ure Plan	inec	l Start		Funding Source Bond Proceeds								
Start Date					Fund Construction Bond Fund								
End Date	End Date							Useful Life	>20Yrs?	Yes			
Cost Estimation Information					Tot. Federal Loan Amount						\$0		
5 Cost Est. Class			lass			ı	Program/Allo	wance '	lask In	formation			
1/1	1/1/2015 Cost Est. Date				Р	roject	Manage						
CDM Smith	Cost Est. Source					CIP Nun							
						escrip							
CDM Smith	CDM Smith Cost Est. Prepa			repared By	L	escrip	11011						
Cost Type		Fis	scal Year	Expense)	Fringe	Benefit	NonPersonn	Э	Со	mment		
Construction		FY2)	\$4	\$4,496				2020CII				
Construction		FY2	1	\$4	4,630				2020CIP				
Construction		FY2	2	\$4	4,769				2020CIP				
Construction		FY2	3	<u> </u>	,275			2020CIP					
Construction		FY2		•	,060				2020CII				
Construction		FY2	5+	\$30	,130				2020CII)			
Task		St	tart Date	End Date	Dur	ation							
Scope Developmer	n†		11/1/2018	3/1/2019		120)						
Procurement			3/1/2019	8/28/2019		180)						
Project Execution			8/28/2019	4/1/2027		2773	3						
Project Closeout			4/1/2027	6/30/2027		90)						
Prior Yr Actuals	FY19	7	FY20	FY21	FY:	22	FY23	FY24	FY2	5+	Total		
		Λ	1 194	4 630		1 740	3 2	75 5.04	0 30	130	52 340		

170800 CIP#

Phase GLWA Em	ployees Pr	oject manager	nent		Contract N	A	Stat	lus	Active	
Title GLWA Sala	ıries									
Phase Budget	Water					Cost Allo	cation CTA			
Phase Status	Active					Funding S	ource Bond	l Pro	oceeds	
Start Date							Fund Cons	struc	ction Bond Func	1
End Date					U	Jseful Life >2	20Yrs?			
Cost Estimation Information					Tot. Fede	eral Loan Aı	mount			\$0
	5 Cost Est. Class		lass		Program/Allowance Task Information					
	1/1/2015 Cost Est. Date		ate	P	Project Manager					
CDM Smith		Cost Est. So	ource	C	CIP Number					
CDM Smith		Cost Est. Pi	repared By	, Description						
Cost Typ	oe	Fiscal Year	Expens	е	Fringe BenefitNo	nPersonne		Com	nment	
GLWA Salaries C	IP2020	FY19		\$7	3	02	2020CIP			
GLWA Salaries C	IP2020	FY20		\$34	13	22	2020CIP			
GLWA Salaries C	IP2020	FY21		\$35	14	22	2020CIP			
GLWA Salaries C	IP2020	FY22		\$34	13	22	2020CIP			
GLWA Salaries C	IP2020	FY23		\$35	14	22	2020CIP			
GLWA Salaries C	IP2020	FY24		\$34	13	22	2020CIP			
GLWA Salaries C	IP2020	FY25+		\$208	82	102	2020CIP			

Task	Start Date	End Date	Duration
Scope Development	6/30/2016	11/1/2018	854
Project Execution	11/1/2018	4/30/2027	3102
Project Closeout	4/1/2027	6/30/2027	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	10	49	51	49	51	49	300	559





Phase Study and Des	ase Study and Design and Construction Assistance						TBD	Stat	rus Active		
Title Engineering											
Phase Budget Wate	er						Cost Allo	cation CTA			
Phase Status Activ	/e			Funding Source Bond Proceeds							
Start Date				Fund Construction Bond Fund							
End Date				Useful Life >20Yrs? Yes							
						Tot Eo	deral Loan A			ФО	
Cost Es	Cost Estimation Information					ioi. re	derai Lodii A	mooni		\$0	
	5 Cost Est. Class						rogram/Allov	vance Task	Information		
1/1/2	2015	Cost Est. D	ate	P	roject <i>l</i>	Manage	er				
CDM Smith		Cost Est. So	ource	C	IP Num	nber					
CDM Smith		Cost Est. Pi	repared By	D	escript	ion					
Cost Type		Fiscal Year Expe		€	Fringe	Benefit	VonPersonne	C	Comment		
Engineering Services	F`	Y19	9	\$472				2020CIP			
Engineering Services	F`	Y20		\$583				2020CIP			
Engineering Services		Y21		\$530				2020CIP			
Engineering Services		Y22		\$364				2020CIP			
Engineering Services		Y23		\$562			2020CIP				
Engineering Services		Y24		\$386				2020CIP			
Engineering Services	<u> </u>	Y25+		,348				2020CIP			
Task		Start Date	End Date		ation						
Scope Development		6/30/2016	11/20/2017		508	-					
Procurement		11/20/2017	11/20/2018		365						
Project Execution		11/20/2018	4/1/2027		3054						
Project Closeout		4/1/2027	6/30/2027		90						
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total		
	47	72 583	530		364	56	2 386	3,348	6,245		

170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

		Contract NIA	Charles				
se not applicable		Contract NA	Status	Closed Out			
Prior Year Actual Expenses							
hase Budget Water		Cost Allocation	on CTA				
Phase Status Closed Out		Funding Source	ce				
Start Date		Fui	nd				
End Date		Useful Life >20Yı	rs?				
Cost Estimation Info	ormation	Tot. Federal Loan Amou	ınt	\$0			
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 Expenses By FY (All figures are in \$1,000's)

	Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,000's)										
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		50	3,300	2,550	2,550	2,550			0	0	11,000
2019	0		39	472	753	4,510	4,340	4,340	4,645	0	19,099
2020	0	0		482	5,128	5,211	5,182	3,888	5,495	33,778	59,164

Suburban Water Meter Pit Rehabilitation and Meter Replacement

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy ☐ NEWTP Repurposing

Project Status Active

CIP Type Program

Project New To CIP \Box

Example of a Water Meter



Project Engineer/Manager Chandan Sood

Manager Chandan Sood

Managing Dept Systems Planning

Date Original Business Case Prepared 1/26/2016

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Programs

Class Lvl 3 Programs

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance Improving meter data reliability, ensuring accurate billing, improving customer service and allow high quality analysis of the system

Scope of Work The Proposed improvements should include the following; The replacements of meters that have surpassed their life expectancy, and or the current flow rates exceed the mechanical limits of the meter. Installing entrance hatches that allow safer ingress, and egress, and that can be locked for security. Sand blasting and painting of piping and walls. Waterproofing meter vaults to keep the ground water out. Provide a proper floor slope in meter chambers that allow water to settle in puddles. Repairing damage sump pump discharge lines. Repairing any structural deficiencies in the meter chambers, loose concrete, bricks, and ladder rungs. Installing access tunnels for the meter location that require extensive traffic control, or are very dangerous to enter because of the entrance location. Upgrading and repairing damaged electrical fixtures in the meter vaults. Weather proofing the meter control cabinets, chalking, replacing rubber door seals, replacing missing foam insulation, replacing upgrading cabinet heaters, repairing damaged locking mechanisms. Improving, or paving the access roads, and or parking for meter locations that have limited parking or get overgrown with foliage in the summer time.

Challenges Requires temporary shutdown of the water supply through the meter

Project History Currently GLWA provides water service to 126 communities, and measures flows and volumes by the utilization of 290 wholesale water meters now in service; 17 of these meters are venturi-orifice type meters, 26 of these are dual venturi type meters, 48 of these single venturi type meters, 97 of these are magnetic flow type meters, and 102 of these are turbine or mechanical type meters. Meters were installed between 1945 through 1975 under various projects and tasks.

Related Project PC-793 provides mechanical help for in-house meter replacement

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

Lookup Driver	2 - Performance	
Other Important Info	n/a	
Explanation	Not provided.	



Suburban Water Meter Pit Rehabilitation and Meter Replacement

PM Weighted Score

20

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

RC Weighted Score

20

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



Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase Construction	n				Co	ntract	NA	Sta	tus Future	Planned Start
Title Unallocated	Suburbar	n Water Meter	Pit Rehabilita	ation a	nd Met	ter Repla	acement			
Phase Budget W	/ater						Cost Allo	cation Subu	urban Only	
Phase Status Fu	uture Planr	ned Start		Funding Source					enue Financ	ed Capital
Start Date				Fund					ovement &	Extension Fun
End Date				Useful Life >20Yrs? No						
Cost		Tot. Federal Loan Amount								
	lass			Pr	ogram/Allov	wance Task	Information			
	Cost Est. Date					/\anage	r			
	ource	С	IP Num	ber						
	repared By									
		0001 2011 1	repared by							
Cost Type)	Fiscal Year	Expense	Э	Fringe I	BenefilN	onPersonne	(Comment	
Construction	ſ	FY19	\$1	,113						
Construction	Ī	FY20	(\$190						
Construction	ŀ	FY21	(\$190						
Construction	ŀ	FY22	\$3	3,997						
Construction	ŀ	FY23	\$4	,100						
Construction	ŀ	FY24	·	,200				2020CIP		
Construction	<u> </u>	FY25+	\$20	,500				2020CIP		
Task		Start Date	End Date	Durc	ation					
Scope Developme	ent									
Procurement										
Project Execution		1/1/2018	12/1/2022		1795					
Project Closeout		12/2/2022	3/2/2023		90					
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23	FY24	FY25+	Total	
	1.1	13 190	190	3	.997	4.100	4.200	20.500	34,290	

Suburban Water Meter Pit Rehabilitation and Meter Replacement

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

hase GLWA Emplo	ent	Contract NA			Sto	Status Active					
tle GLWA Salaries											
Phase Budget Wa	ter			Cost Allocation Suburban Only							
Phase Status Act	ive					Funding So	ource Rev	enue Financ	ed Capital		
Start Date				Fund Imp	rovement &	Extension Fun					
End Date					U	seful Life >2	20Yrs? No				
Cost Estimation Information					Tot. Fede	eral Loan An	nount		\$0		
	1	Cost Est. Cl	ass	Program/Allowance Task Information							
		Cost Est. Do	ıte	Projec	t Manager						
		Cost Est. So	urce	CIP Nu	ımber						
Cost Est. Prepared By			epared By	Description							
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	0	0	0	0	0	0	С	0			

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

170900 CIP#

GLWA Great Lakes Water Authority

Suburban Water Meter Pit Rehabilitation and Meter Replacement

GLWA FY 2020-2024 CIP

Phase Construction					Co	ontract	СС	N-285		Status	Under	Procurem	ent
Title Wholesale Wa	ter Meter F	Pit Rehabilita	tion and Me	ter Re	eplace	ment							
Phase Budget Wa	ter				•			Cost Allo	cation Su	Suburban Only			
Phase Status Unc		ement								Revenue Financed Capital			
Start Date										·			
				Fund Improvement & Extension Useful Life >20Yrs? No						FUII			
End Date							US	etui Lite >	20Yrs? N	0			
Cost E				Tot. Fe	der	al Loan A	mount				\$0		
	ass			P	rog	ram/Allov	wance To	ask Info	ormation	ı			
9/4/	9/4/2018 Cost Est. Date		ate	P	roject	Manage	er						
Previous Work	Previous Work Cost Est. Source		urce	CIP Number 170901									
SA&MO	SA&MO Cost Est. Prepa			D	escrip	lion							
Cost Type	F	iscal Year	Expense)	Fringe	Benefill	Vonl	Personne		Cor	nment		
Construction	FY		· .	1,887					2020CIP				
Construction	FY2		•	3,810					2020CIP				
Construction	FY2	21	\$3	,810					2020CIP				
Task		Start Date	End Date	Dur	ation								
Procurement		3/26/2018	10/31/2018		219								
Project Execution		11/1/2018	10/31/2021		1095	5							
Project Closeout		11/1/2021	4/30/2022		180								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25+	-	Total		
	1,887	3,810	3,810								9,507		
		Ph	ase Total Ex	pense	es By F	Y (All fig	ures	are in \$1	,000's)				
Proje	ct Total	Expenses	By FY Cor	npa	red to	Prior	CIP	s (All fig	gures a	re in	\$1,000)'s)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		500	4,000	4,000	4,000	4,000	4,000		0	0	20,500
2019	0		410	4,613	3,690	3,690	3,997	4,100		0	20,500

A-487

GLWA Great Lakes Water Authority

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		3,000	4,000	4,000	3,997	4,100	4,200	20,500	43,797



LH - WTP Sanitary Survey Improvements

☐ Water MP Right Sizing			
	CIP Type Program		
☐ Reliability/Redundancy	_		
□ NEWTP Repurposing	Project New To CIP $ \sqcup $		
Project Engineer/Manager	Grant Gartrell	Budget	Water
Manager (Grant Gartrell	Class LvI 1	Water
Managing Dept	Water Eng	Class LvI 2	Programs
Date Original Business Case	Prepared 1/4/2018	Class LvI 3	Programs
Year Project Ado	ded to CIP 2017	Location	Saint Clair County
		Fund and Cost Center	
•	ss the sanitary survey needs that are iden s where regulatory needs are identified.	tified by the MDEQ as part	t of its 3-year rotation of plant sanitary
•	and construct improvements or modification during its 3-year cycle of sanitary surveys	· · · · · · · · · · · · · · · · · · ·	ilities that may be identified by the
Challenges Possible	e negotiations with MDEQ on items they i	dentify in sanitary surveys	that GLWA may take exception.



LH - WTP Sanitary Survey Improvements

PM	Weighted
	Score

34

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

RC Weighted Score

0

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



LH - WTP Sanitary Survey Improvements

ase GLWA Emplo	yees Projec	ct managem	nent	C	Contract N	4	Stat	lus Cance	elled	
e GLWA Salaries	5									
Phase Budget Wa	iter									
Phase Status Ca	Cancelled					Funding Sc	ource Reve	nue Financ	ed Capital	
Start Date				Fund Impro	ovement &	Extension Fun				
End Date	Useful Life >20Yrs? No									
Cost Estimation Information					Tot. Fede	ral Loan An	nount		\$0	
	5	Cost Est. Cl	ass	Program/Allowance Task Information						
		Cost Est. Do	ate	Project Manager						
		Cost Est. So	urce	CIP Number						
		Cost Est. Pre	epared By	Descrip	otion					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		

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



LH - WTP Sanitary Survey Improvements

hase Design and B	ase Design and Build						IA	Sto	atus C	ancell	led	
itle LH - WTP Sanito	ary Survey II	mproveme	nts									
Phase Budget Wa	ter			Cost Allocation CTA								
Phase Status Car	ncelled						Funding	Source Reve	enue Fi	nance	ed Capital	
Start Date		4/17,	/2017					Fund Impi	roveme	ent & E	extension Fu	ın
End Date		6/17,	/2029			l	Useful Life >	20Yrs? No				
Cost Estimation Information						Tot. Fed	eral Loan A	mount				
	5 Cost Est. Class					Program/Allowance Task Information						
12/27/	′2017	Cost Est. D	ate	Project Manager								
Educated Guess	Guess Cost Est. Source		ource	CIP Number								
G. Gartrell		Cost Est. P	repared By	D	escripti	on						
Cost Type	Fi	scal Year	Expense	Э	Fringe I	3enefitNc	nPersonne	. (Comme	ent		
Design-Build	FY1	9		\$0								
Design-Build	FY2			\$0								
Design-Build	FY2			\$0								
Design-Build	FY2			\$0								
Design-Build	FY2			\$0								
Design-Build	FY2	4		\$0								
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Tot	al		
					0	0	C	0		0		

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			45	49	49	49	49	247	0	488
2020	0	0		0	0	0	0	0	0	0	0



NE - WTP Sanitary Survey Improvements

☐ Innovation	Project Status Reclassified									
☐ Water MP Right Siz	zing CIP Type Program									
☐ Reliability/Redund										
□ NEWTP Repurposir	Project New To CIP	Project New 10 CIP U								
Project Engineer/Mai	nager Govind Patel	Budget	Water							
Mai	nager Grant Gartrell	Class Lvl 1 Water								
Managing	Dept Water Eng	Class Lvl 2	Programs							
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3 Programs								
Year Proje	ect Added to CIP	Location	City of Detroit							
		Fund and Cost Center								
•	Address the sanitary survey needs that are ide surveys where regulatory needs are identified		t of its 3-year rotation of plant sanitary							
Scope of Work	Design and construct improvements or modifications to plant process facilities that may be identified by the MDEQ during its 3-year cycle of sanitary surveys.									
Challenges	Possible negotiations with MDEQ on items they identify in sanitary surveys that GLWA may take exception.									



NE - WTP Sanitary Survey Improvements

PM	Weighted
	Score

34

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

RC Weighted Score

0

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



NE - WTP Sanitary Survey Improvements

Phase Design and B	ase Design and Build						NΑ	\		Statu	s Cana	elled		
Title NE - WTP Sanito	ary Survey	Improveme	nts											
Phase Budget Wa	ter							Cost Alloc	cation	CTA				
Phase Status Car	ncelled							Funding S	ource R	even	ue Finan	iced Co	apital	
Start Date		4/1/	′2017						Fund I	nprov	ement 8	& Extens	ion Fun	
End Date		9/15/	′2028				Us	seful Life >2	20Yrs?	lo				
Cost E	stimation I	nformation				Tot. Fe	der	al Loan Ar	mount					
	5 Cost Est. Class						rog	ram/Allow	ance T	ask In	formatio	n		
12/26/	2/26/2017 Cost Est. Date			P	roject <i>l</i>	Manage	er							
GLWA Engineerin	neering Cost Est. Source			CIP Number										
G. Gartrell	Cost Est. Prepared B			Description										
					1									
Cost Type		iscal Year	Expense		Fringe	Benefit	Von	Personne		Со	mment			
Design-Build	FY	·		\$0										
Design-Build	FY2			\$0										
Design-Build	FY2			\$0										
Design-Build	FY2			\$0										
Design-Build	FY2			\$0										
Design-Build	FY2	24		\$0										
Task	(Start Date	End Date	Dur	ation									
Scope Developmer	n†	4/1/2017	6/30/2017		90									
Procurement		7/1/2017	7/1/2018		365									
Project Execution		7/2/2018	6/16/2028		3637									
Project Closeout		6/17/2028	9/15/2028		90									
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY25	+	Total			
	С	0	0		0		0	0		0	(0		



NE - WTP Sanitary Survey Improvements

Phase GLWA Employ	ase GLWA Employees Project management						Contract NA				elled	
Title GLWA Salaries												
Phase Budget Wat	ter					Cost Allocation CTA						
Phase Status Car	Phase Status Cancelled							Funding Sou	rce Rever	nue Financ	ced Capita	I
Start Date	Start Date							F	und Impro	vement &	Extension F	un
End Date							U	seful Life >20	Yrs? No			
Cost Estimation Information							Tot. Fede	ral Loan Amo	ount			\$0
5 Cost Est. Class							Prog	gram/Allowa	nce Task I	nformation	1	
			Cost Est. D	ate	F	roject	Manager					
	Cost Est. Source				CIP Number							
			Cost Est. Pi	repared By	Description							
Cost Type		Fis	cal Year	Expense	<i>-</i>	Fringe	e BenefitNor	nPersonne	C	omment		
GLWA Salaries CIP20)20	FY19		LAPONIS	\$0	rmige	0	0				
GLWA Salaries CIP20		FY20			\$0		0	0				
GLWA Salaries CIP20)20	FY21			\$0		0	0				
GLWA Salaries CIP20)20	FY22	2		\$0		0	0				
GLWA Salaries CIP20)20	FY23	3		\$0		0	0				
GLWA Salaries CIP20)20	FY24			\$0		0	0				
Prior Yr Actuals	FY19	7	FY20	FY21	FY	22	FY23	FY24	FY25+	Total		
		0	0	0		0	0	0	0	0		
	Phase Total Expenses By FY (All figures are in \$1,000's)											
Desig	ol Tol	al F		D. FV Car			o Dulou CII	De / All fierr		- ¢1 000	U-X	

Project lotal expenses by FY Compared to Prior CIPS (All figures are in \$1,000's)

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0		6	75	79	79	79	79	399	0	796
2020	0	0		0	0	0	0	0	0	0	0

171200 CIP#

SW-WTP Sanitary Survey Improvements

☐ Innovation	Project Status Reclassified							
☐ Water MP Right Siz	cing CIP Type Program							
☐ Reliability/Redund	lancy _							
□ NEWTP Repurposir	Project New To CIP							
Project Engineer/Mar	nager Shakil Ahmed	Budget	Water					
Mar	nager Grant Gartrell	Class Lvl 1 Water						
Managing	Dept Water Eng	Class Lvl 2 Programs						
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3 Programs						
Year Proje	ect Added to CIP	Location	Wayne County - Outside Detroit					
		Fund and Cost Center						
	Address the sanitary survey needs that are id surveys where regulatory needs are identified		t of its 3-year rotation of plant sanitary					
•	Design and construct improvements or modifications to plant process facilities that may be identified by the MDEQ during its 3-year cycle of sanitary surveys.							
Challenges	Illenges Possible negotiations with MDEQ on items they identify in sanitary surveys that GLWA may take exception.							

GLWA FY 2020-2024 CIP SW-WTP Sanitary Survey Improvements



PM Weighted Score

34

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

RC Weighted Score

0

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



SW-WTP Sanitary Survey Improvements

Phase GLWA Employeritle GLWA Salaries	ees Projec	t manage	ment		C	Contract NA	4	Sta	tus Cance	lled	
Phase Budget Wate	er			Cost Allocation CTA							
Phase Status Cana	celled						Funding S	ource Reve	Revenue Financed Capital		
Start Date								Fund Impr	ovement &	Extension Fun	
End Date						U	seful Life >2	20Yrs? No			
Cost Est				Tot. Fede	ral Loan Ar	nount		\$0			
	Cost Est. C	Class	Program/Allowance Task Information								
	ate	Project Manager									
		Cost Est. S	ource	CIP Number							
		Cost Est. P	repared By	By Description							
Cost Type	Fi	scal Year	Expens	se Fringe BenefilNonPersonne					Comment		
GLWA Salaries CIP202	20 FY1	9		\$0		0	0				
GLWA Salaries CIP202	20 FY2	0		\$0		0	0				
GLWA Salaries CIP202	20 FY2	1	\$0		0		0				
GLWA Salaries CIP202	20 FY2	2		\$0		0	0 0				
GLWA Salaries CIP2020 FY23				\$0		0	0				
GLWA Salaries CIP202	20 FY2	4		\$0		0	0				
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	Total		
	0	C	0		0	0	0	0	0		

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



SW-WTP Sanitary Survey Improvements

Phase Design and Build		mprovemer	ts		С	ontract	NA			Statu	is C	ancel	led	
Phase Budget Water							(Cost Allo	cation	СТА				
Phase Status Cance	lled			Funding Source Revenue Financed Capital								tal		
Start Date	4/1/2018								Fund	Impro	veme	nt & E	Extension	n Fun
End Date		9/17/	2029				Use	eful Life >	20Yrs?	No				
Cost Estim	nation Ir	nformation				Tot. Fe	derd	ıl Loan A	mount					
	5 Cost Est. Class					Program/Allowance Task Information								
12/26/201	12/26/2017 Cost Est. Date				Project Manager									
GLWA Engineering		ource	CIP Number											
G. Gartrell		Cost Est. Pi	epared By	Description										
Cost Type	Fi	iscal Year	Expense	е	Fringe	Benefit	NonP	ersonne		С	omme	ent		
Design-Build	FY1	9		\$0					2020CII)				
Design-Build	FY2			\$0										
Design-Build	FY2			\$0										_
Design-Build	FY2			\$0										
Design-Build Design-Build	FY2 FY2			\$0 \$0										
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Tot	al		
	0	0	0		0		0	0		0		0		
·		Pl	nase Total Ex	(pense	es By F	Y (All fig	ures	are in \$1	,000's)					

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

										<u> </u>	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			6	75	79	79	79	399	0	717
2020	0	0		0	0	0	0	0	0	0	0

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

WWP - WTP Sanitary Survey Improvements

☐ Innovation	Project Status Reclassified		
☐ Water MP Right Size	cing CIP Type Program		
☐ Reliability/Redund	dancy		
☐ NEWTP Repurposi	Project New To CIP		
Project Engineer/Mai	nager TBD	Budget	Water
Mai	nager Terry Daniel	Class Lvl 1	Water
Managing	Dept Water Eng	Class Lvl 2	Programs
Date Original Busines	s Case Prepared 1/4/2018	Class Lvl 3	Programs
Year Proje	ect Added to CIP 2018	Location	City of Detroit
		Fund and Cost Center	
•	Address the sanitary survey needs that are surveys where regulatory needs are identi		t of its 3-year rotation of plant sanitary
Scope of Work	Design and construct improvements or mo MDEQ during its 3-year cycle of sanitary su	·	cilities that may be identified by the
Challenges	Possible negotiations with MDEQ on items	they identify in sanitary surveys	that GLWA may take exception.



WWP - WTP Sanitary Survey Improvements

PM Weighted Score

34

Efficiency and Innovation Financial O&M Performance (Service Level/Reliability) Public Benefit Public Health & Safety 1 1 1 1 1 1 1 1 1 1 1 1 1			
Efficiency and Innovation Financial O&M Performance (Service Level/Reliability) Public Benefit Public Health & Safety 1 1 1 1 1 1 1 1 1 1 1 1 1	Criteria	Score	Comment
Financial O&M 1 Performance (Service Level/Reliability) Public Benefit Public Health & Safety 3	Condition	1	
O&M Performance (Service Level/Reliability) Public Benefit Public Health & Safety 3	Efficiency and Innovation	1	
Performance (Service Level/Reliability) Public Benefit Public Health & Safety 3	Financial	1	
Public Benefit 1 Public Health & Safety 3	O&M	1	
Public Health & Safety 3	Performance (Service Level/Reliability)	1	
·	Public Benefit	1	
Regulatory (Environmental/Legal) 3	Public Health & Safety	3	
	Regulatory (Environmental/Legal)	3	

RC Weighted Score

0

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



WWP - WTP Sanitary Survey Improvements

Phase Design and E			C	Contract 1	٧A		Statu	s Cance	lled				
itle WWP - WTP Sa	ınitary Surv	ey Improven	nents										
Phase Budget Wo	ıter			Cost Allocation CTA									
Phase Status Ca	ncelled		Funding Source Revenue Financed Cap							ed Capital			
Start Date		4/1/	2017					Fund	mprov	vement &	Extension F		
End Date		9/15/	2028				Useful Life >	20Yrs?	No				
Cost	Cost Estimation Information					Tot. Federal Loan Amount							
	5 Cost Est. Class					Program/Allowance Task Information							
12/26	/2017	2017 Cost Est. Date			rojec	l Manager							
GLWA engineerir	ng Cost Est. Source			CIP Number									
G. Gartrell		Cost Est. Pi	epared By	D	escri	otion							
Cost Type		Fiscal Year	Expens	e	Fringe	e BenefitNo	onPersonne		Сс	omment			
Design-Build	FY	19		\$0									
Design-Build	FY	20		\$0									
Design-Build	FY			\$0									
Design-Build		22		\$0									
Design-Build		23		\$0									
Design-Build	FY	24		\$0									
Design-Build	FY	25+		\$0				2020CIF)				
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25	j+	Total			
		0 0	0		0	0	0		0	0			

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



WWP - WTP Sanitary Survey Improvements

Phase GLWA Empl Title GLWA Salarie	-	t managem	ent	C	Contract N	A	Status	Cancell	ed		
T itle GLWA Salarie	es										
Phase Budget W	ater					ation CTA					
Phase Status Co	ancelled					Funding So	urce Revenu	e Finance	ed Capital		
Start Date						I	Fund Improv	ement & E	xtension Fun		
End Date					U	seful Life >20	Yrs? No				
Cost	Estimation Ir	nformation			\$0						
	5	Cost Est. Cle	ass	Program/Allowance Task Information							
		Cost Est. Do	te	Project							
		Cost Est. So	urce	CIP Nu	mber						
		Cost Est. Pre	epared By	Descrip	otion						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	0	0	0	0	0	0	0	0			
	'	Ph	ase Total Ex	penses By F	Y (All figure	es are in \$1,0	00's)				
			_						_		

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			45	49	49	49	49	247	0	488
2020	0	0		0	0	0	0	0	0	0	0

171400 CIP#

Energy Management Program @ All Water Facilities

☐ Innovation☐ Water MP Right Sizin☐	CIP Type Program								
Reliability/Redundo	Project New To CIP								
Project Engineer/Mana	ager TBD	Budget	Water						
Mana	ager Grant Gartrell	Class Lvl 1	Water						
Managing [Dept Water Eng	Class Lvl 2	Programs						
Date Original Business	Case Prepared 1/5/2018	Class LvI 3	Programs						
Year Projec	ct Added to CIP	Location	Multiple Counties						
		Fund and Cost Center							
Project Significance Existing lighting systems at most facilities are energy inefficient. Replacement with new, modern LED lighting type systems will reduce electrical usage and costs.									
Scope of Work ${\mathbb R}$	eplace existing lighting fixtures with new light	ing fixtures at the water pla	nts and water booster pumping stations.						



Energy Management Program @ All Water Facilities

PM Weighted Score

34.4

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

RC Weighted Score

0

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



Energy Management Program @ All Water Facilities

Phase Design and Build					Co	ntract	NA			Status	Future	Planned :	Start
Title Energy Mana	gement F	Program @ All	Water Faciliti	es									
Phase Budget Wo		Cost Allocation CTA											
Phase Status Fut	ure Plann	ned Start						Funding S	ource R	evenu	e Financ	ed Capit	al
Start Date		6/22,	/2019						Fund Ir	nprove	ement &	Extension	n Fun
End Date		12/6,	/2030				Us	eful Life >	20Yrs?	0			
Cost Estimation Information						Tot. Fe	der	al Loan A	mount				
5 Cost Est. Class						P	rog	ram/Allov	vance To	ask Info	ormation		
12/13	/2017	Cost Est. D	ate	Р	roject M	Manage	r						
GLWA Engineerin	GLWA Engineering Cost Est. Source			CIP Number									
Group		Cost Est. P	repared By	ed By Description									
Cost Type		Fiscal Year	Expense		Fringe	Benefit	lon	Personne		Cor	nment		
Design-Build	F	Y23	9	693					2020CIP				
Design-Build	F	Y24	\$	693					2020CIP				
Design-Build	F	Y25+	\$4	,401					2020CIP				
Task		Start Date	End Date	Dur	ation								
Scope Developmei	nt	6/22/2019	7/1/2021		740								
Procurement		7/1/2021	7/1/2022		365								
Project Execution		7/1/2022	9/6/2030		2989								
Project Closeout		9/7/2030	12/6/2030		90								
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23		FY24	FY25	F	Total		
		0 0	0		0	69	3	693	4,4	101	5,787		



Energy Management Program @ All Water Facilities

Phase GLWA Emplo	yees Proje	ect manager	nent	C	ontract N	A	State	us Future	Planned Start		
Title GLWA Salaries	S										
Phase Budget Wa	iter			Cost Allocation CTA							
Phase Status Fut	ure Plann	ed Start				Funding So	ource Rever	nue Financ	ed Capital		
Start Date							Fund Impro	vement &	Extension Fun		
End Date				Useful Life >20Yrs? No							
Cost E	stimation	Information			Tot. Fede	eral Loan An	nount		\$0		
5 Cost Est. Class					Prog	gram/Allow	ance Task I	nformation			
1/1,	1/1/2016 Cost Est. Date				Manager						
GLWA		Cost Est. So	ource	CIP Number							
GLWA	GLWA Cost Est. Prepared By			Descrip	tion						
Task		Start Date	End Date	Duration							
Scope Developmer	nt	6/22/2019	7/1/2021	740	D						
Project Execution		7/1/2021	9/6/2030	3354	1						
Project Closeout		9/7/2030	12/6/2030	90)						
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
		0 0	0	0	0	0	0	0			
		Pl	hase Total Ex	penses By F	Y (All figure	es are in \$1,	000's)				
P •	.1.7.1.		D EV C		D.1	D. /AILC	•	· 61 000	1.1		

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1,0)

		<u> </u>		<i>-</i>		<u></u>				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0					520	693	693	5,094	0	7,000
2020	0	0		0	0	0	0	693	693	4,401	5,787

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Roof Replacement - Various Water Facilities

☐ Innovation	Project Status Active							
☐ Water MP Right Si	zing CIP Type Program							
☐ Reliability/Redund	dancy							
□ NEWTP Repurposi	Project New To CIP \square							
Project Engineer/Ma	nager IBD	Budget	Water					
Ma	nager Grant Gartrell	Class Lvl 1	Water					
Managing	Dept Water Eng	Class Lvl 2	Programs					
Date Original Busines	ss Case Prepared 1/5/2018	Class Lvl 3	Programs					
Year Proj	ect Added to CIP 2018	Location	Multiple Counties					
		Fund and Cost Center						
Project Significance	This CIP will replace roofing systems on GLWA stations that were determined to need replace Replacement is needed to protect building in	ement over the next 5 to 7	years due to their poor condition.					
Scope of Work	Replace existing roofs with new built-up roofing	g systems.						
Project History	A condition assessment was performed and completed under Contract No. CS-1674 in 2016 that included all roofs located at GLWA's 5 water treatment plants, 19 water booster pumping stations and 11 sewage pumping stations. There were 268 separate roof sections totaling 1,682,727 square feet of roof inspected during this condition assessment project.							
Related Project	Contract No. CS-1674							
Other Important Info	The total estimated replacement value (2016 dollars) of the 1,682,727 square feet of roofing at the water treatment plants, sewage pumping stations and water booster pumping stations is \$33,142,054.							



Roof Replacement - Various Water Facilities

PM Weighted Score

42

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

RC Weighted Score

0

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



Roof Replacement - Various Water Facilities

Phase GLWA Em	nployees Projec	t managem	nent	(Contract N.	A	Status	Active		
itle GLWA Salo	aries									
Phase Budget	Water				Cost Allocation CTA					
Phase Status	Active					Funding Source	Bond Pr	oceeds		
Start Date						Fund	Constru	ction Bonc	d Fund	
End Date					U	seful Life >20Yrs?	No			
Cost Estimation Information					Tot. Fede	ral Loan Amoun	t		\$0	
	4	Cost Est. Cl	ass		Pro	gram/Allowance	Task Info	ormation		
	1/1/2016	Cost Est. Do	ıte	Project Manager						
Testing Engine	eers & Consult	Cost Est. So	urce	CIP Number						
Testing Engineers & Consult Cost Est. Prepared By				Descri	ption					
Prior Yr Actua	ls FY19	FY20	FY21	FY22	FY23	FY24 FY2	25+	Total		
	0	0	0	0	0	0	0	0		



Roof Replacement - Various Water Facilities

Phase Design and Build Contract NA Status Active

Title Phase 464631552 - Roof replacement at LH-WTP, NE-WTP, WWP-WTP, Ford Road, Northwest, EastSide, Newburgh, Rochester, Schoolcraft and Ypsilanti Booster Stations

Phase Budget	Water		Cost	Allocation	СТА			
Phase Status	Active		Fund	Bond Proceeds				
Start Date			Fund Construction Bond Fund					
End Date			Useful L	Yes				
Cost Estimation Information			Tot. Federal Loc	an Amount				
	4	Cost Est. Class	Program/.	Allowance	Task Information			
	1/1/2016	Cost Est. Date	Project Manager					
Testing Engine	eers & Consult	Cost Est. Source	CIP Number					
Testing Engine	eers & Consult	Cost Est. Prepared By	Description					

	Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build FY25+ \$2,000 2020CIP	Design-Build	FY24	\$2,000			
	Design-Build	FY25+	\$2,000			2020CIP

Task	Start Date	End Date	Duration				
Scope Development	4/2/2022	7/1/2022	90				
Procurement	7/2/2022	7/2/2023	365				
Project Execution	7/3/2023	6/25/2027	1453				
Project Closeout	6/26/2027	9/24/2027	90				
Prior Yr Actuals FY19	FY20	FY21	FY22	FY23	FY24	FY25+	

 Prior Yr Actuals
 FY19
 FY20
 FY21
 FY22
 FY23
 FY24
 FY25+
 Total

 0
 0
 0
 0
 0
 2,000
 2,000
 4,000

171500 CIP#

Roof Replacement - Various Water Facilities

Phase not applic	cable				(Contract $ ightharpoonup$	1A	Stat	tus Close	ed Out	
Title Prior Year /	Actual Exp	enses									
Phase Budget	Water						Cost Alloc	cation CTA			
Phase Status	Closed O	J†					Funding S	ource			
Start Date								Fund			
End Date							Useful Life >2	20Yrs?			
Co	st Estimat	ion Inform	ation			Tot. Fed	eral Loan Ar	mount			\$0
	4	Cost	Est. Clo	ISS		Pro	ogram/Allow	ance Task	Informatio	n	
	1/1/2016	Cost	Est. Da	le	Projec	t Manager					
Testing Engine	ers & Cor	nsult Cost	Est. Sou	ırce	CIP Nu	ımber					
Testing Engine	ers & Cor	nsult Cost	Est. Pre	pared By	Descri	ption					
Cost Typ	ре	Fiscal Y	'ear	Expens	e Fring	e BenefilNo	onPersonne		Comment		
Engineering Serv	rices	FY18-			\$50		F	Y18			
Prior Yr Actua	s FY	19 F	Y20	FY21	FY22	FY23	FY24	FY25+	Total		
	50								50	0	



Roof Replacement - Various Water Facilities

Phase Design and BuildContractNAStatusActive

Title Phase 758522114 - Roof replacement at LH-WTP, SW-WTP, WWP-WTP, Imlay and Franklin Booster Stations

Phase Budget	Water			Cost Allocation CTA
Phase Status	Active			Funding Source Bond Proceeds
Start Date		1/23/2018		Fund Construction Bond Fund
End Date		7/22/2020	Us	eful Life >20Yrs? Yes
Cost Estimation Information		Tot. Feder	al Loan Amount	
	4	Cost Est. Class	Prog	ram/Allowance Task Information
1	2/9/2016	Cost Est. Date	Project Manager	
CS-1674 roofi	ng CA contrac	Cost Est. Source	CIP Number	
Testing Engin	eers & Consult	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY19	\$0			
Design-Build	FY20	\$2,657			

Task	Start Date	End Date	Duration
Scope Development	1/23/2018	4/23/2018	90
Procurement	4/24/2018	4/24/2019	365
Project Execution	4/25/2019	4/22/2020	363
Project Closeout	4/23/2020	7/22/2020	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	2,657	0	0	0	0	0	2,657



Roof Replacement - Various Water Facilities

Phase Design and Build Contract NA Status Active

Title Phase 1218915073 - Roof replacement at LH-WTP, SW-WTP, WWP-WTP, Imlay Booster Station and Franklin Booster Station (1)

Phase Budget Water		Cost Allocation	on CTA
Phase Status Active		Funding Source	Bond Proceeds
Start Date		Fur	Construction Bond Fund
End Date		Useful Life >20Yrs	yes
Cost Estimation	Information	Tot. Federal Loan Amou	nt
4	Cost Est. Class	Program/Allowand	ce Task Information
1/1/2016	Cost Est. Date	Project Manager	
Testing Engineers & Consu	Cost Est. Source	CIP Number	
Testing Engineers & Consu	Cost Est. Prepared By	Description	

Task		Start Date	End Date	Duration				
Scope Developmer	n†	3/31/2026	6/29/2026	90)			
Procurement		6/30/2026	6/30/2027	36	5			
Project Execution		7/1/2027	6/25/2031	145	5			
Project Closeout		6/26/2030	9/24/2030	90)			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0



Roof Replacement - Various Water Facilities

Phase Design and Build Contract NA Status Active

Phase 1252759899 - Roof replacement at LH-WTP, SW-WTP, Orion & North Service Center Booster Stations Cost Allocation CTA **Phase Budget** Water Phase Status Active Funding Source Bond Proceeds Fund Construction Bond Fund Start Date **End Date** Useful Life >20Yrs? Yes Tot. Federal Loan Amount **Cost Estimation Information** Program/Allowance Task Information Cost Est. Class **Project Manager** 1/1/2016 Cost Est. Date **CIP Number** Cost Est. Source Testing Engineers & Consult Description Testing Engineers & Consult | Cost Est. Prepared By

Task		Start Date	End Date	Duration				
Scope Developmer	n†	3/31/2018	6/29/2018	90)			
Procurement		6/30/2018	6/30/2019	365	5			
Project Execution		7/1/2019	6/23/2023	1450	3			
Project Closeout		6/24/2023	9/22/2023	90)			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0



Roof Replacement - Various Water Facilities

hase Design ar	nd Build		Contract	NA	Status Active
tle Phase 1900	0377390 - Roof	replacement at LH-WTP,	SW-WTP, WWP-WTP,	Imlay Booster Statio	on and Franklin Booster Station (2)
Phase Budget	Water			Cost Allocation	CTA
Phase Status	Active			Funding Source	Bond Proceeds
Start Date				Fund	Construction Bond Fund
End Date				Useful Life >20Yrs?	Yes
Co	ost Estimation Ir	nformation	Tot. Fee	deral Loan Amount	
	4	Cost Est. Class	P	rogram/Allowance	Task Information
	1/1/2016	Cost Est. Date	Project Manage	r	
Testing Engine	eers & Consult	Cost Est. Source	CIP Number		
Testing Engine	eers & Consult	Cost Est. Prepared By	Description		

Task		Start Date	End Date	Duration				
Scope Developmen	nt	3/31/2030	6/29/2030	(90			
Procurement		6/30/2030	6/30/2031	30	6 5			
Project Execution		7/1/2031	6/25/2035	143	55			
Project Closeout		6/26/2035	9/24/2035	(90			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		0 0	0	0	0	0	0	0

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

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

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0			111	986	210	24	1,159	24,756	0	27,246
2020	0	0	50	0	2,657	0	0	0	2,000	2,000	6,707