

Appendix A: Water Business Case Evaluations

Please consider the environment before printing this document.

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 Statu Future Planned

CIP Type Project

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.

Project History

Related Project

Lookup Driver 8 - Efficiency



111001 CIP#

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

Other Important Info *Innovation note: Ensure energy efficiency.

Updated project expenses to account for inflation, moved contract start back one year, added GLWA costs. Portions of project were identified in the 2015 Master Plan.

Explanation Not provided.



111001 CIP#

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

Project Manager Project Risk Matrix Scoring							
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						

Project Manager Score

64.6

Review Committee Project Risk Matrix Scoring

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						

Review Committee Score

71.6

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

hase GLWA Employees Project management				Contract	NA	Sta	lus	Future Planned Start	
tle GLWA Salo	aries								
Phase Budget	Water			Cost Allocation CTA					
Phase Status	Future Plar	nned Start				Funding S	ource Bond	d Pro	oceeds
Start Date							Fund Cons	struc	tion Bond Fund
End Date						Useful Life >	20Yrs? No		
Co	ost Estimati	on Information			Tot. Fe	deral Loan A	mount		\$0
	5	Cost Est. (Class		P	rogram/Allov	vance Task	Info	rmation
	1/1/2015	Cost Est. [ate	P	Project Manage	er			
CDM Smith		Cost Est. S	ource	CIP Number					
Water Master	Plan Updo	ate Cost Est. F	repared By		Description				
Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	(Com	ment
SLWA Salaries C	CIP2020	FY20		\$18	7	1			
GLWA Salaries C	CIP2020	FY21		\$42	17	2			
GLWA Salaries C	CIP2020	FY22		\$42	17	2			
GLWA Salaries C	CIP2020	FY23		\$42	17	2			
GLWA Salaries C	CIP2020	FY24		\$42	17	2			
GLWA Salaries C	CIP2020	FY25+		\$116	46	6	2020CIP		

					(111 113 11	<u> </u>	-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	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 Update	Cost Est. Prepared					

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

By

Task	Start Date	End Date	Duration
Scope Development	12/30/2018	3/30/2019	90
Procurement	3/31/2019	3/30/2020	365
Project Execution	3/31/2020	10/26/2026	2400
Project Closeout	10/27/2026	1/25/2027	90



111001 CIP#

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	375	1,550	3,108	352	400	2,600	8,385

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 Upda	te Cost Est. Prepared By						

СТА
Bond Proceeds
Construction Bond Fund
Yes

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager	
CIP Number	
Description	

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

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

Driar Vr. A atuala	EV10	EV00	EV01	EV00	EV02	EV04	EVOE	Total
Prior Yr Actuals	F119	FYZU	ΓΙΖΙ	FTZZ	F123	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

	Projec	ct Total E	xpenses	By FY C	ompare	d to Prio	r CIPs (Al	I 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 Statu Active

CIP Type Project

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



111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Project Manager P	roject Ri	sk Matrix Scoring
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	

Project Manager Score

66.8

Review Committee Project Risk Matrix Scoring

		or more manufe cooming
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	

Review Committee Score

77

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Phase not applic	cable					Contract	NA		Stat	us Close	d Out	
Title Prior Year A	Actual E	xpense	S									
Phase Budget	Water						(Cost Allo	cation CTA			
Phase Status	Closed	Out					ı	Funding S	Source			
Start Date									Fund			
End Date							Use	eful Life >	20Yrs?			
Co	ost Estim	ation In	formation			Tot. Fo	edero	al Loan A	mount			
	1		Cost Est. C	lass			Progr	am/Allov	wance Task I	nformatio	n	
	1/1/201	5	Cost Est. De	ate	Р	roject Manag	er					
Metco			Cost Est. So	ource	C	IP Number						
Metco			Cost Est. Pr	epared By	D	escription						
Cost Typ	ре	Fis	scal Year	Expens	e	Fringe Benefit	NonF	Personne	С	omment		
Construction		FY18	3-	\$,594				FY18			
Engineering Serv	/ices	FY18	3-		\$98				FY18			
Unknown		FY18	3-		\$309				EndFY17			
GLWA Salaries C	CIP2020	FY18	3-		\$14	5			FY18			
			Phas	e Total Exc	enses	s By FY (All fig	gures	are in S	51,000's)			
Prior Yr Actual	ls F	Y19	FY20	FY21	FY2			FY24	FY25+	Total		
2,0	020									2,020	0	

111002 CIP#

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

hase GLWA Em	nployees F	roject manage	ement		Contract	٧A	Sta	itus Active	
itle GLWA Salo	aries								
Phase Budget	Water					Cost Alloc	cation CTA		
Phase Status	Active					Funding S	ource Bond	d Proceeds	
Start Date							Fund Con	struction Bor	nd Fund
End Date						Useful Life >2	20Yrs? Yes		
Co	ost Estimat	ion Information	ı		Tot. Fed	leral Loan Ar	mount		\$0
	5	Cost Est.	Class		Pr	ogram/Allow	ance Task	Information	
	1/1/2016	Cost Est.	Date	F	Project Manager				
GLWA		Cost Est.	Source	(CIP Number				
GLWA		Cost Est.	Prepared By		Description				
Cost Typ	ре	Fiscal Year	Expens	е	Fringe BenefitN	onPersonne	(Comment	
SLWA Salaries C	IP2020	FY19		\$21	8	1 (CS-1732		
SLWA Salaries C	CIP2020	FY20		\$21	8	1 (CS-1732		
		Ph	ase Total Exp	ense	s By FY (All figu	res are in \$	1,000's)		
Prior Yr Actua	ls FY		FY21		22 FY23	FY24	FY25+	Total	
		30 3	0 0					60	

111002 CIP#

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	entor Replace	ement			
Phase Budget	Water			Cost Allocation	СТА
Phase Status	Future Plann	ned Start		Funding Source	Bond Proceeds
Start Date		8/27/2016		Fund	Construction Bond Fund
End Date		8/24/2018	Us	eful Life >20Yrs?	Yes
С	ost Estimation	n Information	Tot. Feder	al Loan Amount	
	1	Cost Est. Class	Prog	ram/Allowance	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 Development	8/27/2016	11/25/2016	90
Procurement	11/26/2016	11/26/2017	365
Project Execution	11/27/2017	5/25/2018	179
Project Closeout	5/26/2018	8/24/2018	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

Great Builes Water 2	in the state of th	Lake Holon	Walci IIcaliii	icili i idili, m	iscendine of	, s meenamean make improve						
hase Study and	d Design a	nd Construction	Assistance	Contract	CS-1732	Status Active						
tle CS-1732, N	Miscellanec	ous Mechanical	Improvements a	t Lake Huron W	ΓP							
Phase Budget	Water				Cost Allo	cation CTA						
Phase Status Active					Funding S	ource Bond Proceeds						
Start Date						Fund Construction Bond Fund						
End Date					Useful Life >	20Yrs? Yes						
Co	ost Estimati	on Information		Tot. Fe	ederal Loan A	mount						
	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. Pi	repared By	Description								
Cost Ty	pe	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment						
Engineering Serv	vices	FY19	\$102	-								
Engineering Serv	vices	FY20	\$109									
Task	, ,	Start Date	End Date Du	uration								
. 5		0.401.4001.5	5 100 100 1 5	00								

Task	Start Date	End Date	Duration
Scope Development	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

					. (, 90.		.,,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	102	109	0	0	0	0	0	211

Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

hase Construction					Co	ntract	CC	DN-212		Stat	lus Ac	tive			
itle CON-212, LH V	WTP Elec	ctrical & Mecho	anical Proces	s Imp	roveme	ents, C2									
Misc Mech HVAC Ir	mprvts														
Phase Budget Wa	ıter			Cost Allocation CTA											
Phase Status Act	tive							Funding S	ource	Bono	l Proce	eds			
Start Date	2/15/2018								Fund	Cons	struction	n Bon	d Fund	1	
End Date		/2020				Us	eful Life >	20Yrs?	Yes						
Cost E	Tot. Fe	der	al Loan A	mount											
Cost Est. Class Program/Allowance Task Information															
1/1,	/2016	Cost Est. D	ate	P	roject A	\anage	r								
TetraTech	ource	CIP Number													
TetraTech	repared By	By Description													
Cost Type		Fiscal Year	Expense)	Fringe	Benefit	Von	Personne		C	Comme	nt			
Construction		FY19	\$4	,290											
Construction		FY20	\$1	,743											
Task		Start Date	End Date	Dur	ation										
Scope Developmer	nt .	11/15/2016	2/13/2017		90										
Procurement		2/14/2017	2/14/2018		365										
Project Execution		2/14/2018	1/14/2020		699										
Project Closeout		1/14/2020	5/14/2020		121										
		Pha	se Total Exp	ense	s By FY	(All fig	ure	s are in \$	1,000's	s)					
Prior Yr Actuals	FY19	9 FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Toto	lk			
	4,:	290 1,743	0		0		0	0		0	6,	033			
Proje	act Tot	al Expenses	By FY Cor	mna	red to	Prior	CIF	Ps (ΔII fic	HIIPAG	are	in \$1 (າດດ'•	1		

Proje	ect To	tal I	Expenses	s By Fi	/ C	ompare	d to	Prior	CIPs	(All	figure	s are	in Ş	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



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	0	2,020	4,422	1,882	0	0	0	0	0	8,324

111004 CIP#

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Lake Huron WTP Flectrical Tunnel



Project Engineer/Manager Jorge Nicolas

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 electrical tunnel concrete has failed in the past and has seen emergency repairs. This project will provide permanent concrete and structural improvements to this tunnel that carries the primary electrical feed to the entire plant.

Scope of Work Repairing electrical tunnel to prevent intrusion of water and further structural damage to concrete cables, duct banks and cable trays.

Challenges None.

Project History n/a

Related Project none

Lookup Driver | 1 - Condition

Other Important Info moved construction start to FY2019, added GLWA costs, changed project delivery from DBB to DB

Explanation Not provided.

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Project Manager P	roject Ri	sk Matrix :	Scoring

	~	_
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	

Project Manager Score

46.8

Review Committee Project Risk Matrix Scoring

noview commission making make coming										
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									

Review Committee Score

38.6

111004 CIP#

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

hase Design & (Constructi	ion Assistance			Con	tract	CS-2	245	St	tatus	Active		
itle CS-245 LH V	WTP Electri	ical Tunnel Rel	nabilitation										
Benesch													
Phase Budget	Water						(Cost Allo	cation CT	A			
Phase Status	Active			Funding Source Bond Proceeds									
Start Date									Fund Co	nstruc	ction Bor	nd Fund	
End Date	End Date						Use	eful Life >2	20Yrs? Ye:	S			
Co	st Estimati	on Information	ı			Tot. Fe	dero	ıl Loan Aı	mount				
	3	Cost Est.	Class			Р	rogr	am/Allov	vance Tas	k Info	rmation		
12	2/1/2017	Cost Est.	Date	Р	roject M	anage	er						
consultant					CIP Number								
consultant Ber	consultant Benesch Cost Est. Prepared By				escriptio)	n							
Cost Typ	oe	Fiscal Year	Expense		Fringe Be	enefit	NonF	ersonne		Com	ment		
ngineering Servi	ices	FY19		\$16	_								
ngineering Servi	ices	FY20		\$34									
Task		Start Date	End Date	Dur	ration								
cope Developn	nent	10/31/201	1/29/2017	,	90								
rocurement		1/30/2013	7 1/30/2018		365								
Project Execution	า	1/31/2018	3 4/1/2020)	791								
Project Closeout		4/2/2020	7/1/2020)	90								
		Ph	ase Total Exp	ense	s By FY (All fig	ures	are in \$	1,000's)		_		_
Prior Yr Actuals	s FY1	9 FY20	FY21	FY2	22	FY23		FY24	FY25+	-	Γotal		
		16 3	0		0		0	0		0	50		

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

er								
er								
•					Cost Allo	cation CTA		
re Planne	d Start				Funding S	Bond Pr	oceeds	
						Fund Constru	ction Bond Fund	
					Useful Life >	20Yrs? Yes		
stimation I	nformation			Tot. Fe	ederal Loan A	mount	\$0	
5	Cost Est. C	lass		ı	Program/Allov	vance Task Info	ormation	
2017	Cost Est. D	ate	Р	roject Manag	er			
	Cost Est. So	ource	C	CIP Number				
	Cost Est. P	epared By	D	escription				
F	iscal Year	Expens	е	Fringe Benefit	NonPersonne	Cor	nment	
20 FY2	20		\$21	8	1	CS-245		
20 FY2	21		\$4	2	0	CS-245		
	stimation I 5 2017 F 020 FY2	stimation Information 5	Stimation Information 5	stimation Information 5	Stimation Information 5	Stimation Information Tot. Federal Loan A 5	Fund Constru Useful Life >20Yrs? Yes Stimation Information 5	Fund Construction Bond Fund

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

hase not applicab	le				Contract N	Α	Sta	tus Closed (Out
itle Prior Year Actu	ıal Exper	nses							
Phase Budget Wa	ter					Cost Allo	cation CTA		
Phase Status Clo	sed Out					Funding S	ource		
Start Date							Fund		
End Date					l	Jseful Life >2	20Yrs?		
Cost E	stimatio	n Information			Tot. Fed	eral Loan Aı	mount		\$0
	1	Cost Est. C	Class		Pro	gram/Allov	vance Task	Information	
1/1/	′2018	Cost Est. D	ate	Pro	oject Manager				
GLWA		Cost Est. S	ource	CI	P Number				
GLWA		Cost Est. P	repared By	De	escription				
Cost Type		Fiscal Year	Expens	e F	ringe BenefitNo	nPersonne	(Comment	
ngineering Service	s F	Y18-		\$62		F	FY18		
		Pha	se Total Exp	enses	By FY (All figur	es are in \$	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22		FY24	FY25+	Total	
62								62	

CIP

2018

FY16

FY17

FY18

1,000

FY19

3,000

FY20

1,600

GLWA FY 2020-2024 CIP

FY25

0

Total

5,600

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Phase Construction					Co	ntract	NA			Statu	is F	uture F	Plannec	d Start	
Title LH WTP Electric	cal Tunne	l Rehabilitatio	n												
Phase Budget Wat	ter							Cost Allo	cation	СТА					
Phase Status Futu	ure Planne	ed Start					I	Funding S	ource	Bond I	Proc	eeds			
Start Date									Fund	Constr	ructi	on Bor	nd Fund		
End Date							Use	eful Life >	20Yrs?	Yes					
Cost E	stimation	Information				Tot. Fe	derd	al Loan A	mount						
	1	Cost Est. C	lass			P	rogr	am/Allov	vance	Task In	nforn	nation			
1/1/	′2017	Cost Est. D	ate	Р	roject N	\anage	r								
Benesch		Cost Est. So	ource	C	IP Num	ber									
Benesch		Cost Est. Pi	epared By	D	escripti	on									
Cost Type		Fiscal Year	Expense		Fringe I	BenefitN	lonf	Personne		Co	omr	nent			
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										
		Pha	se Total Exp	ense	s By FY	(All figu	ures	are in \$	1,000's	s)					
Prior Yr Actuals	FY19	FY20	FY21	FY	22	FY23		FY24	FY2	5+	To	otal			
	36	4,232	0		0		0	0		0		4,600			
Proje	ct Tota	Expenses	By FY Cor	mpa	red to	Prior (CIP	s (All fig	ures	are ir	n \$1	,000'	s)		

FY21

FY22

FY23

FY24

0



111004 CIP#

Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0		116	414	4,296	6				0	4,832
2020	0	0	62	384	4,296	6	0	0	0	0	4,748



111006 CIP#

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

☐ Innovation☐ Water MP Right Sizing

☐ Reliability/Redundancy
☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Raw Water Flow Meter



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 LvI 2 Treatment Plants and Facilities

Class Lvl 3 Lake Huron

Location Saint Clair County

Fund and Cost Center Water - 5519-882111

Project Significance
The filter instrumentation and raw water metering at the Lake Huron WTP is non-functioning and is in need of replacement. Replacement of this equipment is needed for reliable plant operations.

Scope of Work
Replacement of the filter instrumentation and raw water metering equipment.

Challenges
The existing raw water venturi meters do not have standard dimensions and determining accuracy may be difficult.

Project History
Related Project
none

Lookup Driver N/A - Under Procurement

Other Important Info Design is in progress by TetraTech under CS-1771

Explanation N/A - Under Procurement



111006 CIP#

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

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

64.2

Review Committee Project Risk Matrix Scoring

		o
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	

Review Committee Score

62.2

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

nase not appli	icable	Э					С	ontract	NΑ	\	St	atus	Closed	Out	
tle Prior Year	Actu	al Exp	ense	S											
Phase Budget	Wate	er								Cost Allo	cation CT/	4			
Phase Status	Clos	ed Ou	ı†							Funding	Source				
Start Date											Fund				
End Date									Us	eful Life >	20Yrs?				
С	ost Es	timati	on In	formation				Tot. Fe	der	al Loan A	mount				
		1		Cost Est. C	lass			F	rog	ram/Allo	wance Tas	k Info	rmation		
	1/1/2	2016		Cost Est. D	ate	P	roject	Manage	er						
GLWA				Cost Est. So	ource	(CIP Nu	mber							
GLWA				Cost Est. Pi	epared By		Descrip	otion							
Cost Ty	/pe		Fis	scal Year	Expens	e	Fringe	e Benefit	Non	Personne		Con	nment		
ngineering Ser	vices		FY18	8-		\$481					FY18				
nknown			FY18	3-		\$1					FY16				
nknown			FY18	8-		\$252					FY17				
				Pha	se Total Exp	ense	s By F	Y (All tid	ure	s are in S	S1.000's)				
Prior Yr Actuc	als	FY1	9	Pha: FY20	FY21	ense FY		Y (All fig FY23	ure	FY24	FY25+		Total		

GLWA Salaries CIP2020

FY22

GLWA FY 2020-2024 CIP

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

1 CS-1771

Phase GLWA Emp	oloyees Pr	oject manager	ment		Contract	NA	Status	Active	
Title GLWA Salari	ies								
Phase Budget W	Vater					Cost Allo	cation CTA		
Phase Status A	ctive					Funding S	Source Revenue	e Financed Capi	tal
Start Date							Fund Improve	ement & Extension	n Fun
End Date						Useful Life >	20Yrs? No		
Cos	t Estimatio	on Information			Tot. Fe	ederal Loan A	mount		\$0
	1	Cost Est. C	lass		F	Program/Allov	wance Task Info	ormation	
1,	/1/2016	Cost Est. D	ate	P	roject Manage	er			
GLWA	<u>'</u>	Cost Est. So	ource	C	CIP Number				
GLWA		Cost Est. P	repared By	0	Description				
Cost Type	e	Fiscal Year	Expens	е	Fringe Benefit	VonPersonne	Con	nment	
GLWA Salaries CIF	P2020	FY19		\$21	8	1	CS-1771		
GLWA Salaries CIF	P2020	FY20		\$21	8	1	CS-1771		
GLWA Salaries CIF	P2020	FY21		\$21	8	1	CS-1771		

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

\$21

_				O TOTAL EXP	<u> </u>	. (/ til 11901	00 di 0 iii q	.,000	
	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		30	30	30	30	0	0	0	120

111006 CIP#

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

Phase Construction	Contract NA	Status Future Planned Start

Title LH WTP Replacement of Filter Instrumentation and Raw Water Flow Metering 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 Alle	ocation CTA							
Funding	Source Revenue Financed Capital							
	Fund Improvement & Extension Fun							
Useful Life	>20Yrs? No							
Tot. Federal Loan A	Amount							
Program/Allowance Task Information								
Project Manager								
CIP Number								

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY20	\$3,248			
Construction	FY21	\$3,248			
Construction	FY22	\$3,220			

Description

Task	Start Date	End Date	Duration
Scope Development	3/5/2018	6/3/2018	90
Procurement	6/4/2018	6/2/2019	363
Project Execution	6/3/2019	11/26/2021	907
Project Closeout	11/27/2021	2/25/2022	90

Thate folds Expenses by 11 (7th ngoles are in \$1,000 s)										
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	3,248	3,248	3,220	0	0	0	9,716		

Project Closeout

GLWA FY 2020-2024 CIP

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

Ne see a Charalta and al Design		- A!-l			OC 1771		Nation A - 15 -	
Phase Study and Desig				ontract			Status Active	
itle CS-1771 LH WTP R	eplacement of Filt	er Instrument	ation and R	aw Wate	r Flow Meteri	ng Impro	vements	
Phase Budget Water					Cost Allo	cation C	TA	
Phase Status Active					Funding S	Source Re	evenue Finance	d Capital
Start Date						Fund In	nprovement & Ex	xtension Fun
End Date			Useful Life >20Yrs? No					
Cost Estin	nation Information			Tot. Fe	deral Loan A	mount		
	5 Cost Est. C	Class		Р	rogram/Allov	wance Ta	sk Information	
1/1/201	6 Cost Est. D	ate	Project	Manage	r			
GLWA	Cost Est. S	ource	CIP Nu	mber				
GLWA	Cost Est. P	repared By	Descrip	otion				
Cost Type	Fiscal Year	Expense	e Fringe	e Benefit	IonPersonne		Comment	
Engineering Services	FY19		\$25					
Engineering Services	FY20		\$55					
Engineering Services	FY21		\$55					
Engineering Services	FY22		\$83					
Task	Start Date	End Date	Duration					
Scope Development	7/26/2016	10/24/2016	9	0				
Procurement	10/25/2016	10/25/2017	36	5				
Project Execution	10/26/2017	11/26/2021	149	2				

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

119

Prior Yr Actuals	FY19 FY20		FY21	FY22	FY23	FY24	FY25+	Total
	25	55	55	83	0	0	0	218

3/26/2022

11/27/2021



111006 CIP#

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

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	600	12,150	11,780				0	0	24,630
2019	0	253	643	43	8,647	9,816	6,909	4		0	26,315
2020	0	0	734	55	3.333	3.333	3.333	0	0	0	10.788



111007 CIP#

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

☐ Innovation ☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Raw sludge clarifier at Lake Huron WTP



Project Engineer/Manager Todd King

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/7/2015

Year Project Added to CIP 2016

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 This project will provide a study and design on the structural integrity, capacity and performance requirements for pumps and piping to meet maximum design flows. The construction services will re-construct the raw sludge clarifiers and sludge pumping and conveyance system to meet the plant demands for pumping and conveying raw sludge to the existing lagoons.

Scope of Work The sludge clarifier is integral to the backwash water treatment system and the walls of the clarifiers are severely bowed and in the process of failing. If the clarifier and backwash tank fail, the ability to backwash the Lake Huron WTP filters will be lost and result in the loss of the Lake Huron WTP to the system until a temporary bypass can be arranged.

Challenges Improvements will require coordination with plant operations (filter backwashing).

Project History The clarifier/backwash structure is original to the plant. The tank walls appear to have been inadequately designed and/or constructed to withstand the loading of the surround soils.

Related Project This project is being designed by Brown & Caldwell under Contract No. CS-171.

Lookup Driver 1 - Condition

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

Explanation Not provided.



111007 CIP#

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

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

62.2

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

53.2

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

hase GLWA En		s Projec	t managen	nent		Contract N	1A	State	us Active		
Phase Budget					Cost Allocation CTA]
Phase Status	Active						Funding S	ource Bond	Proceeds		
Start Date								Fund Const	truction Bor	nd Fund	
End Date						I	Useful Life >	20Yrs? No			
C	ost Estim	ation Ir	nformation			Tot. Fed	eral Loan A	mount		\$0	
		5	Cost Est. C	lass		Pro	ogram/Allov	vance Task I	nformation		
1/1/2016 Cost Est. Date		ate	P	Project Manager							
GLWA Cost Est. Source		C	CIP Number								
GLWA Cost Est. Prepared By		epared By		Description							
											_
Cost Ty	pe	Fi	scal Year	Expens	e	Fringe BenefitNo	onPersonne	С	omment		
GLWA Salaries (CIP2020	FY1	9		\$15	6	1	CS-171			
GLWA Salaries (CIP2020	FY2	0		\$15	6	1	CS-171			
GLWA Salaries (CIP2020	FY2	1		\$15	6	1	CS-171			
			Phas	se Total Exp	ense	s By FY (All figu	res are in S	1,000's)			
Prior Yr Actuo	als F	Y19	FY20	FY21	FY		FY24	FY25+	Total		
		22	22	22		0 0	0	0	66		

111007 CIP#

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

Phase Construction	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 Estimo	ition 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 BenefitNonPerso	onne Comment
Construction	FY20	\$4,450		
Construction	FY21	\$4,450		

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

			<u> </u>		. (,		.,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	4,450	4,450	0	0	0	0	8,900

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		Cost Allocation	CTA
Phase Status Under Prod	curement	Funding Source	Revenue Financed Capital
Start Date	10/2/2017	Fund	Improvement & Extension Fun
End Date		Useful Life >20Yrs?	No
Cost Estimati	on 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	

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

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	8/30/2021	1398
Project Closeout	8/31/2021	3/24/2021	-160

Thase for all expenses by 11 (7 th lightes are in \$1,000 s)								
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	172	188	189	0	0	0	0	549

GLWA FY 2020-2024 CIP 111007 CIP# Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System

Phase not applicable		Contract NA				S Closed Out	t			
itle Prior Year Actual E	Expenses									
Phase Budget Water										
Phase Status Closed	Out				Funding So	ource				
Start Date						Fund				
End Date				L	seful Life >2	OYrs?				
Cost Estim	nation Information	ı		Tot. Fede	eral Loan An	nount				
	5 Cost Est.	Class		Pro	gram/Allow	ance Task In	formation			
1/1/201	1/1/2016 Cost Est. Date			Project Manager						
GLWA	Cost Est.	Source	CIP Number							
GLWA	Cost Est.	Prepared By	Descr	iption						
Cost Type	Fiscal Year	Expense	Fring	ge BenefitNo	nPersonne	Со	mment			
Engineering Services	FY18-	\$	5274		F	Y18				
Unknown	FY18-		\$9		F	Y17				
	Ph	ase Total Exp	enses By	FY (All figur	es are in \$1	,000's)				
Prior Yr Actuals	FY19 FY20	FY21	FY22	FY23	FY24	FY25+	Total			
283							283			
Project	Total Expense	s By FY Cor	npared	to Prior Cl	Ps (All fig	ures are in	\$1,000's)			

		<u> </u>									•	
С	IP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	8			50	920	6,163				0	0	7,133
2019	9	0	9	422	212	1,612	3,608	1,221			0	7,084
2020	0	0	0	283	194	4,660	4,661	0	0	0	0	9,798



111008 CIP#

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

	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
	NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

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.
•	Modernize lab and admin building offices, common areas, conference room, lunch room, lobby, entry-way, locker rooms, showers, and bathrooms.
Challenges	
Project History	
Related Project	
Lookup Driver	
Other Important Info	
Explanation	



111008 CIP#

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

Project Manager Project Risk Matrix Scoring								
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							

Project Manager Score

47.2

Review Committee Project Risk Matrix Scoring

	or mon manus cooming	
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	

Review Committee Score

40.6

111008 CIP#

GLWA FY 2020-2024 CIP 111008 CIP# Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

hase Budget	Water		Cost Allocation	CTA				
Phase Status	Future Planr	ned Start	Funding Source	Revenue Financed Capital				
Start Date			Fund	Improvement & Extension Fun				
End Date			Useful Life >20Yrs? No					
Co	Cost Estimation Information		Tot. Federal Loan Amount	\$0				
	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		Cost Est. Prepared By	Description					

Phase Total Ex	(penses B	y FY (All figures	are in \$	1,000's
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		11143	C TOTAL EXP	Jenses by i	1 (/ 111 11901	CS GIC III Q	1,000 5)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

GLWA FY 2020-2024 CIP 111008 CIP# Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin

Phase Study					Contract	NA		Status	Future F	lanned Start
Title LH WTP Archite	ectural Pr	ogramming -	Laboratory c	and Admi	n Building A	Architectural	Improve	ements	Study	
Phase Budget Wa	ter			Cost Allocation CTA						
Phase Status Futu	ure Plann	ed Start				Funding	Source	Revenu	ue Finance	ed Capital
Start Date							Fund	Improv	ement & E	Extension Fur
End Date	End Date				Useful Life >20Yrs? Yes					
Cost E	Information			Tot. Fe	ederal Loan A	Amount				
	5 Cost Est. Class				F	Program/Allo	wance 1	Task Inf	ormation	
1/1/	1/1/2016 Cost Est. Date		ate	Proje	ect Manage	er				
GLWA	LWA Cost Est. Source		ource	CIP Number						
GLWA	GLWA Cost Est. Prepa			Desc	ription					
Cost Type Fiscal Year Engineering Services FY25+		Expense	∋ Frin \$300	ige Benefil	NonPersonne	2020CII		mment		
	, <u> </u>									
Task Scope Developmen	\ †	Start Date 8/1/2017	End Date 12/29/2017	Duratio	150					
Procurement	11	12/29/2017	7/27/2017		210					
Project Execution		7/27/2018	7/27/2019		365					
Project Closeout		7/27/2019	10/25/2019		90					
		Pha	se Total Exp	enses By	FY (All fig	ures are in S	\$1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY2		Total	
		0 0	0	l	0	0 0)	300	300	
Proje	ct Tota	l Expenses	By FY Cor	mpared	l to Prior	CIPs (All fig	gures	are in	\$1,000's	<u> </u>

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



111009 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu New

CIP Type Project



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 Lvl 3 Lake Huron

Location Saint Clair County

Fund and Cost Center

Project Significance 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 high-lift pumping units will also serve a longer term need to better match lower diurnal demands seen at the Lake Huron WTP. Installation of the new water production flow meter can only occur after the 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.

Related Project

Lookup Driver 6 - Public Benefit

Other Important Info

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



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

3 Allows for relocation of 96in main

111009 CIP#

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

Project Manager Project Risk Matrix Scoring								
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						

Project Manager Score

68

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

62.2

Prior Yr Actuals

FY19

GLWA FY 2020-2024 CIP

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

Phase Design ar	nd Build				Contract	S	Status	Future Planned Start		
Title LH-WTP Tw	o 35-MGD H	High Lift Pumps,	Water Produ	uction	n Flow Meters a	nd Yard Pipir	ng Improv	emen	ts	
Phase Budget	Water			Cost Allocation CTA						
Phase Status	Future Plan	ned Start		Funding Source Bond Proceeds						
Start Date				Fund Construction Bond Fund						
End Date				Useful Life >20Yrs? Yes						
Co	ost Estimatio	on Information		Tot. Federal Loan Amount \$0						
	lass	Program/Allowance Task Information								
9	9/26/2018 Cost Est. Date		ate	Project Manager						
		Cost Est. So	ource	CIP Number						
		Cost Est. Pr	epared By	ed By Description						
Cost Ty	pe	Fiscal Year	Expense		Fringe Benefit	VonPersonne		Con	nment	
Design-Build		FY20	\$9	,000			2020CIP			
Design-Build		FY21	\$10	,000			2020CIP			
Design-Build		FY22	\$7	,000			2020CIP			
		Pha	se Total Exp	ense	s By FY (All fig	ures are in S	31.000's)			

FY23

FY24

FY25+

Total

26,000

FY22

7,000

FY21

10,000

FY20

9,000

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

Phase GLWA Employe	es Projec	t managen	nent		Contract	NA	S	Status New				
Title GLWA Salaries												
Phase Budget Water	-					Cost Allo	cation C	ΤA				
Phase Status New						ource Bo	and Proceeds					
Start Date				Fund Construction Bond Fund								
End Date				Useful Life >20Yrs? Yes								
Cost Esti	mation Ir	formation			Tot. Fe	ederal Loan A	mount		\$0			
	5 Cost Est. Class			Program/Allowance Task Information								
1/1/20	16	Cost Est. Date			Project Manager							
GLWA	Cost Est. Source			CIP Number								
GLWA	GLWA Cost Est. Prepared				escription							
Cost Type	Fi	scal Year	Expens	е	Fringe Benefit	NonPersonne		Comment				
GLWA Salaries CIP2020	D FY1	9		\$11	4	1	2020CIP					
GLWA Salaries CIP2020) FY2	0		\$21	8	1.	2020CIP					
GLWA Salaries CIP2020) FY2	1		\$21	8	1 :	2020CIP					
GLWA Salaries CIP2020	FY2	2		\$21	8	1	2020CIP					
		Phas	se Total Exp	enses	By FY (All fig	ures are in S	1.000's)					
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY24	FY25+	Total				
	16	30	30		30			106				
Project	t Total F	ynenses	By FY Co	mpar	red to Prior	CIPs (All fic	TIII'AS AI	re in \$1.000'	(e)			

							The second secon			•	
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

✓ Water MP Right Sizing

✓ Reliability/Redundancy

✓ NEWTP Repurposing

Project Statu Reclassified

CIP Type Project

Project Engineer/Manager Timothy Kuhns

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 Flow control valves are needed at the terminus of the proposed 81-inch Waterworks Park to Northeast finish water transmission system. This project is needed to control flow rates from Waterworks Park to the re-purposed Northeast system.

Scope of Work The work includes providing and installing new flow control station at the NE WTP site.

Challenges Sequencing of construction with the phase-over of Northeast WTP becoming a booster station. Connecting to existing piping and/or reservoirs will require reservoir shut and isolation, requiring close coordination with operations.

Project History

Related Project

Lookup Driver 2 - Performance

Other Important Info

Explanation Not provided.

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

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

46

Review Committee Project Risk Matrix Scoring

		oo a
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	

Review Committee Score

62.2

112001 CIP#

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

Phase Budget	Water		Cost Allocatio	n CTA				
Phase Status	Cancelled		Funding Sourc	e Bond Proceeds				
Start Date			Fun	d Construction Bond Fund				
End Date			Useful Life >20Yrs? Yes					
Co	ost Estimation	n Information	Tot. Federal Loan Amour	nt \$0				
	5 Cost Est.		Program/Allowance Task Information					
	1/1/2016	Cost Est. Date	Project Manager					
GLWA		Cost Est. Source	CIP Number					
GLWA		Cost Est. Prepared By	Description					

That fold Expenses by 11 (7th ngoles are in \$1,000 s)										
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	0	0	0	0	0	0	0		

Project Closeout

GLWA FY 2020-2024 CIP

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

Phase Design a	nd Build			Contra	Status Cancelled			
itle Phase 1 W	/WP to NE Tro	ansmission - Flo	w Control Sto	ation at NE WTP				
Phase Budget	Water				Co	СТА		
Phase Status	Cancelled				Fun	Bond Proceeds		
Start Date						Fund	Construction Bond Fund	
End Date					Useful			
С	ost Estimatio	on Information		Tot	. Federal L			
			lass		Program	/Allowance	Task Information	
			Cost Est. Date		ager			
Jacobs		Cost Est. S	Cost Est. Source					
Jacobs		Cost Est. P	repared By	Description				
Task	,	Start Date	End Date	Duration				
cope Develop		4/1/2019	6/30/2019	90				
rocurement		7/1/2019	6/30/2020	365				
roject Executio	on	7/1/2020	6/28/2022	727				

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

9/27/2022

6/29/2022

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			800						0	0	800
2019	0					700	1,988	112		0	2,800
2020	0	0		0	0	0	0	0	0	0	0

90

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



112002 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Low Lift Pumping Plant at Northeast WTP



Project Engineer/Manager 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

Scope of Work 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.

Challenges

Project History

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.

Explanation



112002 CIP#

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

Project Manager Project Risk Matrix Scoring								
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							

Project Manager Score

51.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

51.6

112002 CIP#

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

n ase GLWA Emp H e GLWA Salai	,	roject mand	agement		C	Contract N.	A	Stat	rus Active	
Phase Budget \	Water	Vater			Cost Allocation CTA					
Phase Status	Active						Funding S	ource Bond	l Proceeds	
Start Date								Fund Cons	truction Bor	nd Fund
End Date	;					U	seful Life >2	20Yrs? Yes		
Co	st Estimati	on Informat	ion			Tot. Fede	eral Loan Ar	nount		\$0
	1	Cost E	st. Class			Pro	gram/Allow	ance Task I	Information	
1	/1/2016	Cost E	st. Date	F	Project Manager					
GLWA		Cost E	st. Source	(CIP Number					
GLWA		Cost E	st. Prepared	By	Descrip	otion				
Cost Typ	e	Fiscal Ye	ar Exp	ense	Fringe	e BenefilNo	nPersonne	C	Comment	
SLWA Salaries CI		FY19		\$20		8		CS-1744		
SLWA Salaries Cl	P2020	FY20		\$10		4	00	CS-1744		
			Phase Total	Expense	s By F	Y (All figure	es are in S	I,000's)		
Prior Yr Actuals	FY1				22	FY23	FY24	FY25+	Total	
		29	14	0	0	0	0	0	43	

Project Closeout

GLWA FY 2020-2024 CIP

112002 CIP#

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

							. •			
Phase Study and De	esign and	Construction	Assistance		Contrac	t CS-1744	Status	Active		
Title CS-1744, FKE,	NE WTP Lo	w Lift Pumpir	ng Plant Caiss	son Re	ehabilitation					
FKE										
Phase Budget Wa	ater					Cost Allo	cation CTA			
Phase Status Act	tive					Funding S	ource Bond Pro	oceeds		
Start Date							Fund Construc	ction Bond Fund		
End Date						Useful Life >	20Yrs? Yes			
Cost E	Cost Estimation Information				Tot.	Federal Loan A	mount			
	2 Cost Est. Class			Program/Allowance Task Information						
1/1	/2016	Cost Est. D		Project Manager						
GLWA	72010	Cost Est. S			CIP Number					
GLWA		Cost Est. P	repared By	0	Description					
Cost Type		Fiscal Year	Expense)	Fringe Bene	fitNonPersonne	Com	nment		
Engineering Service	es FY	19		\$60						
Engineering Service	es FY	20		\$26						
Task		Start Date	End Date	Dui	ration					
Scope Developmer	nt	8/18/2015	11/16/2015		90					
Procurement		11/17/2015	11/16/2016		365					
Project Execution		6/15/2016	1/31/2020		1325					

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

					1 11 11 11 3 11		7 7	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	60	26	0	0	0	0	0	86

3/31/2020

1/1/2020

GLWA FY 2020-2024 CIP

112002 CIP#

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

hase Construction			C	ontract C	ON-215A	Status	Active	
itle NE WTP Low Lift Pu	mping Plant Cai	sson Rehabilita	tion					
Phase Budget Water			Cost Allocation CTA					
Phase Status Active					Funding So	urce Bond Pr	oceeds	
Start Date					ı	Fund Constru	ction Bo	nd Fund
End Date				ι	Jseful Life >20	Yrs? Yes		
Cost Estim	ation Informatio	1		Tot. Fede	eral Loan Am	ount		
1	Cost Est.	Class		Pro	gram/Allowa	ınce Task Inf	ormation	
	Cost Est.	Date	Project	Manager				
	Source	CIP Number						
	Prepared By	Descrip	lion					
Cost Type	Fiscal Year	Expense	e Fringe	BenefitNo	nPersonne	Cor	nment	
Construction	FY19	Q.	\$800					
Construction	FY20	9	\$163					
Task	Start Date	End Date	Duration					
Scope Development	8/17/201	7 11/15/2017	90)				
Procurement	11/16/201	7 5/23/2018	188	3				
Project Execution	5/1/201	8 11/1/2019	549					
Project Closeout	1/1/202	0 3/31/2020	90)				
	Ph	ase Total Exp	enses By FY	' (All figur	es are in \$1,	000's)		
Prior Yr Actuals F	Y19 FY20	FY21	FY22	FY23	FY24	FY25+	Total	

112002 CIP#

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

nase not applicable	Э				Contract	NA	Sta	itus Closed C)ut	
itle Prior Year Actua	al Expen	ses								
Phase Budget Wate	er					Cost Allo	cation CTA			
Phase Status Clos	ed Out					Funding S	ource			
Start Date							Fund			
End Date						Useful Life >	20Yrs?			
Cost Es	timation	Information			Tot. F	ederal Loan A	mount			
	1	Cost Est. C	Class			Program/Allov	vance Task	Information		
1/1/2	2016	Cost Est. D	ate	P	roject Manag	er				
GLWA		Cost Est. S	ource	CIP Number						
GLWA		Cost Est. Prepared By			Description					
Cost Type		Fiscal Year	Expens	e	Fringe Benefi	NonPersonne	(Comment		
Construction	F`	/18-	·	\$257	7.1.9.2.2.1.2.1		2020CIP			
Engineering Services	F`	Y18-		\$42			2020CIP			
Unknown	F`	1 18-		\$11			FY16			
Unknown		/18 -		\$152			FY17			
GLWA Salaries CIP20:	20 F`	/18-		\$8	3	0	2020CIP			
		Pho	se Total Exp	ense	s By FY (All fig	gures are in \$	1,000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY:		FY24	FY25+	Total		
473								473		
Proie	ct Tota	Expenses	By FY Co	mpa	red to Prior	CIPs (All fic	ures 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



112003 CIP#

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

] Innovation
Water MP Right Sizing
Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

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 Lvl 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.
Challenges	
Project History	
Related Project	
Lookup Driver	
Other Important Info	Identified in the 2015 WMPU
Explanation	



112003 CIP#

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Project Manager F	Project Manager Project Risk Matrix Scoring							
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							

Project Manager Score

53.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

50.8

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Phase Design &	Constructio	n Assistance			Contract	NA	Status	Future Planned Start
Title NE WTP Hig	gh-Lift Pump	ing Station Ele	ctrical Impro	vemei	nts			
Phase Budget	Water					Cost Allocation	on CTA	
Phase Status	Future Plan	ned Start				Funding Sour	ce Bond Pro	oceeds
Start Date						Fui	nd Construc	ction Bond Fund
End Date						Useful Life >20Yr	rs? Yes	
Co	ost Estimatio	n Information			Tot. Fe	deral Loan Amou	ınt	
	5	Cost Est. C	lass		P	rogram/Allowan	ce Task Info	rmation
	1/1/2016	Cost Est. D	ate	Pı	roject Manage	r		
GLWA		Cost Est. S	ource	С	IP Number			
GLWA		Cost Est. P	repared By	D	escription			
								,
Cost Ty	pe	Fiscal Year	Expense)	Fringe Benefit	lonPersonne	Com	nment
Other		FY25+	\$62	,234		2020)CIP	
Task	<u> </u>	Start Date	End Date	Dur	ation			
Scope Develop	ment	8/18/2025	11/16/2025		90			
Procurement		11/17/2025	10/1/2026		318			
Project Executio	n	12/15/2026	12/11/2030		1457			
Project Closeou	†	12/12/2030	3/28/2031		106			

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

			<u> </u>		· (· · · · · · · · · · · · · · · · · ·	<u> </u>	- / /	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	62,234	62,234

112003 CIP#

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

Phase Construction

Contract NA Status Future Planned Start

Title NE WTP High-Lift Pumping Station Electrical Improvements

Phase Budget Water

Phase Status Future Planned Start

Start Date

Contract NA Status Future Planned Start

Funding Source Bond Proceeds

Fund Construction Bond Fund

Cost Estimation Information

5 Cost Est. Class

11/16/2018 Cost Est. Date

GLWA Cost Est. Source

GLWA Cost Est. Prepared By

Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

CIP Number

Description

Task	Start Date	End Date	Duration
Scope Development	8/18/2025	11/16/2025	90
Procurement	11/17/2025	5/24/2026	188
Project Execution	5/25/2026	5/17/2030	1453
Project Closeout	5/18/2030	8/16/2030	90

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

Thase folds expenses by 11 (All lightes die in \$1,000 s)								
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

112003 CIP#

Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements

nase GLWA Emp	ployees Projec	ct managem	ent	C	ontract NA	4	Status	Future Planned Start	
lle GLWA Salai	ries								
Phase Budget V	Water					Cost Allocation	СТА		
Phase Status F	-uture Planned	d Start				Funding Source	Bond Pr	oceeds	
Start Date						Fund	Constru	ction Bond Fund	
End Date					U	seful Life >20Yrs?	Yes		
Cos	st Estimation II	nformation			Tot. Fede	ral Loan Amount		\$0	
	5	Cost Est. Clo	ass		Prog	gram/Allowance	Task Info	ormation	
1	1/1/2016	Cost Est. Da	te	Project	Manager				
GLWA		Cost Est. So	urce	CIP Nu	mber				
GLWA		Cost Est. Pre	pared By	Descrip	otion				
		Phase	e Total Exp	enses By F	Y (All figure	es are in \$1,000'	s)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24 FY2	25+	Total	
	0	0	0	0	0	0	0	0	
		_	EV C		- D.: OII			\$1,000L)	

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0								62,265	0	62,265
2020	0	0		0	0	0	0	0	0	62,234	62,234

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP NE - WTP Relocation of 12" service line at front of plant

☐ Innovation	Project Statu	Cancelled		
☐ Water MP Right Si	zing CIP Type	Project		
☐ Reliability/Redund		•		
□ NEWTP Repurposi	ng			
Project Engineer/Ma	naaer Govind Patel		Budget	Water
•	nager Grant Gartrell		Class Lvl 1	
	Dept Water Eng			Treatment Plants and Facilities
	ss Case Prepared 1/4/2	018	Class Lvl 3	
•	ect Added to CIP		Location	City of Detroit
•			Fund and Cost Center	,
Project Significance	GLWA is charged by D	WSD for use of this w	vater which represents a substa	llong 8 Mile Road in front of the plant. ntial long term cost. Project involves exiting the plant for its service water
Scope of Work		ng to an existing GL	•	owned by DWSD and connect it via ne plant grounds. Work involves site
Challenges	Coordinating with DWS	D on the disconnec	ction from its 12" water main.	
Project History				
Related Project				
Lookup Driver				
Other Important Info				
Explanation				



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

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

Project Manag	ger Project Risk M	atrix Scoring	Project Manager Score			
Criteria	Score	Comment	24			
Condition	1		27			
Efficiency and Innovation	1					
Financial	3					
D&M	1					
Performance (Service Level/Reliability)	1					
Public Benefit	1					
Public Health & Safety	1					
Regulatory (Environmental/Legal)	1					
Review Comm	nittee Project Risk	Matrix Scoring	Review Committee Score			
Criteria	Score	Comment	22			
Condition	1					
Efficiency and Innovation	1					
Financial	2					
O&M	1					
Performance (Service Level/Reliability)	1					
Public Benefit	1		1			

112004 CIP#

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

hase Budget Water		Cost Allocation	n CTA
Phase Status Future Plani	ned Start	Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs	? Yes
Cost Estimatio	n Information	Tot. Federal Loan Amoun	\$0
5	Cost Est. Class	Program/Allowance	e Task Information
1/1/2016	Cost Est. Date	Project Manager	
GLWA	Cost Est. Source	CIP Number	
GLWA	Cost Est. Prepared By	Description	

		1 11 01 0	O TOTAL EXP	7011303 D	. (/90.	oo al o iii q	.,000,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

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

			•					
ase Design and Build		Contract NA	Status Future Planned Start					
le NE - WTP Relocation	of 12" service line at front of	plant						
Phase Budget Water		Cost Allocation CTA						
Phase Status Future Pla	nned Start	Funding	g Source Bond Proceeds					
Start Date	6/23/2018		Fund Construction Bond Fund					
End Date	6/22/2021	Useful Life	>20Yrs? Yes					
Cost Estimat	ion Information	Tot. Federal Loan Amount						
5	Cost Est. Class	Program/All	lowance Task Information					
12/26/2017	Cost Est. Date	Project Manager						
GLWA Engineering	Cost Est. Source	CIP Number						
G. Gartrell	Cost Est. Prepared By	Description						

Task	Start Date	End Date	Duration
Scope Development	6/23/2018	9/21/2018	90
Procurement	9/22/2018	9/22/2019	365
Project Execution	9/23/2019	3/23/2021	547
Project Closeout	3/24/2021	6/22/2021	90

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

Prior Yr Actuals	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)

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	Project Statu New		
☐ Water MP Right Sizing	CIP Type Project		
☐ Reliability/Redundancy	on type ways		
□ NEWTP Repurposing			
Project Engineer/Manager	Peter Fromm	Budget	Water
Manager	Grant Gartrell	Class Lvl 1	Water
Manager	Ordin Odnieli	Class LVI I	water
Managing Dept			
•	Water Eng		Treatment Plants and Facilities
Managing Dept	Water Eng Prepared 10/1/2018	Class Lvl 2 Class Lvl 3	Treatment Plants and Facilities

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.
Project History	
Related Project	
Lookup Driver	
Other Important Info	
Explanation	



112005 CIP#

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

Project Manager F	Project Manager Project Risk Matrix Scoring									
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									

Project Manager Score

72

Review Committee Project Risk Matrix Scoring

morrow communications manuscocoming										
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									

Review Committee Score

61

112005 CIP#

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

Phase GLWA Em	hase GLWA Employees Project management					Contract NA					tart
fitle GLWA Salo	aries										
Phase Budget	Water			Cost Allocation					CTA		
Phase Status	Future Pla	anned Start					Funding \$	ource Bon	d Proceeds		
Start Date								Fund Cor	nstruction Bor	nd Fund	
End Date						U	seful Life >2	20Yrs? Yes			
Cost Estimation Information						Tot. Fede	eral Loan Ar	mount			\$0
	5	Cost Est	Class		Program/Allowance Task Information						
	1/1/2018	Cost Est	Date	P	roject M	anager					
GLWA		Cost Est	Source	С	IP Numl	oer					
GLWA		Cost Est	Prepared By	By Description							
Cost Ty	pe	Fiscal Year	Expens	е	Fringe B	enefitNo	nPersonne		Comment		
GLWA Salaries C	CIP2020	FY20		\$4		2	02	2020CIP			
GLWA Salaries C	CIP2020	FY21		\$5		2	02	2020CIP			
		Pł	nase Total Exp	enses	By FY (All figure	es are in S	1,000's)			
Prior Yr Actua	ls FY	19 FY20	FY21	FY2		FY23	FY24	FY25+	Total		
			6 7						13		

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

Phase Construction	-				Co	ntract	TRD		Status	Futura	Planned S	tart
									Jidios	101016	i idiliica 3	IGII
		епеп										
Phase Budget Wat	ter			Cost Allocation CTA								
Phase Status Futu	ure Planr	ned Start					Funding S	Source E	Bond P	roceeds		
Start Date								Fund	Constru	uction Bo	nd Fund	
End Date							Useful Life >	20Yrs? Y	'es			
Cost Estimation Information						Tot. Fe	deral Loan A	mount				\$0
	5 Cost Est. Class					P	rogram/Allov	wance T	ask Inf	ormation	1	
1/1/	′2018	Cost Est. D	ate	Р	roject A	Nanage	er					
GLWA		Cost Est. So	ource	CIP Number								
GLWA				Description								
GLWA	GLWA Cost Est. Prepared By											
Cost Type		Fiscal Year	Expense	ense Fring		Benefit	VonPersonne		Со	mment		
Construction	F	-Y20		\$160				2020CIP				
Construction	F	Y21		\$640				2020CIP				
Task		Start Date	End Date	Dur	ation							
Scope Developmen	n†	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							
		Pha	se Total Exp	ense	s Bv FY	(All fig	ures are in \$	1.000's)				
Prior Yr Actuals	FY19	FY20	FY21	FY:		FY23	FY24	FY25		Total		
		160	640							800		
Droio	ot Tota	d Evnances	DV EV Co	mnc	rod to	Drior		NUIVOO A	uro in	\$1,000	'c)	
Proje	CITOTO	al Expenses	Dy FI CO	npa	ieu io	LIIOL	CIPS (All TIC	juies C	iie in	<u>الاس, ا چ</u>	3)	

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 Statu New

CIP Type Project



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 LvI 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Northeast

Location City of Detroit

Fund and Cost Center

Project Significance 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

Project History

Related Project

Lookup Driver 1 - Condition

Other Important Info 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.



Northeast Water Treatment Plant Flocculator Replacements

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

65

Review Committee Project Risk Matrix Scoring

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										

Review Committee Score

67.4

Northeast Water Treatment Plant Flocculator Replacements

Phase Construction	n				Co	ntract	TBD	St	atus	Future F	Planned Start
Title NE WTP Floco	culator Rep	olacement									
Phase Budget Wa	ater						Cost Allo	cation CTA	4		
Phase Status Fu	ture Plann	ed Start					Funding	Source Bor	nd Pro	ceeds	
Start Date								Fund Co	nstruc	tion Bor	nd Fund
End Date							Useful Life >	20Yrs? Yes			
Cost	Estimation	Information				Tot. Fe	ederal Loan A	mount			\$0
	5	Cost Est. C	lass			F	Program/Allo	wance Tasl	k Info	rmation	
1/	1/2018	Cost Est. D	ate	Pı	oject N	Nanage	er				
GLWA	GLWA Cost Est. Source GLWA Cost Est. Prepare		ource	С	CIP Number						
GLWA			repared By	ed By Description				<u> </u>			
Cost Type		Fiscal Year	Expense)	Frinae I	Benefit	NonPersonne		Com	ment	
Construction		Y20	·	,350	J -			2020CIP			
Construction	F	Y21	\$1,	,350				2020CIP			
Task		Start Date	End Date	Dur	ation						
Scope Developme	ent	7/1/2019	10/1/2019		92						
Procurement		10/2/2019	4/2/2020		183						
Project Execution		4/3/2020	6/30/2021		453						
Project Closeout		7/1/2021	9/29/2021		90						
	_	Pha	se Total Exp	enses	By FY	(All fig	ures are in S	\$1,000's)		_	
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY25+	T	otal	
		1,350	1,350							2,700	

Northeast Water Treatment Plant Flocculator Replacements

		ct managen	ieni		Contract	NA	314	tus Active			
le GLWA Salaries											
Phase Budget Water	•					Cost Alloca	tion CTA				
Phase Status Active)					rce Bond	Bond Proceeds				
Start Date						und Cons	Construction Bond Fund				
End Date						Yrs? Yes	'es				
Cost Esti	nformation			Tot. Fo	ount	\$0					
5 Cost Est. Clas			ass			Program/Allowa	nce Task	Information			
1/1/20	1/1/2018 Cost Est. Date Cost Est. Source			Р	roject Manag						
GLWA				CIP Number							
GLWA Cost Est. Prepared By				Description							
Cost Type	F	iscal Year	Expense		Fringe Benefi	NonPersonne	(Comment			
Cost Type SLWA Salaries CIP2020			Expense	e \$2	Fringe Benefii		C 20CIP	Comment			
• • • • • • • • • • • • • • • • • • • •	O FY1	9	Expense		Fringe Benefii 1 2	0 20		Comment			
LWA Salaries CIP2020	O FY1	9	Expense	\$2	Fringe Benefit 1 2 2	0 20 0 20	20CIP	Comment			
SLWA Salaries CIP2020 SLWA Salaries CIP2020	O FY1 O FY2 O FY2	9 20 21	Expense	\$2 \$4	Fringe Benefii 1 2 2 1	0 20 0 20 0 20	20CIP 20CIP	Comment			
LWA Salaries CIP2020 LWA Salaries CIP2020 LWA Salaries CIP2020	O FY1 O FY2 O FY2	9 20 21 22		\$2 \$4 \$4 \$2	1 2 2 1	0 20 0 20 0 20 0 20	20CIP 20CIP 20CIP 20CIP	Comment			
LWA Salaries CIP2020 LWA Salaries CIP2020 LWA Salaries CIP2020	O FY1 O FY2 O FY2	9 20 21 22		\$2 \$4 \$4 \$2	1 2 2 1 1 S By FY (All fig	0 20 0 20 0 20	20CIP 20CIP 20CIP 20CIP	Comment			

									•		
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	C	0		3	1,356	1,356	3				2,718



113002 CIP#

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

☐ Innovation

✓ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

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 Lvl 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.

Scope of Work 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.

Project History

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.

Explanation

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

Project Manager Project Risk Matrix Scoring						
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					

Project Manager Score

64

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

53.2

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

Phase Design & Construction Assistance

Contract CS-034

Status Active

Title CS-034, Tetra Tech, High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP

Design contract is CS-034 Te	etra Tech		
Phase Budget Water		Cost Alloco	ation CTA
Phase Status Active	Phase Status Active		urce Bond Proceeds
Start Date		I	Construction Bond Fund
End Date		Useful Life >20	Yes Yes
Cost Estimatio	n Information	Tot. Federal Loan Am	ount
5	Cost Est. Class	Program/Allowo	ance Task Information
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	\$46		
Engineering Services	FY20	\$65		
Engineering Services	FY21	\$33		

Task	Start Date	End Date	Duration
Scope Development	4/2/2016	7/1/2016	90
Procurement	7/2/2016	7/2/2017	365
Project Execution	7/3/2017	11/30/2020	1246
Project Closeout	12/1/2020	3/1/2021	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	46	65	33	0	0	0	0	144

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

Phase	Construction	Contract NA	Status	Active
Title	Construction, SW WTP High Lift Pump Discharge Valve Actu	uators Replacement		

Phase Budget	Water
Phase Status	Active
Start Date	
End Date	

Cost Estimation Information						
3 Cost Est. Class						
1/1/2017	Cost Est. Date					
TetraTech	Cost Est. Source					
TetraTech	Cost Est. Prepared By					

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

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$1,100			
Construction	FY20	\$2,800			
Construction	FY21	\$1,100			

Task	Start Date	End Date	Duration
Scope Development	11/30/2017	2/28/2018	90
Procurement	3/1/2018	12/3/2018	277
Project Execution	12/4/2018	11/30/2020	727
Project Closeout	12/1/2020	3/1/2021	90

		1 11 010	O I O I GI EAP	, , , , , , , , , , , , , , , , , , , 	. (/	OF GIFT III Y	.,000	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,100	2,800	1,100	0	0	0	0	5,000

11

11

11

6

0

0

39

0

GLWA FY 2020-2024 CIP

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

					_		_			_
Phase GLWA Employees	Project manager	ment		Contract	NA		Status	Active		
Fitle GLWA Salaries										
Phase Budget Water					cation	1 CTA				
Phase Status Active					ource	Bond Pro	oceeds			
Start Date			Fund Construction Bond							
End Date					Useful Life >2	Yes				
Cost Estima	tion Information			Tot. Fe	deral Loan Ar	mount	\$0			\$0
5	Cost Est. C	lass	Program/Allowance Task Information							
1/1/2016	Cost Est. D	ate	Project Manager							
GLWA	Cost Est. S	ource	CIP Number							
GLWA	Cost Est. P	repared By	red By Description							
Cost Type	Fiscal Year	Expens	е	Fringe Benefit	VonPersonne		Con	nment		
GLWA Salaries CIP2020	FY19		\$8	3	0					
GLWA Salaries CIP2020	FY20		\$8	3	0					
GLWA Salaries CIP2020	FY21		\$8	3	0					
GLWA Salaries CIP2020	FY22		\$4	2	0					
	Pha	se Total Exc	ense	s By FY (All fig	ures are in S	1.000's	s)			
Prior Yr Actuals FY	/19 FY20	FY21	FY:		FY24	FY2		Total		

GLWA FY 2020-2024 CIP 113002 CIP# Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

Phase not applicable	е				Contract	NA	Sta	tus Closed	Dut
Title Prior Year Actua	al Expe	enses							
Phase Budget Wate	er					Cost Allo	cation CTA		
Phase Status Close	ed Ou	t				Funding S	ource		
Start Date							Fund		
End Date						Useful Life >	20Yrs?		
Cost Es	timatio	on Information			Tot. Fo	ederal Loan A	mount		
	5	Cost Est. C	Class			Program/Allov	vance Task	Information	
1/1/2	2016	Cost Est. D	ate	Р	roject Manag	er			
GLWA		Cost Est. S	ource	C	CIP Number				
GLWA		Cost Est. P	repared By	D	escription (
Cost Type		Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	(Comment	
Engineering Services		FY18-		\$106			FY18		
Unknown		FY18-		\$112			FY17		
Unknown		FY18-		\$3			FY16		
GLWA Salaries CIP202	20	FY18-		\$20	8		FY18		
		Pha	se Total Exc	ense	s Bv FY (All fic	gures are in \$	1.000's)		
Prior Yr Actuals	FY1		FY21	FY2		FY24	FY25+	Total	
249								249	
Proie	ct Tot	al Expenses	By FY Co	mpa	red to Prior	CIPs (All fic	ures 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 Sizing
	Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Example of a butterfly valve



Project Engineer/Manager Shakil Ahmed

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/19/2014

Year Project Added to CIP 2014

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 Replacing improperly functioning as well as cracked valves and gates, causing operational and maintenance concerns. Low and High Lift Pumping Improvements: Existing pumping station equipment including pumps, motors, switchgear, controls, gates, valves, etc. are all original to the plant and are oversized for the current and projected system water demands for at least the next 20 years. The station's electrical system and controls are difficult and costly to maintain and have reduced reliability due to age and lack of available parts on the market. Large size and age of pumps and motors are inefficient. Flocculation & Filtration System Improvements: 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 The work includes study, design, and construction services for the replacement of 2 - 72" diameter butterfly valves, 4 motorized sluice gates, 7 potable sluice gates, and 1 - 36" flag valve. Replacement of high and low lift pumps, motors, motor controls, medium-voltage switchgear, and MCCs. Replace and improve filtration system equipment and components as well as flocculator equipment upgrades.

Challenges

Project History

Related Project

Lookup Driver 4 - O&M

Other Important Info This work is included in the 2015 water master plan update

Explanation



113003 CIP#

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

Project Manager Project Risk Matrix Scoring											
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										

Project Manager Score

66.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

67.6

Project Execution
Project Closeout

GLWA FY 2020-2024 CIP

113003 CIP#

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

Great Lakes Water Authority	ooniiwesi w	alei ilealii	nem riam,	LOW- GI	a mgm-tim r o		.oranon ana
Phase Design & Construct	ion Assistance		Со	ntract NA	\	Status Future Planned	Start
Title SW WTP Low and Hig E2, E3, E2B, E3B,)	yh Lift Pumping 8	& Rapid Mix (Chamber BFV	s, Sluice G	ates, Flocculation	n & Filtration System Impro	ovements (E1,
Phase Budget Water					Cost Allocation	CTA	
Phase Status Future Pla	inned Start				Funding Source	Bond Proceeds	
Start Date					Fund	Construction Bond Fund	
End Date				Us	seful Life >20Yrs?	Yes	
Cost Estimat	ion Information			Tot. Fede	al Loan Amount		
5	Cost Est. C	Class		Prog	ram/Allowance	Task Information	
1/1/2016	Cost Est. D	ate	Project <i>N</i>	Manager			
GLWA	Cost Est. S	ource	CIP Num	ber			
GLWA	Cost Est. P	repared By	Descript	ion			
			ı				
Cost Type	Fiscal Year	Expense	e Fringe	BenefitNor	Personne	Comment	
Engineering Services	FY25+	\$15	5,000		2020C	IP	
Task	Start Date	End Date	Duration				
Scope Development							
Procurement							

						· · · ·		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	15,000	15,000

0

0

0

0

0

0

132,563

132,563

GLWA FY 2020-2024 CIP

113003 CIP#

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

							_		_	_				
Phase Construction				Co	ntract	NA			Statu	JS F	uture	Planne	ed Stai	rt
Title SW WTP Low and Hig	h Lift Pumping 8	& Rapid Mix (Chaml	oer BFV	s, Sluice	Gates	(C, C2	2)						
Phase Budget Water			Cost Allocation CTA											
Phase Status Future Plai	nned Start		Funding Source						Bond	Proc	:eeds			
Start Date			Fund Construction Bond Fu							nd Fur	nd			
End Date					Useful	Life >2	OYrs?	Yes						
Cost Estimati	on Information				Tot. Fe	deral La	oan An	nount						
5	Cost Est. C	Class			P	rogram	/Allow	ance	Task Ir	nforn	natior	1		
1/1/2016	Cost Est. D	ate	P	roject <i>l</i>	Manage	er								
GLWA				e CIP Number										
GLWA	Cost Est. P	repared By	D	escript	ion									
Cost Type	Fiscal Year	Expens	е	Fringe	Benefill	NonPers	onne		С	omr	nent			
Construction	FY25+	\$132	2,563				2	2020CI	Р					
Task	Start Date	End Date	Dur	ation										
Scope Development														
Procurement														
Project Execution														
Project Closeout														
	Pho	se Total Exp	ense	s By FY	(All fig	ures ar	e in \$1	.000's	3)					
Prior Yr Actuals FY1		FY21	FY2		FY23		24	FY2		Tc	otal			

CIP

2018

2019

2020

FY16

FY17

0

0

0

FY18

FY19

0

FY20

0

GLWA FY 2020-2024 CIP

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

hase GLWA Emplo	yees Projec	ct manager	nent	Contrac	t NA	Status	Future Plar	nned Start		
itle GLWA Salaries	S									
Phase Budget Wo	ıter				Cost Allocatio	n CTA				
Phase Status Fut	Future Planned Start				Funding Source	e Bond Pr	oceeds			
Start Date	Start Date				Fun	d Constru	ction Bond F	und		
End Date	End Date				Useful Life >20Yrs? Yes					
Cost I	stimation li	nformation		Tot.	Federal Loan Amour	nt		\$0		
	5	Cost Est. C	lass		Program/Allowance	e Task Info	ormation			
1/1	/2016	Cost Est. D	ate	Project Mana	ger					
GLWA		Cost Est. So	ource	CIP Number						
GLWA		Cost Est. Pi	epared By	Description						
Cost Type	Fi	scal Year	Expense	e Fringe Bene	fitNonPersonne	Cor	nment			
GLWA Salaries CIP2	020 FY2	5+		\$500 19	8 25 20200	CIP				
		Pha	se Total Exp	enses By FY (All f	igures are in \$1,000)'s)				
Prior Yr Actuals	FY19	FY20	FY21	FY22 FY23		′25+	Total			
	0	0	0	0	0 0	723	723			
Proje	ect Total	Expenses	By FY Co	mpared to Prio	r CIPs (All figure	s are in	\$1,000's)			

FY21

0

FY22

0

FY23

2,940

0

FY24

148,286

0

0

FY25

148,286

0

Total

2,940

148,286

148,286

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

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 Lvl 2 Treatment Plants and Facilities

Class LvI 3 Southwest

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance 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

Scope of Work 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.

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Project Manager Project Risk Matrix Scoring										
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									

Project Manager Score

53.2

Review Committee Project Risk Matrix Scoring

5

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

Review Committee Score

44.8

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

nase GLWA Em	nployees F	roject n	nanagem	nent		С	ontract N.	A	Sta	tus Active	
itle GLWA Sala	aries										
Phase Budget	Water							Cost Alloc	cation CTA		
Phase Status	Active							Funding S	ource Bond	d Proceeds	
Start Date									Fund Cons	struction Bor	nd Fund
End Date							U	seful Life >2	20Yrs? No		
Co	ost Estimat	ion Info	rmation				Tot. Fede	eral Loan Ar	mount		\$0
	5	C	ost Est. Cl	ass			Pro	gram/Allow	vance Task	Information	
	1/1/2016	C	ost Est. Do	ate	P	roject	Manager				
GLWA		С	ost Est. So	urce	C	CIP Nui	mber				
GLWA		С	ost Est. Pro	epared By		escrip	tion				
Cost Typ	oe	Fisco	al Year	Expens	e	Fringe	BenefitNo	nPersonne	(Comment	
SLWA Salaries C	IP2020	FY19			\$4		2	0			
SLWA Salaries C	IP2020	FY20			\$7		3	0			
SLWA Salaries C	IP2020	FY21			\$1		0	0			
			Phas	e Total Exp	ense	s By F	(All figure	es are in \$	1,000's)		
Prior Yr Actual	ls FY	19	FY20	FY21	FY:		FY23	FY24	FY25+	Total	
			10			0	0	0	0	17	

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

Phase Construction Contract NA Status Future Planned Start

Title SW WTP Residual Handling Facility's Decant Flow Modifications

near procurement			
Phase Budget Water		Cost Allocation	CTA
Phase Status Future Plan	nned Start	Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimation	on Information	Tot. Federal Loan Amount	
1	Cost Est. Class	Program/Allowance	Task Information
1/1/2017	Cost Est. Date	Project Manager	
FTC&H	Cost Est. Source	CIP Number	
FTC&H	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$293			
Construction	FY20	\$340			

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

		1 11 010	<u> </u>		. (,		·/•••	
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 Mo	difications		

TC&H is the co	nsultant			
Phase Budget	Water			Cost Allocation CTA
Phase Status	Active			Funding Source Bond Proceeds
Start Date				Fund Construction Bond Fund
End Date			Us	seful Life >20Yrs? Yes
Co	ost Estimatio	n Information	Tot. Feder	ral Loan Amount
	5	Cost Est. Class	Prog	gram/Allowance Task Information
	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			

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

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

113004 CIP#

Southwest Water Treatment Plant, Raw Water Sampling Modifications

					Contract	NA	310	atus Closed Out	
tle Prior Year Actual E	xpense	S							
Phase Budget Water						Cost Allo	cation CTA		
Phase Status Closed	Out					Funding S	Source		
Start Date							Fund		
End Date						Useful Life >	20Yrs?		
Cost Estim	ation Ir	nformation			Tot. Fe	ederal Loan A	mount		
	5	Cost Est. C	lass		I	Program/Allov	wance Task	Information	
1/1/201	6	Cost Est. D	ate	Р	roject Manag	er			
GLWA		Cost Est. S	ource	C	CIP Number				
GLWA		Cost Est. P	renared Ry	D	escription				
		0001 =011 1	repared by						
		0031 2311 1	repared by						
Cost Type	Fi	scal Year	Expens		Fringe Benefit	NonPersonne	. (Comment	
	Fi:	scal Year			•		FY18	Comment	
Cost Type		scal Year 8-	Expens	e	•			Comment	
Cost Type Engineering Services	FY1	scal Year 8- 8-	Expens	e \$37	•		FY18	Comment	
Cost Type Engineering Services Jnknown	FY1	scal Year 8- 8- 8-	Expens	e \$37 \$135	•		FY18 FY17	Comment	
Cost Type Engineering Services Jnknown Jnknown	FY1	scal Year 8- 8- 8- 8-	Expens	e \$37 \$135 \$7 \$14	Fringe Benefit		FY18 FY17 FY16 FY18	Comment	
Cost Type Engineering Services Unknown Unknown GLWA Salaries CIP2020	FY1	scal Year 8- 8- 8- 8-	Expens	e \$37 \$135 \$7 \$14	Fringe Benefit 5 By FY (All fig		FY18 FY17 FY16 FY18	Comment	

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

		on	

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Reclassified

CIP Type Project

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.

Challenges

Project History

Related Project

Lookup Driver 2 - Performance

Other Important Info

Explanation



Southwest Water Treatment Plant Residuals Management

Project Manager I	Project Ri	sk Matrix Scoring
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	

Project Manager Score

59.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

58

113005 CIP#

Southwest Water Treatment Plant Residuals Management

Phase Budget Water		Cost Allocation	СТА		
Phase Status Future Plani	ned Start	Funding Source	Bond Proceeds		
Start Date		Fund	Construction Bond Fund		
End Date		Useful Life >20Yrs?	No		
Cost Estimatio	n Information	Tot. Federal Loan Amount	\$0		
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			

Phase Total Ex	(penses B	y FY (All figures	are in \$	1,000's
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	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
Ĭ		0	0	0	0	0	0	0	0

Southwest Water Treatment Plant Residuals Management

Phase Budget Water		Cost Allocation	CTA		
Phase Status Future Plann	ned Start	Funding Source	Revenue Financed Capital		
Start Date		Fund	Improvement & Extension Fun		
End Date		Useful Life >20Yrs?	No		
Cost Estimation	n 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
Scope Development	12/4/2017	2/1/2018	59
Procurement	2/2/2018	8/31/2018	210
Project Execution	8/31/2018	6/27/2019	300
Project Closeout	6/27/2019	9/25/2019	90

		I IIGs	e iolai Exp	Tellaca by I	i (All ligo	es are in y	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

113005 CIP#

Southwest Water Treatment Plant Residuals Management

Phase Budget	Water		Cost Allocation	CTA		
Phase Status	Start Date End Date Cost Estimation Information		Funding Source	Bond Proceeds		
Start Date			Fund	Construction Bond Fund		
End Date			Useful Life >20Yrs?	Yes		
C			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			

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								1,145	0	1,145
2020	0	0		0	0	0	0	0	0	0	0



113006 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

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 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 with new unit plus related ventilation, alarms, instruments, and controls; as well as replacement of the existing raw water screens.

Challenges

Project History

Related Project

Lookup Driver 5 - Public Health & Safety

Other Important Info

Explanation



113006 CIP#

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

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

46.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

46.6

Prior Yr Actuals

FY19

0

FY20

0

FY21

0

FY22

0

FY23

0

FY24

0

FY25+

7,000

Total

7,000

GLWA FY 2020-2024 CIP

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

Phase Design and Build				Contract NA	4	Status	Future Planned St	tart
itle SW WTP Chlorine S	crubber, Raw Wa	er Screens &	Related I	mprovements	;			
Phase Budget Water					Cost Allocation	СТА		
Phase Status Future F	Planned Start				Funding Source	Bond Pr	oceeds	
Start Date					Fund	Constru	ction Bond Fund	
End Date				Us	seful Life >20Yrs?	Yes		
Cost Estim	ation Information			Tot. Fede	ral Loan Amount			
	5 Cost Est. C	Class		Prog	gram/Allowance	Task Info	ormation	
1/1/201	6 Cost Est. D	ate	Proje	ct Manager				
GLWA	Cost Est. S	ource	CIP N	lumber				
GLWA	Cost Est. P	repared By	Desc	ription				
Cost Type	Fiscal Year	Expense	e Fring	ge BenefitNor	nPersonne	Con	nment	
Design-Build	FY25+	\$7	,000		2020C	IP		
Task	Start Date	End Date	Duratio	n				
Scope Development	5/11/2027	8/9/2027		90				
Procurement	8/10/2027	8/9/2028	(365				
Project Execution	8/10/2028	12/26/2029	į	503				
Project Closeout	12/27/2029	3/27/2030		90				
	Pho	se Total Exp	enses By	FY (All figure	es are in \$1,000'.	s)		

113006 CIP#

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

hase GLWA Em	nployees F	Projec [®]	t manager	nent		Contract	NA	Λ.	Status	Future Plar	nned Start
tle GLWA Salc	aries										
Phase Budget	Water							Cost Allocat	ion CTA		
Phase Status	Future Pla	anned	Start					Funding Soul	rce Bond Pr	oceeds	
Start Date								Fu	Constru	ction Bond F	- und
End Date							Us	seful Life >20Y	rs? No		
Co	ost Estima	tion In	formation			Tot. F	edei	al Loan Amo	unt		\$0
	5		Cost Est. C	lass			Prog	ıram/Allowan	nce Task Info	ormation	
	1/1/2016		Cost Est. D	ate	Pro	ject Manag	er				
GLWA	,		Cost Est. So	ource	CIP	Number					
GLWA			Cost Est. Pi	epared By	Des	scription					
					ı						
Cost Typ	pe	Fis	cal Year	Expense	e Fr	inge Benefi	Mor	Personne	Cor	nment	
SLWA Salaries C	CIP2020	FY25	5+		\$22	9)	1 202	OCIP		
			Pha	se Total Exp	enses B	By FY (All fig	gure	s are in \$1,0	00's)		
Prior Yr Actual	ls FY	19	FY20	FY21	FY22				FY25+	Total	
		0	0	0		0	0	0	32	32	
D	- 1 1 T	a Laut E		D. FV C.		al La Dalas		o (All figur		Ć1 000I-V	

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								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

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		1 1	\cup	٧	u	11	\cup		

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

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.

Challenges

Project History

Related Project

Lookup Driver

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

Explanation

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Project Manager	Project Ri	sk Matrix Scoring
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	

Project Manager Score

46.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

36

113007 CIP#

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase Design &	Constructio	n Assistance			Contract	NA		Stat	us Future	Planned Start
Title SW WTP Ard	chitectural	and Building N	Nechanical In	nproven	nents					
Phase Budget	Water						Cost Alloc	cation CTA		
Phase Status	Future Plan	ned Start					Funding So	Durce Bond	Proceeds	
Start Date								Fund Cons	truction Bor	nd Fund
End Date						Use	eful Life >2	OYrs? Yes		
Co	ost Estimatio	n Information			Tot. Fe	der	al Loan An	nount		
	5	Cost Est. C	Class		P	rogi	ram/Allow	ance Task I	nformation	
	1/1/2016	Cost Est. D	ate	Proj	ect Manage	er				
GLWA	<u>'</u>	Cost Est. S	ource	CIP	Number					
GLWA		Cost Est. P	repared By	Des	cription					
Cost Typ	ре	Fiscal Year	Expense	e Fri	nge Benefill	Vonl	Personne	C	comment	
Engineering Serv	vices	FY25+	\$6	,100			2	020CIP		
Task		Start Date	End Date	Durat	on					
Scope Developr	ment	5/11/2027	8/9/2027		90					
Procurement		8/10/2027	8/9/2028		365					
Project Executio	n	8/10/2028	8/2/2033		1818					
Project Closeout	İ	8/3/2033	11/1/2033		90					
		Pha	se Total Exp	enses B	y FY (All fig	ures	s are in \$1	,000's)		
Prior Yr Actual	ls FY19	P FY20	FY21	FY22	FY23		FY24	FY25+	Total	
		0 0	0		0	0	0	6,100	6,100	

113007 CIP#

Great Lakes Water Aut	thority	Southwest Wo	ater Treatn	nent	Plant Archite	ectural and Bu	uilding Mechanical Im	provement
Phase Construction	on				Contract 1	NA	Status Future Planned	Start
Title SW WTP Arc	hitectura	l and Building M	lechanical Ir	nprov	rements			
Phase Budget V	Vater					Cost Allocatio	n CTA	
Phase Status F	uture Pla	nned Start				Funding Source	e Bond Proceeds	
Start Date						Fun	d Construction Bond Fund	
End Date						Useful Life >20Yrs	? Yes	
Cos	st Estimati	on Information			Tot. Fed	eral Loan Amour	nt	
	5	Cost Est. C	lass		Pro	ogram/Allowanc	e Task Information	
1	/1/2016	Cost Est. D	ate	Р	Project Manager			
GLWA		Cost Est. S	ource		CIP Number			
GLWA		Cost Est. P	repared By	D	Description			
Cost Typ	е	Fiscal Year	Expense		Fringe BenefitNo		Comment	
Construction		FY25+	\$31	,000		20200	CIP	
Task		Start Date	End Date	Dur	ration			

Cost Type	Fiscal Year	Expense	Fringe	Benefit	NonPersonne	Comment	
Construction	FY25+	\$31,	000			2020CIP	
Task	Start Date	End Date	Duration				
Scope Development	11/12/2029	2/10/2030	90				
Procurement	2/11/2030	8/18/2030	188				
Project Execution	8/19/2030	8/2/2033	1079				
Project Closeout	8/3/2033	11/1/2033	90				

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Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	31,000	31,000

Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

hase GLWA Emp	loyees Projec	ct managen	nent	C	ontract NA	Α	Status	Future Plan	ned Start
itle GLWA Salari	es								
Phase Budget W	ater					Cost Allocat	tion CTA		
Phase Status Fu	uture Planned	d Start				Funding Sou	rce Bond Pr	oceeds	
Start Date						Fu	und Constru	ction Bond F	und
End Date					Us	seful Life >20\	rs? No		
Cost	Estimation l	nformation			Tot. Feder	ral Loan Amo	ount		\$0
	5	Cost Est. C	ass		Prog	ıram/Allowaı	nce Task Info	ormation	
1/	1/2016	Cost Est. Do	ate	Project	Manager				
GLWA		Cost Est. So	ource	CIP Nur	nber				
GLWA		Cost Est. Pr	epared By	Descrip	tion				
Cost Type	e Fi	iscal Year	Expense	e Fringe	BenefitNor	Personne	Cor	nment	
GLWA Salaries CIP	2020 FY2	25+	(163	65	8 202	20CIP		
		Phas	e Total Exp	enses By FY	(All figure	es are in \$1,0)00's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	0	0	0	0	236	236	

Project Tota	ıl Expenses By F	Y Compared to Prior	r CIPs (All figures	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 Statu Active

CIP Type Project

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

Project History

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

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



114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Project Manag	er Project Risk Mo	ıtrix Scoring
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	

Project Manager Score

62.2

Review Committee Project Risk Matrix Scoring

		o
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	

Review Committee Score

62.2

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase GLWA Em	nployees	Projec	t manager	ment		Contract N	1A	Sto	itus Active	
itle GLWA Salo	aries									
Phase Budget	Water						Cost Alloc	cation CTA		
Phase Status	Active						Funding S	ource Bone	d Proceeds	
Start Date								Fund Con	struction Bor	nd Fund
End Date						1	Useful Life >2	20Yrs? Yes		
Co	ost Estim	ation Ir	nformation			Tot. Fed	eral Loan Ar	mount		\$0
			Cost Est. C	lass		Pro	ogram/Allow	vance Task	Information	
	1/1/2013	3	Cost Est. D	ate	Proj∈	ect Manager				
CDM Smith			Cost Est. S	ource	CIP	Number				
CDM Smith			Cost Est. P	repared By	Desc	cription				
			-		1					
Cost Ty	pe	Fi	scal Year	Expens	e Frir	nge BenefitNo	onPersonne	(Comment	
GLWA Salaries C	CIP2020	FY1	9		\$74	29	4			
			Pha	se Total Exc	enses By	y FY (All figu	res are in S	1.000's)		
Prior Yr Actua	ls F	Y19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		107	0	0		0 0	0	0	107	

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Physical Design and Pulled			
riase Design and Build Contract 5P-563 Status Active	Phase Design and Build	Contract SP-563	Status Active

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

alsh Construction Grou	р		
Phase Budget Water			Cost Allocation CTA
Phase Status Active			Funding Source Bond Proceeds
Start Date	7/8/2013		Fund Construction Bond Fund
End Date	12/14/2018	U	seful Life >20Yrs? Yes
Cost Estimo	tion Information	Tot. Fede	eral Loan Amount
1	Cost Est. Class	Pro	gram/Allowance Task Information
1/1/2013	Cost Est. Date	Project Manager	Todd King
CDM Smith	Cost Est. Source	CIP Number	
	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe	Benefit	NonPersonne	Comment
Design-Build	FY19	\$7,	000			construction
Task	Start Date	End Date	Duration			
Scope Development	10/9/2012	1/7/2013	90			
Procurement	1/8/2013	7/7/2013	180			
Project Execution	7/8/2013	4/1/2019	2093			
Project Closeout	4/2/2019	7/2/2019	91			

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	7,000	0	0	0	0	0	0	7,000

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase Study and Design and Construction Assistance

Contract CS-1425

Status Closed Out

Title CS-1425, CDM, SPW WTP 1958 Filter Rehabilitation and Auxiliary Facilities (E1 & E2)

CDM					
Phase Budget	Water		Cost	Allocation	CTA
Phase Status	Closed Out		Fundi	ng Source	Bond Proceeds
Start Date		1/18/2008		Fund	Construction Bond Fund
End Date		12/14/2018	Useful Li	fe >20Yrs?	Yes
Co	ost Estimation I	nformation	Tot. Federal Loc	an Amount	
	1	Cost Est. Class	Program/ <i>E</i>	Allowance	Task Information
	1/1/2013	Cost Est. Date	Project Manager		
CDM Smith		Cost Est. Source	CIP Number		
CDM Smith		Cost Est. Prepared By	Description		

Task	Start Date	End Date	Duration
Scope Development	10/8/2010	1/6/2011	90
Procurement	1/7/2011	1/7/2012	365
Project Execution	1/8/2012	11/12/2018	2500
Project Closeout	11/13/2018	2/11/2019	90

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

		I IIG3	C TOTAL EXP	clises by i	i (All light	cs are in y	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

CDM Smith

GLWA FY 2020-2024 CIP

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

	J		, , , , , , , , , , , , , , , , , , , ,
Phase Construction Assistan	ice	Contract cs-073	Status Active
Title CS-073, Lake Erie Elec	tric Inspection Services (2)	nd C)	
Phase Budget Water		Со	st Allocation CTA
Phase Status Active		Fun	Iding Source Bond Proceeds
Start Date			Fund Construction Bond Fund
End Date		Useful	Life >20Yrs? Yes
Cost Estimatio	n Information	Tot. Federal L	oan Amount
1	Cost Est. Class	Program	n/Allowance Task Information
1/1/2013	Cost Est. Date	Project Manager	
CDM Smith	Cost Est. Source	CIP Number	

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

Description

Cost Est. Prepared By

		FIIUS	e ioidi exp	Pelises by r	T (All light	es are in \$	1,000 5)	
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

		. •									-	
nase Construction	Assistan	се			Contract	CS-	-200		Status	Active		
le CS-200, CDM,	SPW WTI	P 1958 Filter Re	habilitation o	and Auxilia	ry Facilitie	es (E	3)					
Add CS-200 CDM												
Phase Budget Wa	ter						Cost Allo	cation (CTA			
Phase Status Act	Active						Funding S	ource	Bond P	roceeds		
Start Date								Fund (Constru	uction Bo	nd Fund	
End Date						Us	eful Life >	20Yrs?	⁄es			
Cost E	stimatio	n Information			Tot. Fo	eder	al Loan A	mount				
	1	Cost Est. C	lass			Prog	ram/Allov	vance T	ask Inf	ormation	1	
1/1,	/2013	Cost Est. D	ate	Project Manager								
CDM Smith		Cost Est. S	ource	CIP Number								
CDM Smith		Cost Est. P	repared By	Descr	iption				<u> </u>			
Cost Type		Fiscal Year	Expense	e Frinc	ae Benefit	Non	Personne		Со	mment		
ngineering Service	s I	FY19	·	\$871	,					-		
Task		Start Date	End Date	Duration	1							
roject Execution		6/5/2017	12/18/2018	5	61							
		Pha	se Total Exp	enses By	FY (All fig	jure	s are in \$	1,000's				
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23		FY24	FY25	+	Total		
	8	371 0	0	0		0	0		0	871		

114001 CIP#

Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities

Phase not applicable				Contract	NA	Stat	tus Closed (Dut		
Title Prior Year Actual Exp	enses									
Phase Budget Water			Cost Allocation CTA							
Phase Status Closed O	ut				Funding S	Source				
Start Date						Fund				
End Date	End Date					20Yrs?				
Cost Estimat	ion Information			Tot. Fe	ederal Loan A	mount				
1	1 Cost Est. Class				Program/Allov	wance Task	Information			
1/1/2013 Cost Est. Date			Pı	roject Manag	er					
CDM Smith	CDM Smith Cost Est. Source			CIP Number						
CDM Smith	Cost Est. P	repared By	D	escription						
Cost Type	Fiscal Year	Expense)	Fringe Benefit	NonPersonne	C	Comment			
Construction	FY18-	\$5	,333			FY18				
Engineering Services	FY18-	(868			FY18				
Unknown	FY18-	\$82	,884			FY16-17				
GLWA Salaries CIP2020	FY18-		\$89	35	100	FY18				
	Pha	se Total Exp	enses	Bv FY (All fic	gures are in \$	1.000's)				
Prior Yr Actuals FY		FY21	FY2		FY24	FY25+	Total			
89,309							89,309			
Project To	tal Expenses	By FY Cor	mpar	ed to Prior	CIPs (All fic	aures 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	89,309	7,978	0	0	0	0	0	0	97,287



114002 CIP#

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

☐ Innovation

✓ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Project Engineer/Manager Erich Klun

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/29/2004

Year Project Added to CIP 2004

High Lift Station viewed from Low Lift Station operating floor showing high lift pump pits and windows to be replaced.



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

Scope of Work The electrical gear at the Springwells WTP high and low lift stations is old and parts are no longer available. The outdated equipment also poses safety issues. Furthermore, the pumps may be right-sized to provide more efficient pumping systems.

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

Project History

Related Project Contract No. CS-103 with CDM Smith Design and Construction Administration Services

Lookup Driver 1 - Condition

Other Important Info

Explanation Not provided.



114002 CIP#

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

Project Manager F	roject Ri	sk Matrix Scoring
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	

Project Manager Score

78.6

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

69.2

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

Phase not applied	not applicable				Contract NA					d Out
Title Prior Year Ac	tual Exp	enses								
Phase Budget W	'ater									
Phase Status C	losed Ou	ı†					Funding S	ource		
Start Date								Fund		
End Date						Us	eful Life >2	20Yrs?		
Cost	Estimati	on Information			Tot. Fo	eder	al Loan Ar	nount		
	5	Cost Est. (Class			Prog	ram/Allow	ance Task	Informatio	n
1/1/2016 Cost Est. Date				Project Manager						
GLWA	GLWA Cost Est. Source				CIP Number					
GLWA		Cost Est. F	repared By	0	escription					
Cost Type)	Fiscal Year	Expens	e	Fringe Benefit	Non	Personne		Comment	
ngineering Servic	es	FY18-		\$468			F	Y18		
Jnknown		FY18-		\$22			F	Y17		
GLWA Salaries CIP	2020	FY18-		\$7	1		O F	Y18		
		Pho	ise Total Exp	ense	s By FY (All fig	jure	s are in \$	I,000's)		
Prior Yr Actuals	FY1		FY21	FY2			FY24	FY25+	Total	
49	8								498	3

114002 CIP#

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

ase Construction		Contract NA	Status Future Planned Start
e SPW WTP - Low Lift ar	d High Lift Pump Station		
Phase Budget Water		Cost Allocation	CTA
Phase Status Future Pla	nned Start	Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimati	on 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	
	Cost Est. Prepared By	Description	

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

Task	Start Date	End Date	Duration



114002 CIP#

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

Task	Start Date	End Date	Duration
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

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

Thate folds expenses by 11 (All lightes die in \$1,000 s)								
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	2,462	5,840	9,157	13,579	13,579	26,000	42,686	113,303

GLWA

GLWA

GLWA FY 2020-2024 CIP

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

Phase Study and Design and Construction Assistance Contract CS-103 **Status** Under Procurement **Title** CS-103, SPW WTP - Low Lift and High Lift Pump Station Cost Allocation CTA Phase Budget Water **Phase Status** Under Procurement Funding Source Bond Proceeds **Start Date** Fund Construction Bond Fund Useful Life >20Yrs? Yes **End Date Tot. Federal Loan Amount Cost Estimation Information** 5 Cost Est. Class Program/Allowance Task Information **Project Manager** 1/1/2016 Cost Est. Date

CIP Number

Description

Cost Est. Source

Cost Est. Prepared By

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

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

Thase fold Expenses by 11 (All lightes die ill \$1,000 s)									
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	0	0	0	0	0	0	

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

hase GLWA Employees f	roject manage	ment		Contract N	A	Statu	us Active	
itle GLWA Salaries								
Phase Budget Water			Cost Allocation CTA					
Phase Status Active					Funding Sc	ource Bond	Proceeds	
Start Date						Fund Const	truction Bon	d Fund
End Date				U	seful Life >2	OYrs? No		
Cost Estima	tion Information			Tot. Fede	eral Loan Am	nount		\$(
5	Cost Est. C	Class		Prog	gram/Allow	ance Task lı	nformation	
1/1/2016	Cost Est. D	Date	Proje	ect Manager				
GLWA Cost Est. Source			CIP I	Number				
GLVVA								
GLWA	Cost Est. F	Prepared By	Desc	cription				
	Cost Est. P	Prepared By Expens		cription nge BenefitNo	nPersonne	C	omment	
GLWA		Expens			nPersonne 5	C	omment	
GLWA Cost Type	Fiscal Year	Expens	e Frir	nge Benefil <mark>No</mark>	_	C	omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19	Expens	e Frir	nge BenefilNo 40	5	C	omment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22	Expens	e Frir \$100 \$100 \$100 \$100	40 40 40 40 40	5 5	C	omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22 FY23	Expens	e Frin \$100 \$100 \$100 \$100 \$100	40 40 40 40 40 40	5 5 5 5 5	C	omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22 FY23 FY24	Expens	e Frin \$100 \$100 \$100 \$100 \$100 \$100	40 40 40 40 40 40 40 40	5 5 5 5 5 5		omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22 FY23	Expens	e Frin \$100 \$100 \$100 \$100 \$100	40 40 40 40 40 40	5 5 5 5 5 5	C 020CIP	omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22 FY23 FY24 FY25+	Expens	e Frin \$100 \$100 \$100 \$100 \$100 \$100	40 40 40 40 40 40 40 40	5 5 5 5 5 5 5	020CIP	omment	
Cost Type GLWA Salaries CIP2020	Fiscal Year FY19 FY20 FY21 FY22 FY23 FY24 FY25+	Expens	e Frin \$100 \$100 \$100 \$100 \$100 \$100	40 40 40 40 40 40 40 40	5 5 5 5 5 5 5	020CIP	omment Total	

Project Total Expenses By	FY Co	mpared to Prior	CIPs (Al	ll figures are	e 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	0	498	2,607	5,985	9,302	13,724	13,724	26,145	42,831	114,816



114003 CIP#

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

_	
	Innovation
	Water MP Right Sizing
	Reliability/Redundancy

□ NEWTP Repurposing

Project Statu Active

CIP Type Project

Water production flow metering device



Project Engineer/Manager Jorge Nicolas

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/26/2014

Year Project Added to CIP 2014

these plants.

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Springwells

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Existing water production flow meters need to be rehabilitated to place back into reliable and accurate service. Once completed, accurate flow measurement from these plants will answer non-revenue water questions.
Scope of Work	Water production metering is needed at the Water Treatment Plants to manage non-revenue and provide estimates of usage for non-wholesale customers.
Challenges	Removing and replacing existing meters in original piping requires isolation using existing yard piping and valving. Condition of existing pipe and valves needs to be adequately addressed in the final design documents and coordinated with operations.
Project History	n/a
Related Project	Contract No. CS-1656 with Applied Science, Inc. for Design and Construction 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



114003 CIP#

Water Production Flow Metering Improvements at Northeast, Southwest and Springwells

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

59.8

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

50.6

114003 CIP#

hase GLWA Em	nployees P	roject	managen	nent		C	ontract N	A	Stat	tus Active		
itle GLWA Salo	aries											
Phase Budget	Water							Cost Alloc	cation CTA			
Phase Status	Active							Funding So	ource Bond	d Proceeds		
Start Date									Fund Cons	struction Bon	nd Fund	
End Date							U	seful Life >2	OYrs? No			
Co	ost Estimat	ion Info	ormation		Tot. Federal Loan Amount \$0							
	5		Cost Est. Cl	ass			Prog	gram/Allow	ance Task	Information		
	1/1/2016 Cost Est. Date			ate	Р	roject	Manager					
GLWA		Cost Est. Source			C	IP Nu	mber					
GLWA		Cost Est. Prepared By			D	escrip	otion					
Cost Ty	pe	Fisc	al Year	Expens	e	Fringe	e BenefilNor	nPersonne		Comment		
GLWA Salaries C		FY19			\$21		8	1				
GLWA Salaries C	CIP2020	FY20			\$21		8	1				
GLWA Salaries C	IP2020	FY21			\$13		5	1				
			Phas	e Total Exp	enses	BV F	Y (All figure	es are in \$1	(2'000.1			
Prior Yr Actua	ls FY	19	FY20	FY21	FY2		FY23	FY24	FY25+	Total		
		30	30	19		0	0	0	0	79		

114003 CIP#

hase Construct	tion			Co	ontract (CON-133		Status	Active	:	
itle CON-133,	Water Prod	duction Flow Me	etering Improv	vements at 1	NE, SW, ar	nd SPW WTP					
LCG Global is c	ontractor										
Phase Budget	Water					Cost Allo	cation	СТА			
Phase Status	Active					Funding S	ource	Bond Pr	oceeds		
Start Date		7/31	/2017				Fund	Constru	ction Bo	nd Fund	
End Date		10/29	/2019			Useful Life >	20Yrs?	Yes			
Co	ost Estimati	on Information			Tot. Fed	eral Loan A	mount				
	1	Cost Est. C	Class		Pro	ogram/Allov	vance 1	Task Info	rmation	1	
		ate	Project	Manager							
consultant		Cost Est. S	ource	CIP Number							
Consultant Ap	oplied Scie	ence Cost Est. P	repared By	Descrip	tion						
Cost Typ	oe	Fiscal Year	Expense	e Fringe	BenefitNo	onPersonne		Con	nment		
Construction		FY19		,531							
Construction		FY20		\$50							
Task		Start Date	End Date	Duration							
cope Developr	ment										
Procurement											
Project Executio	n	7/31/2017	7/31/2020	1096	5						
Project Closeout	t	8/1/2020	10/30/2020	90							
		Pha	se Total Exp	enses By FY	(All figu	res are in \$	1,000's	3)			
D V. A - I	I- EV1	0 5,400	EVO 1	EVOO	EV/O2	EVO 4	EVO	г.	Talad		

			<u> </u>		. (-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	3,531	50	0	0	0	0	0	3,581

114003 CIP#

Phase not applic	cable					С	ontract	NA		Sto	atus Closed	Out	
Title Prior Year	Actual Exp	oense	S										
Phase Budget	Water								Cost Allo	cation CTA	Α		
Phase Status	Closed C	ut							Funding S	Source			
Start Date										Fund			
End Date					Useful Life >20Yr					20Yrs?			
Co	ost Estima	tion In	formation				Tot. Fe	eder	al Loan A	mount			
	5		Cost Est. C	lass	Program/Allowance Task Information								
	1/1/2015		Cost Est. D	ate	P	roject	Manag	er					
GLWA			Cost Est. So	ource	C	CIP Nu	mber						
GLWA			Cost Est. Pr	epared By	0)escrip	otion						
			1										
Cost Ty	oe	Fis	scal Year	Expens	<u> </u>	Fringe	e Benefit	Nonl	Personne		Comment		
Construction		FY18	8-	•	3,020					FY18			
Engineering Serv	/ices	FY18	8-		\$186					FY18			
Unknown		FY18	8-		\$14					FY17			
Unknown		FY18	8-		\$141					FY16			
Unknown		FY18	8-		\$30					Pre-Bifurca	tion		
GLWA Salaries C	CIP2020	FY18	8-		\$40		14			FY18			
			Phas	se Total Exp	ense	s By F	Y (All fig	ures	are in \$	51,000's)			
Prior Yr Actua	ls FY	19	FY20	FY21	FY:		FY23		FY24	FY25+	Total		
3,4	445										3,445		
Pr	oject Id	otal F	ynenses	By FY Co	mna	red t	o Prior	CIP	ς (ΔII fic	aures are	in \$1.000'	(c)	

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

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



114003 CIP#

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	3,445	3,561	80	19	0	0	0	0	7,105



114005 CIP#

Springwells Water Treatment Plant, Administration Building Improvements & Underground

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

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 nonfunctioning 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

Project 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 ongoing 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.



114005 CIP#

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Project Manage	er Project Ris	sk Matrix Scoring
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	

Project Manager Score

63.8

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

67.4

Prior Yr Actuals

FY19

10

FY20

30

FY21

30

FY22

30

FY23

25

FY24

0

FY25+

0

Total

125

GLWA FY 2020-2024 CIP

114005 CIP#

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Phase GLWA En	nployees Pro	oject manager	ment	Contract NA Status Active Cost Allocation CTA Funding Source Bond Proceeds							
Title GLWA Sale	aries										
Phase Budget	Water					Cost Alloc	cation CTA				
Phase Status	Active				Funding Source Bond Proceeds						
Start Date							Fund Constru	ction Bond Fund			
End Date						Useful Life >2	20Yrs? No				
С	ost Estimatio	n Information			Tot. Fed	deral Loan Ar	mount	\$0			
	5	Cost Est. C	lass		Pr	ogram/Allow	ance Task Inf	ormation			
	1/1/2018	Cost Est. Date		F	Project Manager	,					
GLWA		Cost Est. S	ource	(CIP Number						
GLWA		Cost Est. P	repared By		Description						
Cost Ty	pe	Fiscal Year	Expens	е е	Fringe BenefitN	onPersonne	Сог	nment			
GLWA Salaries (CIP2020	FY19		\$7	3	0					
GLWA Salaries (CIP2020	FY20		\$21	8	1					
					0	1					
GLWA Salaries (CIP2020	FY21		\$21	8	I					
GLWA Salaries (GLWA Salaries (FY21 FY22		\$21 \$21	8	1					

Springwells Water Treatment Plant, Administration Building Improvements & Underground

Phase	Study and Design and Construction Assistance	Contract NA	Status	Active

Title SPW WTP Administration Building Improvements & Underground Fire Protection Loop

Phase Budget	Water
Phase Status	Active
Start Date	
End Date	

Cost Estimation Information									
5	Cost Est. Class								
1/1/2018	Cost Est. Date								
GLWA	Cost Est. Source								
GLWA	Cost Est. Prepared By								

Cost Allocation	CTA					
Funding Source	Bond Proceeds					
Func	Construction Bond Fund					
Useful Life >20Yrs?	Yes					
Tot. Federal Loan Amoun	1					
Program/Allowance	e Task Information					
Project Manager						
CIP Number						
Description						

Cost Type	Fiscal Year	Expense	Fringe Benefit NonPersonne	Comment
Engineering Services	FY19	\$20		
Engineering Services	FY20	\$383		
Engineering Services	FY21	\$186		
Engineering Services	FY22	\$290		
Engineering Services	FY23	\$121		

Task	Start Date	End Date	Duration
Scope Development	2/24/2018	6/7/2018	103
Procurement	6/8/2018	5/26/2019	352
Project Execution	5/27/2019	12/23/2022	1306
Project Closeout	12/24/2022	3/24/2023	90

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

					. (-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	20	383	186	290	121	0	0	1,000

FY16

CIP

FY18

FY19

FY20

FY17

GLWA FY 2020-2024 CIP

Springwells Water Treatment Plant, Administration Building Improvements & Underground

				•				•									
Phase Construction				Contrac	t NA		Sto	itus Futur	e Planned Start								
Title SPW WTP Administration	on Building Impr	ovements &	Unde	rground Fire	Prote	ction Loop	0										
Phase Budget Water						Cost Alloc	cation CTA										
Phase Status Future Plan	nned Start					Funding S	ource Bone	d Proceed	S								
Start Date							Fund Con	struction B	ond Fund								
End Date					Us	eful Life >2	20Yrs? Yes										
Cost Estimativ	on Information			Tot.	Feder	al Loan Ar	mount										
5	Cost Est. Cl		P.	o! o o b AA	_	ram/Allow	ance Task	intormatic	on								
1/1/818	Cost Est. Do	ate		oject Mana	ger												
GLWA	Cost Est. So	ource	C	P Number													
GLWA	Cost Est. Pr	epared By	ed By Description														
0.17	-:					D											
Cost Type	Fiscal Year	Expense		Fringe Benet	iiNon	Personne	(Comment									
Construction	FY21		\$2,042														
Construction	FY22	•	,500														
Construction	FY23	<u></u>	,458														
Task	Start Date	End Date	Durc	ation													
Scope Development	2/24/2020	5/24/2020		90													
Procurement	5/25/2020	11/29/2020		188													
Project Execution 11/30/2020 1		12/23/2022		753													
Project Closeout 12/24/2022 3/2		3/2//2023	24/2023 90														
•	12/24/2022	J/ Z4/ ZUZJ		70					Phase Total Expenses By FY (All figures are in \$1,000's)								
,					igure	s are in S	1,000's)										
Prior Yr Actuals FY19	Phas			By FY (All f		s are in \$	1, 000's) FY25+	Total									
	Phas	e Total Exp	enses FY2	By FY (All f					0								

FY21

FY22

FY23

FY24

FY25

Total



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 Statu Active

CIP Type Project

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 Lvl 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance 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.

Challenges 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.



114006 CIP#

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

72

Review Committee Project Risk Matrix Scoring

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								

Review Committee Score

69.4

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

Phase not applicable						Contract	NA	Stat	tus Closed	Out	
Title Prior Year <i>i</i>	Actual E	xpense	·S								
Phase Budget	Water						Cost Allo	cation CTA			
Phase Status	Closed	Out					Funding S	Source			
Start Date								Fund			
End Date							Useful Life >	20Yrs?			
Cost Estimation Information						Tot. Fe	ederal Loan A	mount			
		1	Cost Est. C	lass		J	Program/Allov	wance Task	Information		
	1/1/201	8	Cost Est. D	ate	Р	roject Manag	er				
Hazen & Saw	yer		Cost Est. So	ource	CIP Number						
Hazen & Saw	yer		Cost Est. Pr	epared By	y Description						
Cost Ty	pe	Fi	scal Year	Expens	e	Fringe Benefit	NonPersonne		Comment		
Construction		FY1	8-		\$30			FY18			
Engineering Serv	vices	FY1	8-		\$33			2020CIP			
Unknown		FY1	8-		\$104			FY17			
GLWA Salaries CIP2020 FY18-			\$7	3	0	FY18					
			Pha	se Total Fxn	enses	s By FY (All fig	ures are in S	(1 000's)			
Prior Yr Actua	ls f	FY19	FY20	FY21	FY2		FY24	FY25+	Total		
	177								177		

114006 CIP#

· Construct	ion		Contract Co	ON-251	Status Active	
SPW WTP R	eplacemen	t of Rapid Mix Units WTP 195	8 Process Train			
ase Budget	Water			Cost Allocation	СТА	
hase Status	Active			Funding Source	Bond Proceeds	
Start Date				Fund	Construction Bond Fund	
End Date			U	seful Life >20Yrs?	Yes	
Co	st Estimation	n Information	Tot. Fede	ral Loan Amount		
	1	Cost Est. Class	Prog	gram/Allowance	Task Information	
	1/1/2018	Cost Est. Date	Project Manager			
azen & Sawy	/er	Cost Est. Source	CIP Number			
azen & Sawy	/er	Cost Est. Prepared By	Description			

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$750			
Construction	FY20	\$54			

Task	Start Date	End Date	Duration
Scope Development	9/21/2017	12/20/2017	90
Procurement	12/21/2017	5/14/2018	144
Project Execution	5/15/2018	7/14/2019	425
Project Closeout	7/15/2019	10/15/2019	92

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

			<u> </u>		. (, 90.		-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	750	54	0	0	0	0	0	804

Project Closeout

GLWA FY 2020-2024 CIP

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

5/20/2019

8/18/2019

Hazen and Sawyer			
Phase Budget Water		Cost Allocation	СТА
Phase Status Active		Funding Source	Bond Proceeds
Start Date	2/6/2017	Fund	Construction Bond Fund
End Date	5/9/2019	Useful Life >20Yrs?	Yes
Cost Estimat	on Information	Tot. Federal Loan Amount	
5	Cost Est. Class	Program/Allowance	Task Information
1/1/2018	Cost Est. Date	Project Manager	
Hazen & Sawyer	Cost Est. Source	CIP Number	
Hazen & Sawyer	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe E	3enefit	NonPersonne	Comment
Engineering Services	FY19	\$	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			

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

90

					. (.,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	122	0	0	0	0	0	0	122

114006 CIP#

Springwells Water Treatment Plant Replacement of 1958 Rapid Mixing Units

hase GLWA En	nployees Pr	oject manager	ment		Contract NA	4	Status Active	
tle GLWA Salo	aries							
Phase Budget	Water					Cost Allocation	on CTA	
Phase Status	Active					Funding Source	Bond Proceeds	
Start Date						Fun	Construction Bond Fu	und
End Date					Us	seful Life >20Yrs	s? No	
С	ost Estimatio	on Information			Tot. Feder	ral Loan Amou	nt	\$0
	1	Cost Est. C	Class		Prog	gram/Allowanc	e Task Information	
	1/1/2018	Cost Est. D	ate	Project Manager				
Hazen & Saw	yer	Cost Est. S	ource	CIP Number				
Hazen & Saw	yer	Cost Est. P	repared By	Do	escription			
Cost Ty	pe	Fiscal Year	Expens	e	Fringe BenefitNor	Personne	Comment	
SLWA Salaries (CIP2020	FY19		\$10	4	0		
SLWA Salaries (CIP2020	FY20		\$5	2	0		
		Pha	se Total Exp	enses	By FY (All figure	es are in \$1.00	0's)	
Prior Yr Actuc	ıls FY1		FY21	FY2			Y25+ Total	
		14 7	0		0 0	0	0 21	

											•	
С	IP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
201	8		100	875	275					0	0	1,250
201	9	0	104	123	1,284	211					0	1,722
202	.0	0	0	177	886	61	0	0	0	0	0	1,124



114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
	NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Springwells WTP



Project Engineer/Manager TBD

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 Although the existing powdered activated carbon (PAC) system is operable, it is difficult to operate and maintain when needed for taste and odor control. The PAC system needs to be replaced with a new system using a different design that provides for improved operation and maintainability.

> The plant is able to feed powdered activated carbon (PAC) when needed but only through extraordinary measures because the existing PAC feed systems does not operate as intended. The extraordinary measures cause additional operation and maintenance expense and inefficiencies that should be corrected in the long term. Due to the infrequent need to feed PAC, there is not an immediate need to replace the entire existing PAC system at Springwells. If raw water quality deteriorates unexpectedly and taste and odor causing compound concentrations steadily increase, then replacement of the PAC system at an earlier date would be warranted.

Scope of Work Replace the existing PAC system with a new system of a different design that provides improved operations and maintainability when PAC dosing is needed to control taste and odor in the raw water supply.

Challenges Layout of piping to correct existing problems and drainage difficult. Diffuser replacement/relocation/installation will require plant shutdowns to complete, so it will be seasonal demand dependent.

Project History n/a

Related Project none

Lookup Driver 2 - Performance

Other Important Info n/a



114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

Explanation The existing PAC system is cumbersome and difficult to operate and maintain.



114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

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

Project Manager Score

71.4

Review Committee Project Risk Matrix Scoring

Criteria	Score	Comment
Condition	5	
Efficiency and Innovation	1	
Financial	2	
O&M	4	
Performance (Service Level/Reliability)	5	
Public Benefit	5	
Public Health & Safety	1	
Regulatory (Environmental/Legal)	3	PM considers this a regulatory issue. This is a sec

Review Committee Score

63.8

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

hase Study and I	Design and	d Construction	n Assistance	Co	ontract N	A	Stat	t us Future	e Planned Start		
tle SPW WTP Po	wdered Ac	ctivated Carb	on System Im	provements							
Phase Budget W	t Water										
Phase Status Fo	us Future Planned Start			Funding Source				Bond Proceeds			
Start Date							Fund Cons	Construction Bond Fund Yes			
End Date					U	seful Life >2	OYrs? Yes				
Cos	t Estimatior	n Information			Tot. Fede	eral Loan An	nount				
5 Cost Est. Class				Program/Allowance Task Information							
1/1/2015 Cost E			ate	Project Manager							
1/		Cost Est. Source		CIP Number							
CDM Smith		Cost Est. So	ource	CII ITOII	ibei						
			ource repared By	Descript							
CDM Smith											
CDM Smith	e			Descript	tion	nPersonne	C	Comment			
CDM Smith		Cost Est. P	repared By Expense	Descript	tion		020CIP	Comment			
CDM Smith CDM Smith Cost Type		Cost Est. Pr	repared By Expense	Descript e Fringe	tion			Comment			
CDM Smith CDM Smith Cost Type Ingineering Service Task	ces F	Cost Est. P	Expense	Descript Fringe 8820 Duration	Benefil No			Comment			
CDM Smith CDM Smith Cost Type Engineering Service	ces F	Cost Est. Prince Fiscal Year EY25+ Start Date	Expense End Date	Percript Fringe \$820 Duration 90	Benefil No			Comment			
CDM Smith CDM Smith Cost Type Engineering Service Task Scope Development	ces F	Cost Est. Prince Fiscal Year EY25+ Start Date 10/8/2022	Expense \$ End Date 1/6/2023	Percript Fringe 8820 Duration 90 365	BenefitNo			Comment			
CDM Smith CDM Smith Cost Type Engineering Service Task Scope Development	ces F	Fiscal Year Y25+ Start Date 10/8/2022 1/7/2023	Expense \$ End Date 1/6/2023 1/7/2024	Percript Fringe 5820 Duration 90 365 830	Benefil No			Comment			
CDM Smith CDM Smith Cost Type Engineering Service Task Ecope Development Procurement Project Execution	ces F	Fiscal Year Fiscal Year Fix25+ Start Date 10/8/2022 1/7/2023 1/8/2024 4/18/2026	Expense \$ End Date 1/6/2023 1/7/2024 4/17/2026	Descript Fringe 8820 Duration 90 365 830 90	Benefit No	2	020CIP	Comment			
CDM Smith CDM Smith Cost Type Engineering Service Task Ecope Development Procurement Project Execution	ces F	Fiscal Year Fiscal Year Fix25+ Start Date 10/8/2022 1/7/2023 1/8/2024 4/18/2026	Expense End Date 1/6/2023 1/7/2024 4/17/2026 7/17/2026	Descript Fringe 8820 Duration 90 365 830 90	Benefit No	2	020CIP	Comment			

114007 CIP#

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

hase GLWA Emplo itle GLWA Salaries	•	oject manager	ment		Co	ntract N	Ą	State	us Future f	Planned Start	
Phase Budget Wa	Phase Budget Water						Cost Alloc	ation CTA	СТА		
Phase Status Fut	Phase Status Future Planned Start Start Date End Date								Bond Proceeds Construction Bond Fund		
Start Date											
End Date				Useful Life >20Yrs? No							
Cost Estimation Information					Tot. Federal Loan Amount					\$0	
5 Cost Est. Class				Program/Allowance Task Information							
1/1/2015 Cost Est. Date			ate	Project Manager							
CDM Smith Cost Est. Source			ource	CIP Number							
CDM Smith Co		Cost Est. P	Cost Est. Prepared By		Description						
Cost Type		Fiscal Year	Expens	е	Fringe I	BenefitNo	nPersonne	С	omment		
SLWA Salaries CIP2020		FY25+		\$82		32	42	020CIP			
		Pha	se Total Exp	enses	s By FY	(All figure	es are in \$1	,000's)			
Prior Yr Actuals	FY19		FY21	FY2		FY23	FY24	FY25+	Total		
		0 0	0		0	0	0	118	118		

Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements

Phase Construction					Contract N	1A	Status	Future Pla	nned Start			
itle SPW WTP Powo	dered Act	ivated Carb	on System Im	provemen	its							
Phase Budget Wat	ter					Cost Alloc	ation CTA					
Phase Status Futu	ure Planne	ed Start				Funding Sc	ource Bond Pr	oceeds				
Start Date							Fund Constru	ction Bond	Fund			
End Date					I	Useful Life >2	OYrs? 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	Projec	t Manager							
CDM Smith		Cost Est. S	ource	CIP Number								
CDM Smith		Cost Est. P	repared By	Descri	ption		<u> </u>					
Cost Type		Fiscal Year	Expense	e Fring	e Benefit	onPersonne		mment				
Construction	FY	25+	\$3	,000		2	020CIP					
Task		Start Date	End Date	Duration	1							
Scope Developmen	ıt	7/15/2024	10/13/2024		90							
Procurement		10/14/2024	4/20/2025	1	88							
Project Execution		4/21/2025	4/17/2026	3	61							
Project Closeout		4/18/2026	7/17/2026		90							
		Pha	se Total Exp	enses By I	FY (All figu	es are in \$1	,000's)					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total				
		0	0	0	0	0	3,000	3,000				
Proje	ct Total	Expenses	By FY Cor	npared	to Prior C	IPs (All fig	ures are in	\$1,000's)				
CID EV17							'00 EV04		T - 1 - 1			

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



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



114008 CIP#

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

☐ Innovation ☐ Water MP Right Sizing ☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

NONE



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 sedimentation basin gates, guides and hoists are early 1930s and are in need of upgrade. Further, upgrades must result in a safer mode of gate operation.

Scope of Work This project will evaluate and rehabilitate or replace the sluice gates, guides and hoists at the 1930s Filter Building at the Springwells Water Treatment Plant. These gates and appurtenances have surpassed their expected service life and require rehabilitation and/or replacement for the isolation and operation of the 1930s filters and overall maintenance of various systems at the Springwells WTP. Options for maintenance of flows are limited with current condition of these gates.

Challenges Work will either require sedimentation basins to be shut down and dewatered or the work performed by divers. In either case, portions of the 1930 plant will need to be shut down to complete the work.

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.



114008 CIP#

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

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

61.8

Review Committee Project Risk Matrix Scoring

		or mon manuscooming
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	

Review Committee Score

52.8

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

Phase Design a	nd Build				Contract	DB-309		Status	Active	
Title 1930 Sedin	mentation Bo	asin Sluice Gat	es, Guides 8	, Hoist	s Improvemen	ts at Springwe	ells WTP			
Phase Budget	Water					Cost Allo	cation	СТА		
Phase Status	Active					Funding S	ource	Bond Pro	oceeds	
Start Date							Fund	Construc	ction Bond Fund	
End Date						Useful Life >	20Yrs?	Yes		
Co	ost Estimatio	n Information			Tot. Fe	ederal Loan A	mount			
	5	Cost Est. C	lass		I	Program/Allov	wance	Task Info	rmation	
	1/1/2015	Cost Est. D	ate	F	Project Manage	er				
GLWA	,	Cost Est. So	ource	(CIP Number					
GLWA		Cost Est. P	repared By		Description					
Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne		Com	nment	
Design-Build		FY19		\$411						
Design-Build		FY20	\$2	4,123						
Design-Build		FY21	\$6	3,800						
Design-Build		FY22	\$5	5,667						

Task	Start Date	End Date	Duration
Scope Development	1/24/2018	8/23/2018	211
Procurement	8/24/2018	4/25/2019	244
Project Execution	4/26/2019	4/21/2022	1091
Project Closeout	4/22/2022	7/21/2022	90

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	411	4,123	6,800	5,667	0	0	0	17,001

GLWA FY 2020-2024 CIP 114008 CIP# Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

hase GLWA Employee:	s Project manage	ement	Contract	NA	Status Active	
i tle GLWA Salaries	,					
Phase Budget Water				Cost Alloc	cation CTA	
Phase Status Active				Funding So	Durce Bond Proceeds	
Start Date					Fund Construction Bond	d Fund
End Date				Useful Life >2	OYrs? No	
Cost Estim	ation Information	ı	Tot. F	ederal Loan An	nount	\$0
	Cost Est.	Class		Program/Allow	ance Task Information	
1/1/201	5 Cost Est.	Date	Project Manag	er		
GLWA	Cost Est.	Source	CIP Number			
GLWA	Cost Est.	Prepared By	Description			
Cost Type	Fiscal Year	Expense	Fringe Benefi	1NonPersonne	Comment	
GLWA Salaries CIP2020	FY19		\$9	0		
GLWA Salaries CIP2020	FY20	\$	521 8	3		
GLWA Salaries CIP2020	FY21	\$	521 8	1		
GLWA Salaries CIP2020	FY22	9	521 8	1		
GLWA Salaries CIP2020	FY23		\$2	0		

		1 11010	O I O I GI I Z	7011000 D) 1	. (/90.	or are my	.,000,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	13	30	30	30	3	0	0	106

114008 CIP#

GLWA FY 2020-2024 CIP 114008 CIP# Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

Phase Design					Co	ntract	CS-289	7		Statu	is A	ctive			
Title Design 1930 Se	dimentation	on Basin Slu	ice Gates, G	uides,	& Hois	ts Impro	vemen	its at Sp	oringwe	ells					
Phase Budget Wat	er						Co	st Alloc	cation	СТА					
Phase Status Activ	ve			Funding Source Bond Proceeds											
Start Date				Fund Construction Bond Fund											
End Date							Useful	Life >2	20Yrs?	Yes					
Cost Es	stimation l	nformation				Tot. Fe	deral L	oan Ar	nount					\$0	
	5	Cost Est. C	lass			P	rogram	n/Allow	ance 1	īask In	nform	nation			
1/1/2	2015	Cost Est. D	ate	Р	roject <i>l</i>	Manage	er								
GLWA		Cost Est. S	ource	C	IP Num	nber									
GLWA		Cost Est. P	repared By	red By Description											
			,												
			_		<u> </u>										
Cost Type		iscal Year	Expense		Fringe	Benefith	NonPer				omm	ent			
Engineering Services	FY1	9		\$18					2020CIF)					
Task	S	tart Date	End Date	Dur	ation										
Scope Development	t	2/28/2018	4/15/2018		46										
Procurement		4/16/2018	5/29/2018		43										
Project Execution		6/7/2018	8/24/2018		78										
Project Closeout		8/24/2018	11/22/2018		90										
		Pha	se Total Exp	ense:	s By FY	(All fig	ures ai	re in \$	1,000's)					
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY23		Y24	FY25		То	tal			
	18											18			
Proje	ct Total	Expenses	By FY Co	mpa	red to	Prior (CIPs (All fig	ures	are ir	n \$1	,000'	s)		
015 51414			F) (1.0									E) (0	_	-	

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



114008 CIP#

GLWA FY 2020-2024 CIP Great Lakes Water Authority Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		442	4,153	6,830	5,697	3	0	0	17,125



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

□ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

NONE



Project Engineer/Manager Timothy Kuhns

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 Hydraulic analysis and Evaluation of options to maintain adequate pressure at Springwell's high pressure district, FROM 132010: Construction of West Service Center Division Valves is needed to convey Lake Huron flows through the West Service Center to the Springwells high service area while the Springwells raw water tunnel is out of service for repairs. Construction of active bypass around the Newburgh Pump Station.

Scope of Work This study involves hydraulic analyses and evaluation of options to transmit finished water from the Lake Huron Water Treatment Plant through the West Service Center in order to provide finished water to the Springwells Water Treatment Plant's high-pressure district. FROM 132010: Lake Huron WTP needs to provide flows to the Springwells high service area while the Springwells raw water tunnel is out of service for repair.

Challenges N/A - Under Procurement. FROM 132010: Coordination with operations critical meet testing of existing valves. Isolation, shutdown and operation of Lake Huron and Springwells WTPs, North Service Center, and other facilities.

Project History

Related Project | Springwells WTP Reservoir Fill Line

Lookup Driver 1 - Condition

Other Important Info

Explanation N/A - Under Procurement



SPW WTP Service Area Redundancy Study

Project Manager Project Risk Matrix Scoring								
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							

Project Manager Score

85.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

78

SPW WTP Service Area Redundancy Study

Phase Study Contract CS-1772 Status Pending Close-out

Title CS-1772 Springwells Water Treatment Plant Service Area Redundancy Study

Phase Budget	Water
Phase Status	Pending Close-out
Start Date	11/4/2016
End Date	11/14/2017

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

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

	J. a, 7 a	
Project Manager		
CIP Number		
Description		

Task	Start Date	End Date	Duration
Scope Development	10/24/2017	2/26/2018	125
Procurement	2/27/2018	12/19/2018	295
Project Execution	12/20/2018	12/18/2019	363
Project Closeout	7/1/2019	9/26/2019	87

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

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 GLWA Employees Project management			Contract NA		Status Pending Close-out		
fle GLWA Salo	aries						
Phase Budget	Budget Water e Status Pending Close-out			Cost Allocation	CTA Revenue Financed Capital		
Phase Status				Funding Source			
Start Date				Fund	Improve	ment & Extension Fun	
End Date			Us	eful Life >20Yrs?	No		
Co	ost Estimation	Information	Tot. Feder	al Loan Amount		\$0	
	5	Cost Est. Class	Program/Allowance Task Information				
	1/1/2015	Cost Est. Date	Project Manager				
GLWA		Cost Est. Source	CIP Number				
GLWA		Cost Est. Prepared By	Description				

Discuss Talkel	F	D EV	/ A II . C		61	0001-1
Phase Total	expenses	BA LI	(All flaures	are in	31.	.UUU S I

			11143	C TOTAL EX	ciises by i	chises by it (/ thi highles are in \$1,000 s)						
Pr	rior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
		0	0	0	0	0	0	0	0			

SPW WTP Service Area Redundancy Study

hase not applicable					Contract	NA	Sto	atus Closec	tuO k	
itle Prior Year Actual	Expense	S								
Phase Budget Water										
Phase Status Closed	l Out					Funding S	Source			
Start Date							Fund			
End Date						Useful Life >	20Yrs?			
Cost Estin	nation Ir	formation			Tot. Fe	ederal Loan A	mount			
	5	Cost Est. C	Class			Program/Allo	wance Task	Information	1	
1/1/20	15	Cost Est. D	ate	P	Project Manag	er				
GLWA		Cost Est. S	ource	CIP Number						
GLWA		Cost Est. P	repared By		Description					
Cost Type	Fi	scal Year	Expens	е	Fringe Benefit	NonPersonne		Comment		
Engineering Services	FY1	8-		\$121			2020CIP			
Jnknown	FY1	8-		\$193			FY17			
GLWA Salaries CIP2020	FY1	8-		\$14	6		FY18			
		Pha	se Total Exp	ense	s By FY (All fig	gures are in S	31,000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY:		FY24	FY25+	Total		
334								334		
Proiect	Total I	xpenses	By FY Co	mpa	red to Prior	CIPs (All fie	aures are	in \$1.000)'s)	

				"						•	
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	334	0	0	0	0	0	0	0	334



114010 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Springwells WTP



Project Engineer/Manager Erich Klun

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/8/2016

Year Project Added to CIP 2012

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 Six (6) of the seven (7) 72-inch mains leaving the site are original to the 1930 plant construction and consist of riveted steel pipe material. Main No. 7 is a prestressed concrete cylinder pipe material installed in 1958. The steel mains are known to be leaking and are in need of replacement to maintain system reliability. Additionally, isolation valves associated with the 72-inch mains need to be replaced. Other yard piping, including gravity sewers and process piping, need to be assessed and replaced and or rehabilitated.

Scope of Work Existing yard piping is original riveted steel from the early 1930s and has experienced leaks. These leaks have potential to disrupt service to Springwells Service area customers. Scope will also include performing a condition assessment, cleaning and replacement/rehabilitation of all gravity sewers (including manholes) and other pressure pipe. Other site improvements will include replacement of access drives, new guard shack, construction trailer utility hook-up station, and other site miscellaneous site improvements. Formerly CIP 1248.

Challenges Complex construction sequencing, and reliability of existing gate valves for isolation will be critical. Design will need to address the isolation valve issue, as well 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 Production Flow Metering Upgrades at Springwells WTP.

Lookup Driver 1 - Condition

Other Important Info n/a

Explanation Not provided.



114010 CIP#

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

Project Manager P	Project Manager Project Risk Matrix Scoring										
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										

Project Manager Score

53.8

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

62.2

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

Phase GLWA Em	nployees I	Projec	t managen	nent		С	ontract N	A	Stat	us Future I	Planned S	tart	
Title GLWA Salo	aries												
Phase Budget	Water							Cost Alloc	cation CTA				
Phase Status	Future Pla	annec	d Start		Funding Source Bond Proceeds								
Start Date	Start Date								Fund Cons	truction Bor	nd Fund		
End Date	End Date						U	seful Life >2	20Yrs? No				
Co	ost Estima	lion In	formation				Tot. Fede	eral Loan Ar	nount			\$0	
	5 Cost Est. Class					Program/Allowance Task Information							
	1/1/2015		Cost Est. D	ate	P	roject	Manager						
CDM Smith			Cost Est. So	ource	CIP Number								
CDM Smith			Cost Est. Pr	epared By	red By Description								
Cost Ty	pe	Fis	scal Year	Expens	e	Fringe	e BenefitNo	nPersonne	C	omment			
GLWA Salaries C	CIP2020	FY2	4		\$50		20	2					
GLWA Salaries C	GLWA Salaries CIP2020 FY25+						158	20 2	2020CIP				
			Phas	se Total Exp	ense	s By F	Y (All figur	es are in \$	1,000's)				
Prior Yr Actua	ls FY	19	FY20	FY21	FY:		FY23	FY24	FY25+	Total			
		0	0	0		0	0	72	578	650			

114010 CIP#

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

Phase Design and Build			C	ontract	Status	Future Planned Start				
Title SPW WTP Yard Pipin	g Improvements									
Phase Budget Water					Cost Allocatio	n CTA				
Phase Status Future Pla	anned Start		Funding Source Bond Proceeds							
Start Date			Fund Construction Bond Fund							
End Date					Useful Life >20Yrs	? Yes				
Cost Estima	tion Information			Tot. Fe	deral Loan Amour	nt				
5	Cost Est. Cl	ass		P	rogram/Allowanc	e Task Inf	ormation			
1/1/2015	ate	Project	Manage	r						
CDM Smith	CDM Smith Cost Est. Source				e CIP Number					
CDM Smith	CDM Smith Cost Est. Prepar				ed By Description					
Cost Type	Fiscal Year	Expense	e Fringe	e Benefith	Cor	nment				
Design-Build	FY25+	\$110	,000		2020	CIP				
Task	Start Date	End Date	Duration							
Scope Development	3/9/2024	6/7/2024	9	0						
Procurement	6/8/2024	6/8/2025	36	5						
Project Execution	Project Execution 6/9/2025 6									
Project Closeout	6/5/2032	9/3/2032	9	0						
	Phas	e Total Exp	enses By F	Y (All figu	res are in \$1,000	0's)				
Prior Yr Actuals FY	′19 FY20	FY21	FY22	FY23	FY24 FY	(25+	Total			
	0 0	0	0	(0 1	10,000	110,000			

114010 CIP#

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

ase Budget	Water		Cost Allocation	CTA
Phase Status	Future Plann	ned Start	Funding Source	Bond Proceeds
Start Date			Fund	Construction Bond Fund
End Date			Useful Life >20Yrs	? Yes
С	ost Estimatio	n Information	Tot. Federal Loan Amoun	t
	5	Cost Est. Class	Program/Allowance	e 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)

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 Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

SP-563 – Rehabilitated 1958 Pipe Gallery (in progress)



Project Engineer/Manager Brian VanHall

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/6/2012

Year Project Added to CIP 2012

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 These existing mechanical systems are largely broken and leaking, creating an inefficient use of energy.

Scope of Work This engineering services contract involves designing a new, more energy-efficient steam heating system for the entire Springwells Water Treatment Plant, including all steam unit heaters, steam piping, condensate return piping, condensate return pumping stations, steam pressure reducing valves, and appurtenances. This project also involves replacing the compressed air piping in the plant used for service air. Once completed, the project will provide energy savings by eliminating extensive steam and condensate leaking currently inherent in the antiquated system. This project includes design and construction administration (CS-1671) and construction (SP-TBD) to replace the leaking steam piping, condensate return piping and compressed air piping throughout the Springwells WTP. The scope of work includes replacing inefficient unit heaters, radiators, condensate return pump stations, pressure reducing valves, regulators, and heating system appurtenances throughout the plant. Once completed, the project will provide energy savings by eliminating extensive steam and condensate leaking currently inherent in the antiquated system.

Challenges Many components of the existing system are original to the existing heating system, are not functioning and need to be demolished/removed. Seasonal work and sequencing with the heating season is required.

Project History n/a

Related Project none

Lookup Driver N/A - Under Procurement

Other Important Info n/a

Explanation N/A - Under Procurement



114011 CIP#

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

Project Manager P	Project Manager Project Risk Matrix Scoring										
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										

Project Manager Score

63.8

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

62.4

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

Phase not appli	cable					Contract	NA	Sta	tus Closed	Out		
Title Prior Year <i>i</i>	Actual Ex	pense	S									
Phase Budget	Water				Cost Allocation CTA							
Phase Status	Closed C)ut			Funding Source							
Start Date								Fund				
End Date	End Date						Useful Life >	20Yrs?				
Cost Estimation Information						Tot. Fe	ederal Loan A	mount				
	5		Cost Est. C	lass		J	Program/Allov	wance Task	Information			
	1/1/2017 Cost Est. Date				P	roject Manag	er					
Metco			Cost Est. So	ource	CIP Number							
Metco			Cost Est. Pr	epared By	D	escription						
Cost Ty	pe	Fis	scal Year	Expens	е е	Fringe Benefit	NonPersonne	(Comment			
Engineering Serv		FY1	3-		\$172 FY18				3			
Unknown		FY1	3-		\$261			FY17	17			
Unknown		FY1	3-		\$19			FY16				
GLWA Salaries CIP2020 FY18-				\$15	\$15 6 FY18							
			Phas	se Total Exp	ense	s By FY (All fig	ures are in \$	51,000's)				
Prior Yr Actua	ls FY	′19	FY20	FY21	FY2		FY24	FY25+	Total			
	473								473			

114011 CIP#

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

Phase GLWA Em	iployees Pi	roject manager	ment		Contract N	A	Status	Active	
Title GLWA Salc	aries								
Phase Budget	Water					Cost Alloca	ition CTA		
Phase Status	Active					Funding Sou	Bond Pr	oceeds	
Start Date						F	Constru	ction Bond Fund	
End Date					U	seful Life >20	Yrs? No		
Co	st Estimati	on Information			Tot. Fede	eral Loan Amo	ount		\$0
	5	Cost Est. C	lass		Pro	gram/Allowa	nce Task Info	ormation	
	1/1/2017	Cost Est. D	ate	F	Project Manager				
Metco		Cost Est. S	ource	(CIP Number				
Metco		Cost Est. P	repared By	[Description				
Cost Typ	ре	Fiscal Year	Expens	е	Fringe BenefitNo	nPersonne	Con	nment	
GLWA Salaries C	:IP2020	FY19		\$21	8	1			
GLWA Salaries C	IP2020	FY20		\$21	8	1			
GLWA Salaries C	IP2020	FY21		\$21	8	1			
GLWA Salaries C	IP2020	FY22		\$21	8	1			

Phase Total Expenses By FY (All figures are in \$1.000's)

				<u> </u>	<u> </u>	· (/	σο απο πτ γ	- /	
Pric	or Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		30	30	30	30	0	0	0	120

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

Phase	Construction	Contract NA	Status Active	

Title Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP

Phase Budget	Water
Phase Status	Active
Start Date	
End Date	

<u> </u>	
Cost Estimo	tion Information
1	Cost Est. Class
1/1/2017	Cost Est. Date
Metco	Cost Est. Source
Metco	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	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$2,938			
Construction	FY20	\$5,134			
Construction	FY21	\$7,526			
Construction	FY22	\$8,003			2020CIP

Description

Task	Start Date	End Date	Duration
Scope Development	11/30/2017	2/28/2018	90
Procurement	3/1/2018	1/2/2019	307
Project Execution	1/3/2019	2/28/2022	1152
Project Closeout	4/22/2021	5/30/2022	403

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	2,938	5,134	7,526	8,003	0	0	0	23,601

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

Phase Study and Design and Construction Assistance	Contract	CS-1
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ontract CS-1671 Status Active

Title CS-1671 Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP

ETCO			
Phase Budget Water		Cost Allocation	СТА
Phase Status Active		Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimatio	n Information	Tot. Federal Loan Amount	
5	Cost Est. Class	Program/Allowance	Task Information
1/1/2017	Cost Est. Date	Project Manager	
Metco	Cost Est. Source	CIP Number	
Metco	Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	VonPersonne	Comment
Engineering Services	FY19	\$141			
Engineering Services	FY20	\$228			
Engineering Services	FY21	\$198			
Engineering Services	FY22	\$228			2020CIP

Task	Start Date	End Date	Duration
Scope Development	10/1/2016	12/30/2016	90
Procurement	12/31/2016	12/31/2017	365
Project Execution	1/1/2018	4/21/2021	1206
Project Closeout	4/22/2021	5/30/2022	403

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	141	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	O	Ω	0	24 989		

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Innovation	
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☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Filter Building roof



Project Engineer/Manager Paula Anderson

Manager Paula Anderson

Managing Dept Fleet and Facilities

Date Original Business Case Prepared 10/11/2016

Year Project Added to CIP 2016

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 The existing roof over the 1930 filters is leaking in places and poses water quality concerns due to roof leaks.

Scope of Work This project encompasses replacement of the existing 1930 Filter Building roofing system, including the built-up roofing material, flashing, roof drains/conductors and sealing cap stones to prevent water from penetrating the building envelop and causing water damage. Construction activity under Contract SP-563 in 2014-2015 revealed that water damage has been on-going and is causing clerestory window lintel deterioration. Additionally, construction traffic under Contract SP-563 has shown the built-up material to be blistering and spongy.

Challenges Seasonal construction work, and construction will require working around new rooftop equipment installed under SP-563.

Project History n/a

Related Project none

Lookup Driver 1 - Condition

Other Important Info n/a

Explanation Not provided.

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Project Manager P	roject Ri	sk Matrix Scoring
а	Score	

	-	-
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	

Project Manager Score

70.6

Review Committee Project Risk Matrix Scoring

KOVIOW GOIIIIII	nee i rejeer kisk mank eeening							
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							

Review Committee Score

61

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Phase Design ar	nd Build				Contract	DB-093		Status	Active		
Title Springwells	s Water Tre	atment Plant 1	930 Filter Build	ling-Root	f Replacem	ent					
DB093											
Phase Budget	Water					Cost Allo	cation C	CTA			
Phase Status	Active			Funding Source Bond Proceeds							
Start Date				Fund Construction Bond Fund							
End Date	End Date			Useful Life >20Yrs? Yes							
Cost Estimation Information					Tot. Fe	deral Loan A	mount				
4 Cost Est. Class		Class	Program/Allowance Task Information								
1/1/2016 Cost Est. Date		ate	Project Manager								
Testing Engine	eers & Con	sult Cost Est. S	ource	CIP Number							
Testing Engine	eers & Con	sult Cost Est. F	repared By	By Description							
Cost Typ	pe	Fiscal Year	Expense	e Frir	nge Benefill	lonPersonne		Com	nment		
Design-Build		FY19	\$2	,778							
Task		Start Date	End Date	Duratio	on						
Scope Developi	ment	8/15/2017	9/30/2017		46						
Procurement		10/1/2017	3/1/2018		151						
Project Executio	n	4/12/2018	4/17/2019		370						
Project Closeou	t	4/18/2019	7/18/2019		91						
		Pho	se Total Exp	enses Ry	v FY (All fig	ures are in S	1 000's)				

					. (11301		-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	2,778	0	0	0	0	0	0	2,778

114012 CIP#

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Phase GLWA Emplo	oyees Projec	ct manager	ment		С	ontract N	A	atus Active				
Title GLWA Salaries	S											
Phase Budget Wo	ater			Cost Allocation CTA								
Phase Status Ac	Phase Status Active						Funding S	ource Bon	d Proceeds			
Start Date								Fund Cor	nstruction Bo	nd Fund		
End Date	End Date					U	seful Life >2	20Yrs? No				
Cost I	Cost Estimation Information				Tot. Federal Loan Amount							
	4 Cost Est. Class				Program/Allowance Task Information							
1/1/2016 Cost Est. Date			ate	Project Manager								
Testing Engineers	& Consult	Cost Est. S	ource	CIP Number								
Testing Engineers	& Consult	Cost Est. P	repared By	D	escrip	otion						
Cost Type	Fi	scal Year	Expens	e	Fringe	e BenefitNo	nPersonne		Comment			
GLWA Salaries CIP2	2020 FY1	9		\$7		3	0					
		Pha	se Total Exp	enses	s By F	Y (All figur	es are in \$	1,000's)				
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY23	FY24	FY25+	Total			
	10	0	0		0	0	0	(10			

SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

hase not applicable				Contract N	IA	Status	Closed Out			
itle Prior Year Actual	Expenses									
Phase Budget Water			Cost Allocation CTA							
Phase Status Closed	Out				Funding S	ource				
Start Date						Fund				
End Date				l	Jseful Life >2	20Yrs?				
Cost Esti	nation Information			Tot. Fed	eral Loan Aı	mount		\$0		
	4 Cost Est. C	Class		Pro	gram/Allov	vance Task Info	ormation			
1/1/20	6 Cost Est. D	ate	Pro	ject Manager						
Testing Engineers & Consult Cost Est. Source			CIP	Number						
Testing Engineers &	Consult Cost Est. P	repared By	Des	cription						
Cost Type	Fiscal Year	Expens	e Fr	inge BenefitNo	nPersonne	Cor	nment			
Construction	FY18-	\$1	1,122		f	FY18				
GLWA Salaries CIP2020	FY18-		\$1		i	FY18				
			enses P	Sy FY (All figur	es are in \$	1,000's)				
	Pha	ise Total Exp								
Prior Yr Actuals	Pho FY19 FY20	FY21	FY22	FY23	FY24	FY25+	Total			

							The second secon		•		
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	1,123	2,788	0	0	0	0	0	0	3,911

114013 CIP#

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

☐ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

✓ NEWTP Repurposing

Project Statu Active

CIP Type Project

Springwells WTP



Project Engineer/Manager Erich Klun

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/11/2016

Year Project Added to CIP 2016

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 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.

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

114013 CIP#

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Project Manager	Project Ri	sk Matrix Scoring
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	

Project Manager Score

68.2

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

77.2

114013 CIP#

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

nase GLWA Em I le GLWA Salo		Project mana	gement		Contract N	1A	Statu	s Active		
Phase Budget	Water					Cost Allocat	ion CTA			
Phase Status	Active					Funding Sou	rce Bond F	Proceeds		
Start Date				Fund Construction Bond Fu						
End Date						Useful Life >20Y	rs? No			
Co	Cost Estimation Information				Tot. Fed	unt	\$0			
	4	Cost Es	t. Class		Pro	ogram/Allowar	ice Task In	formation		
1/1/2015		Cost Es	Cost Est. Date		Project Manager					
CDM Smith		Cost Es	Cost Est. Source		CIP Number					
CDM Smith		Cost Es	t. Prepared	Ву	Description					
Cost Ty	pe	Fiscal Yea	ar Exp	pense	Fringe BenefitNo	onPersonne	Сс	mment		
SLWA Salaries C	CIP2020	FY19		\$20	8	1				
SLWA Salaries CIP2020 FY20			\$10	4	0					
			hase Total	Expense	s By FY (All figu	res are in \$1,0	00's)			
Prior Yr Actua	ls FY				22 FY23		FY25+	Total		
		29	14	0	0 0	0	0	43		

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 \	hase Budget Water		Cost Allocation CTA						
Phase Status	hase Status Active			Funding Source Bond Proceeds					
Start Date	rt Date 10/11/2016			Fund Construction Bond Fund					
End Date		10/7/2019	Us	reful Life >20Yrs? Yes					
Co	st Estimatio	n Information	Tot. Feder	al Loan Amount					
	4	Cost Est. Class	Prog	ram/Allowance Task Information					
1	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
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

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

			<u> </u>	, , , , , , , , , , , , , , , , , , , 	. (,		.,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	70	37	0	0	0	0	0	107

114013 CIP#

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Phase Construction				Contract	New	S	tatus	Active		
itle SPW WTP Reservoir Fi	I Line Improvem	nents								
Phase Budget Water					Cost Alloc	ation CT	A			
Phase Status Active					Funding Sc	ource Bo	nd Pro	oceeds		
Start Date						Fund Co	onstruc	ction Bond Fund		
End Date					Useful Life >2	OYrs? Ye	Yes			
Cost Estimat	on Information			Tot. Fe	deral Loan Am	nount				
4 Cost Est. Class				P	rogram/Allow	ance Ta	sk Info	rmation		
1/1/2015	Cost Est. D	ate	Project Manager							
CDM Smith	Cost Est. S	Cost Est. Source		CIP Number						
CDM Smith	Cost Est. P	repared By	Description							
Cost Type	Fiscal Year	Expense	F	ringe Benefit	IonPersonne		Com	nment		
Construction	FY19	\$2	,750							
Construction	FY20	\$1	,500							
Task	Start Date	End Date	Durc	ation						
TOSK	orari Baro									
	10/23/2017	1/21/2018		90						
Scope Development		1/21/2018 10/29/2018		90 280						
Scope Development Procurement Project Execution	10/23/2017									

Phase Total	Expenses B	y FY ((All figures	are in \$	(s',000,1)
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					- (7000	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	2,750	1,500	0	0	0	0	0	4,250

114013 CIP#

Springwells Water Treatment Plant, Reservoir Fill Line Improvements

ase not applicable				Contract NA				Sto	atus Clos	sed Out		
tle Prior Year Actua	I Expense	es										
Phase Budget Wate	r				Cost Allocation CTA							
Phase Status Close	d Out						Funding S	ource				
Start Date				Fund								
End Date				Useful Life >20Yrs?								
Cost Esti	imation I	nformation			Tot. Fe	eder	al Loan Ar	nount				
4 Cost Est. Class			Class		İ	Prog	ram/Allow	ance Task	Informat	ion		
1/1/2015 Cost Est. Date		ate	Project Manager									
CDM Smith		Cost Est. S	ource	CIP Number								
CDM Smith		Cost Est. P	repared By	Description								
Cost Type	F	Fiscal Year	Expens	e	Fringe Benefit	Non	Personne		Commen	nt		
Ingineering Services	FY	18-	·	\$88	-			Y18				
Inknown	FY	18-		\$120			F	:Y17				
GLWA Salaries CIP202	0 FY	18-		\$7	1		F	Y18				
		Pha	se Total Exp	ense	s By FY (All fig	ure	s are in \$1	I,000's)				
Prior Yr Actuals	FY19	FY20	FY21	FY2			FY24	FY25+	Total			
216									2	116		
Projec	t Total	Expenses	By FY Co	mpa	red to Prior	CIF	Ps (All fin	ures are	in \$1.0	00'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	216	2,849	1,551	0	0	0	0	0	4,616

Springwells Water Treatment Plant Emergency Grating Replacement

□ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Deteriorated support beams holding up Low Lift Station. Dewaterina 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 Fley, 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 LvI 3 Springwells

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance 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).

Scope of Work 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).

Challenges 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.

Project History 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

Other Important Info 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 \$1 and \$2.

Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

114015 CIP#

Springwells Water Treatment Plant Emergency Grating Replacement

Project Manager Project Risk Matrix Scoring							
Criteria	Score	Comment					
Condition	5						
Efficiency and Innovation	5						
Financial	5						
O&M	5						
Performance (Service Level/Reliability)	5						
Public Benefit	5						

Project Manager Score

100

Review Committee Project Risk Matrix Scoring

5 5

no non commission make make a coming								
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							

Review Committee Score

100

Springwells Water Treatment Plant Emergency Grating Replacement

hase Design and B	uild				Contract N	IA	Stat	tus Active	
itle Emergency Gr	rating Rep	lacement at	Springwells \	WTP					
Contract No. is SCP	-DB-112								
Phase Budget Wa	ter					Cost Allo	cation CTA		
Phase Status Act	ive					Funding S	ource Bond	l Proceeds	
Start Date		5/1/	′2017	Fund Constru					nd Fund
End Date	ate 8/27/2018				l	Jseful Life >2	20Yrs? Yes		
Cost E	stimation	Information			Tot. Fede	eral Loan Ar	mount		
	5	Cost Est. C	lass		Pro	gram/Allow	vance Task	Information	
1/1/2017 Cost Est. Date			Projec	ct Manager					
GLWA		Cost Est. So	ource	CIP Number				J	
GLWA		Cost Est. Pi	repared By	Description					
Cost Type		Fiscal Year	Expense	e Fring	ge BenefilNo	nPersonne	C	Comment	
Design-Build	FY	19	\$	5718		2	2020CIP		
Task		Start Date	End Date	Duration	n				
cope Developmen	nt	1/30/2016	4/29/2016		90				
rocurement		4/30/2016	4/30/2017	3	365				
Project Execution		5/1/2017	12/27/2018	6	505				
Project Closeout		10/2/2018	12/27/2018		86				
		Pha	se Total Exp	enses By	FY (All figur	es are in \$	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	71	8 0	0	0	0	0	0	718	

Springwells Water Treatment Plant Emergency Grating Replacement

hase GLWA Em	nployees I	Project m	nanagen	nent	(Contract N	A	Sta	itus Active	
tle GLWA Salo	aries									
Phase Budget	Water						Cost Alloc	cation CTA		
Phase Status	Active	Active					Funding S	ource Bond	d Proceeds	
Start Date								Fund Con	struction Bor	nd Fund
End Date						U	Jseful Life >2	OYrs? No		
Cost Estimation Information				Tot. Fede		\$0				
	5	Сс	ost Est. Cl	ass		Pro	gram/Allow	ance Task	Information	
	1/1/2017	Сс	ost Est. Do	ate	Projec	t Manager				
GLWA		Co	ost Est. Sc	urce	CIP Number					
GLWA		Co	ost Est. Pr	epared By	Description					
Cost Ty	pe	Fisca	ıl Year	Expense	e Fring	je BenefitNo	nPersonne	(Comment	
SLWA Salaries C	CIP2020	FY19			\$8	3	0			
			Phas	e Total Exp	enses By I	FY (All figur	es are in \$1	I,000's)		
Prior Yr Actua	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	t us Closed Out	
Title Prior Year Actual E	xpenses							
Phase Budget Water					Cost Allo	cation CTA		
Phase Status Closed	Out				Funding S	Source		
Start Date						Fund		
End Date					Useful Life >	20Yrs?		
Cost Estim	Cost Estimation Information				ederal Loan A	mount		
1	Cost Est.	Class		ı	Program/Allov	wance Task	Information	
1/1/2012	Cost Est.	Date	Proje	ect Manag	er			
GLWA	Cost Est.	Source	CIP	Number				
GLWA	Cost Est.	Prepared By	Desc	cription				
Cost Type	Fiscal Year	Expense	Frir	nge Benefit	NonPersonne		Comment	
Construction	FY18-	\$2,4				FY18		
Engineering Services	FY18-	\$	32			FY18		
Unknown	FY18-	\$2	:54			FY17		
GLWA Salaries CIP2020	FY18-	\$	18	3		FY18		
	Ph	ase Total Expe	nses By	/ FY (All fic	ures are in S	51,000's)		
Prior Yr Actuals F	Y19 FY20	FY21	FY22	FY23	FY24	FY25+	Total	
2,737							2,737	
Project 1	Total Expense	s By FY Com	pared	to Prior	CIPs (All fig	gures 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



conduit.

Project History Related Project Lookup Driver

Explanation

Other Important Info

GLWA FY 2020-2024 CIP

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

114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

☐ Innovation☐ Water MP Right Siz☐ Reliability/Redunct☐ NEWTP Repurposir	dancy				
Project Engineer/Mar	nager Peter Fromm	Budget	Water		
Mar	nager Grant Gartrell	Class Lvl 1	Water		
Managing	Dept Water Eng	Class Lvl 2	Treatment Plants and Facilities Springwells		
Date Original Busines	s Case Prepared 10/1/2018	Class Lvl 3			
Year Proje	ect Added to CIP 2018	Location	Wayne County - Outside Detroit		
		Fund and Cost Center			
	The existing concrete pavement that covers replacement. The existing pavement is seve is a service road that provides vehicular accast the roof to the settled water conduit that	erely deteriorated and is crum cess to the 1958 filter building.	bling in several areas. This pavement This paved service road also serves		
-	Remove existing concrete pavement and rebuilding at the Springwells Water Treatment	· ·	vement around the entire 1958 filter		



114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

Project Manager Project Risk Matrix Scoring								
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							

Project Manager Score

40.6

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

36.6

114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

Phase Construction					Contract	TBD	Statu	s Future P	lanned St	art
Title SPW 1958 Settle	ed Water	Conduit Cor	ncrete Repla	ceme	ent					
Phase Budget Wat	ter			Cost Allocation CTA						
Phase Status Futu	ıre Planne	d Start		Funding Source Bond						
Start Date				Fund Construction Bond Fund						
End Date				Useful Life >20Yrs?						
Cost E			Tot. Fe	deral Loan A	mount			\$0		
	5 Cost Est. Class				F	rogram/Allo	wance Task Ir	formation		
1/1/	1/1/2018 Cost Est. Date			P	roject Manage	er				
GLWA		Cost Est. So	ource	C	CIP Number					
GLWA	GLWA Cost Est. Prepare			d By Description						
Cost Type	F	Fiscal Year	Expense		Fringe Benefit	NonPersonne	e Co	omment		
, ,	FY		•	e \$200	Fringe Benefil	NonPersonne	2020CIP	omment		
Construction		20			Fringe Benefill	NonPersonne		omment		
Construction	FY FY	20		\$200 \$650	Fringe Benefit	NonPersonne	2020CIP	omment		
Construction Construction Task	FY FY	20		\$200 \$650 Dur		NonPersonne	2020CIP	omment		
Construction Construction Task Scope Developmen	FY FY	20 21 Start Date	End Date	\$200 \$650 Dur	ation	NonPersonne	2020CIP	omment		
Construction Construction Task Scope Developmen Procurement	FY FY	20 21 Start Date 7/1/2019	End Date 9/2/2019	\$200 \$650 Dur	ation 63	NonPersonne	2020CIP	omment		
Construction Construction Task Scope Developmen Procurement Project Execution	FY FY	20 21 Start Date 7/1/2019 9/3/2019	End Date 9/2/2019 3/2/2020	\$200 \$650 Dur	ration 63 181	NonPersonne	2020CIP	omment		
Construction Construction Task Scope Developmen Procurement Project Execution	FY FY	20 21 Start Date 7/1/2019 9/3/2019 3/3/2020 3/3/2021	End Date 9/2/2019 3/2/2020 3/2/2021 6/3/2021	\$200 \$650 Dur	ration 63 181 364		2020CIP 2020CIP	omment		
Construction Construction	FY FY	20 21 Start Date 7/1/2019 9/3/2019 3/3/2020 3/3/2021	End Date 9/2/2019 3/2/2020 3/2/2021 6/3/2021	\$200 \$650 Dur	ation 63 181 364 92 8 By FY (All fig		2020CIP 2020CIP	omment		

GLWA FY 2020-2024 CIP

114016 CIP#

Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement

Phase GLWA Employees Project ma	anagement	Contract N	٧A	Status	Future Planne	ed Start	
itle GLWA Salaries							
Phase Budget Water			Cost Allocation	СТА			
Phase Status Future Planned Sta	rt		Funding Source	Bond Pro	ceeds		
Start Date			Fund	Construc	tion Bond Fur	nd	
End Date			Useful Life >20Yrs?				
Cost Estimation Inform	nation	Tot. Federal Loan Amount \$0				\$0	
5 Co:	st Est. Class	Pro	ogram/Allowance	Task Infor	mation		
1/1/2018 Cos	st Est. Date	Project Manager					
GLWA	st Est. Source	CIP Number					
GLWA	st Est. Prepared By	By Description					
Cost Type Fiscal	Year Expens	se Fringe BenefilNo	onPersonne	Comi	ment		
GLWA Salaries CIP2020 FY20		\$4 2	0 2020 CIF	Р			
GLWA Salaries CIP2020 FY21		\$4 2	0 2020CIF	Р			
	Phase Total Exp	penses By FY (All figu	res are in \$1,000's	3)			
Prior Yr Actuals FY19	FY20 FY21	FY22 FY23	FY24 FY25	5+ T	otal		
	6 6				12		
Project Total Exp	enses By FY Co	ompared to Prior C	IPs (All figures	are in \$	1,000's)		
CIP FY16 FY17 F	Y18 FY19	FY20 FY21	FY22 FY23	FY24	FY25	Total	

114017 CIP#

Springwells Water Treatment Plant Flocculator Drive Replacement

		L: -	
 nr	$1 \cap V$	atic	۱n
 1 11	10 4	$\alpha 110$	' I I

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu New

CIP Type Project



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 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.

Project History

Related Project

Lookup Driver 1 - Condition

Other Important Info

Explanation Existing flocculator drivers are beyond the useful service life

Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

114017 CIP#

Springwells Water Treatment Plant Flocculator Drive Replacement

Project Manager Project Risk Matrix Scoring									
Criteria	Score	Comment							
Condition	3								
Efficiency and Innovation	3								
Financial	2								
O&M	2								
Performance (Service Level/Reliability)	3								
Public Benefit	2								

2

Project Manager Score

43.8

Review Committee Project Risk Matrix Scoring

Review Communication Risk Main's Coming										
Score	Comment									
4										
2										
2										
3										
2										
2										
2										
2										
	Score 4 2 2									

Review Committee Score

47

114017 CIP#

Springwells Water Treatment Plant Flocculator Drive Replacement

hase GLWA Emplo itle GLWA Salaries	•	oject manager	ment		Contract N.	A	Sto	atus Future F	Planned Start			
Phase Budget Wa						Cost Alloc	cation CTA					
Phase Status Fut		nad Start		Cost Allocation CTA Funding Source Bond Proceeds								
_	ore Flair					runding 30			l Fl			
Start Date								struction Bor	na Funa			
End Date					U	seful Life >2	20Yrs? Yes					
Cost E	stimatio	n Information			Tot. Fede	eral Loan Ar	mount		\$0			
	5	Cost Est. C	Class		Program/Allowance Task Information							
1/1,	/2018	Cost Est. D	ate	Proje	Project Manager							
GLWA		Cost Est. S	CIP Number									
GLWA		Cost Est. P	repared By	Description				-				
Cost Type		Fiscal Year	Expens	e Frinç	ge BenefitNo	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					
		Pha	se Total Exp	enses By	FY (All figure	es are in \$1	1,000's)					
Prior Yr Actuals	FY19		FY21	FY22	FY23	FY24	FY25+	Total				
				10) 14	4		28				

Springwells Water Treatment Plant Flocculator Drive Replacement

Phase Construction					Contract TBD Status Future Planned Start							
Title SPW WTP Floc	culator Dr	rive Replacen	nent									
Phase Budget Wo	ater					Cost Allocati	ion CTA					
Phase Status Fut	ture Plann	ed Start		Funding Source Bond Proceeds								
Start Date						Fu	onstru	ction Bond Fun	nd			
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	1/1/2018 Cost Est. Date			Project	Manager							
GLWA	Cost Est. Source			CIP Number								
GLWA Cost Est. Prepa			repared By	d By Description								
Cost Type		Fiscal Year	Expense	Eringe	RepetitNo	nPersonne	Con	nment				
Construction	E,	Y23	•	,300	: Dellellino	2020CIP						
						202						
Task		Start Date	End Date	Duration								
Scope Developme	nt	11/1/2019	1/15/2020	7.	5							
Procurement		1/16/2020	7/16/2020	18	2							
Project Execution		7/17/2020	6/30/2021	34	8							
Project Closeout		7/1/2021	10/1/2021	9	2							
		Pha	se Total Exp	enses By F	(All figur	es are in \$1,0	00's)					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23			Total				
					2,300			2,300				
Proj	ect Tota	I Expenses	By FY Cor	npared to	Prior C	Ps (All figur	es are in	\$1,000's)				

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

I	r	١	n	(7	V	a	t	i	\bigcirc	r	1
				•	$\overline{}$	٧	\sim			\sim		

✓ Water MP Right Sizing

✓ Reliability/Redundancy

✓ NEWTP Repurposing

Project Statu Active

CIP Type Project

Pumps and Pipina



Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 4/23/2007

Year Project Added to CIP 2007

Budget Water

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class LvI 3 Water Works Park

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Most of the existing yard piping is greater than 100 years old and requires replacement with new piping installed in a more efficient configuration.

Scope of Work Much of the yard piping and valve system at Waterworks Park is old and at the end of its service life. Furthermore, the Water Treatment Plant does not have functioning production flow metering as the existing equipment is oversized and non-functioning. Replacement of the yard piping, valve, and metering system is needed at the site.

Challenges Complicated sequence of construction, and demands of DWSD-R must be maintained along with coordination with 84" between Water Works Park and Northeast WTPs. Condition of existing valves required to complete the work is unknown.

Project History

Related Project

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.



115001 CIP#

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

Project Manager Project Risk Matrix Scoring										
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									

Project Manager Score

58.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

65.4

Project Closeout

11/13/2021

2/11/2022

GLWA FY 2020-2024 CIP

115001 CIP#

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

Phase Construc	se Construction				Contract	Status	Future Planned S	Start			
itle WWP WTP	Yard Piping	, Valves and V	enturi Meters	Repla	acement						
Phase Budget	Water					Cost Alloc	cation	СТА			
Phase Status	Future Plan	ned Start				Funding S	ource	Bond Proceeds			
Start Date		11/19,	/2018	Fund Construction Bond Fund							
End Date		/2021			Useful Life >2	20Yrs?	Yes				
С			Tot. Fo	ederal Loan Ar	mount						
	4	Cost Est. C	lass	Program/Allowance Task Information							
	ate	Project Manager									
Cost Est. Source			ource	C	CIP Number						
		Cost Est. P	repared By	Description							
Cost Ty	/pe	Fiscal Year	Expense	Э	Fringe Benefit	NonPersonne		Con	nment		
Construction		FY20	\$16	,739							
Construction		FY21	\$16	,871							
Construction		FY22	\$16	,999							
Task	<	Start Date	End Date	Dur	ation						
cope Develop	ment	3/26/2016	3/31/2019		1100						
Procurement		4/1/2019	11/17/2019		230						
Project Execution	on	11/18/2019	11/12/2021		725						

90

	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0	16,739	16,871	16,999	0	0	0	50,609	

115001 CIP#

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

Phase	Study	\prime and [Desian	and	Constru	ction	Assistanc	:E

Contract CS-055

Status Active

Title CS-055, AECOM, WWP WTP Yard Piping, Valves and Venturi Meters Replacement

Phase Budget	Water
Phase Status	Active
Start Date	5/22/2017
End Date	7/23/2021

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

Program/Allowance Task Information									
Project Manager									
CIP Number									
Description									

Cost Type	Fiscal Year	Expense	Fringe BenefitNo	nPersonne	Comment
Engineering Services	FY19	\$838			
Engineering Services	FY20	\$533			
Engineering Services	FY21	\$401			
Engineering Services	FY22	\$273			

Task	Start Date	End Date	Duration
Scope Development	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

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	838	533	401	273		0	0	2,045

115001 CIP#

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

Phase GLWA Em	nployees P	roject manager	nent		Contract	NA	Status	Active	
Title GLWA Salo	aries								
Phase Budget	Water					Cost Alloc	cation CTA		
Phase Status	Active					Funding S	ource Bond Pro	oceeds	
Start Date							Fund Construc	ction Bond Fund	
End Date						Useful Life >2	20Yrs? No		
Cost Estimation Information					Tot. Fe	deral Loan Ar	mount		\$0
	4	Cost Est. C	lass		Program/Allowance Task Information				
	1/1/2015	Cost Est. D	ate	P	Project Manager				
CDM Smith		Cost Est. So	ource		CIP Number				
CDM Smith		Cost Est. P	repared By		Description				
Cost Typ	pe	Fiscal Year	Expense		Fringe Benefit	VonPersonne	Con	nment	
GLWA Salaries C		FY19		\$42		2			
GLWA Salaries C	CIP2020	FY20	\$42		17	2			
GLWA Salaries C	CIP2020	FY21	\$4:		17	2			
GLWA Salaries C	CIP2020	FY22		\$42	17	2			

Phase Total Expenses By FY (All figures are in \$1.000's)

			<u> </u>		. (11301		-/	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	61	61	61	61	0	0	0	244

115001 CIP#

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

hase not applicable				Contract	NA	Stat	lus Closed C	Dut
itle Prior Year Actual Ex	penses							
Phase Budget Water					Cost Alloc	cation CTA		
Phase Status Closed (Dut				Funding S	ource		
Start Date						Fund		
End Date					Useful Life >2	20Yrs?		
Cost Estimo	ation Information	1		Tot. Fe	ederal Loan Ar	nount		
4	Cost Est.	Class		F	Program/Allow	ance Task	Information	
1/1/2015	Cost Est.	Date	Р	roject Manage	er			
CDM Smith	Cost Est.	Source	CIP Number					
CDM Smith	Cost Est.	Prepared By	D	escription				
Cost Type	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne	C	Comment	
Engineering Services	FY18-		\$655		F	Y18		
Jnknown	FY18-		\$9		F	Y17		
GLWA Salaries CIP2020	FY18-		\$12	5	1 F	Y18		
	Ph	ase Total Exp	oense:	s By FY (All fig	ures are in \$1	l,000's)		
Prior Yr Actuals F	Y19 FY20	FY21	FY2		FY24	FY25+	Total	
682							682	
Project T	otal Expense	es By FY Co	mpa	red to Prior	CIPs (All fig	ures are	in \$1,000's)

								3	T	7000	
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



115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Waterworks Park WTP



Project Engineer/Manager Grant Gartrell

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 Water Works Park

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Condition assessment is needed to identify critical assets in need of repair or replacement.

Scope of Work A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Continued and periodic inspection of the Water Treatment Plant is needed to maintain a reliable production system, especially given the reliance on Waterworks Park to provide finish water to the Northeast Service Area.

Challenges Coordinating shutdowns required for condition assessment inspections.

Project History n/a

Related Project Yard Piping, Valves and Venturi Meters Replacement

Lookup Driver 1 - Condition

Other Important Info Contract No. 147 with Hubbell, Roth & Clark is underway.

Explanation Not provided.



115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Project Manager Project Risk Matrix Scoring								
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							

Project Manager Score

38

Review Committee Project Risk Matrix Scoring

•	•
Score	Comment
2	
2	
1	
2	
3	
3	
1	
1	
	Score 2 2 1 2 3 3 3 1 1 1

Review Committee Score

35.6

Prior Yr Actuals

FY19

0

FY20

0

FY21

0

FY22

0

GLWA FY 2020-2024 CIP

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Phase Budget \	Water		Cost Allocat	CTA
Phase Status	Active		Funding Sou	rce Revenue Financed Capital
Start Date			F	Improvement & Extension Fun
End Date			Useful Life >20\	Yrs? No
Cos	st Estimation	n Information	Tot. Federal Loan Amo	ount \$0
	5	Cost Est. Class	Program/Allowa	nce Task Information
1	/1/2016	Cost Est. Date	Project Manager	
GLWA		Cost Est. Source	CIP Number	
GLWA		Cost Est. Prepared By	Description	

FY23

0

FY25+

0

Total

0

FY24

0

115003 CIP#

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Phase Study					Co	ontract	NA	\		Statu	s Activ	re	
Title Comprehensive	e Conditi	on Assessme	nt at Waterw	orks F	Park WT	Р							
CS-147, HRC													
Phase Budget Wate	er							Cost Allo	cation	CTA			
Phase Status Activ	'e							Funding S	ource	Rever	nue Finar	nced Capital	
Start Date		8/2/	2017						Fund	mpro	vement	& Extension Fun	
End Date		8/2/	2019				Us	seful Life >2	20Yrs?	No			
Cost Est	timation	Information				Tot. Fe	de	al Loan A	mount				
	5	Cost Est. C	lass			F	rog	ıram/Allov	vance 1	ask Ir	nformatic	on	
		Cost Est. D	ate	Р	roject <i>l</i>	Manage	er						
		Cost Est. So	ource		CIP Num	nber							
		Cost Est. Pi	repared By		escript)	ion							
Cost Type		Fiscal Year	Expense)	Fringe	Benefit	Vor	Personne		С	omment		
Engineering Services	FY	19		262									
Engineering Services	FY	20	Ç	153									
Task		Start Date	End Date	Dur	ation								
Scope Development													
Procurement													
Project Execution		8/2/2017	8/2/2019		730								
Project Closeout		8/5/2019	10/1/2019		57								
		Pha	se Total Exp	ense	s By FY	(All fig	ure	s are in \$	1,000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY:	22	FY23		FY24	FY25	5+	Total		
	26	2 153	0		0		0	0		0	41	5	

Water Works Park Water Treatment Plant Comprehensive Condition Assessment

hase not applicable					Contract N	IA	Stat	lus Closed Ou	t
itle Prior Year Actual	Expen	ises							
Phase Budget Water						Cost Alloc	ation CTA		
Phase Status Closed	d Out					Funding Sc	ource		
Start Date							Fund		
End Date					ı	Jseful Life >2	OYrs?		
Cost Esti	mation	Information			Tot. Fed	eral Loan An	nount		\$ O
	5	Cost Est. C	lass		Pro	gram/Allow	ance Task	Information	
1/1/20	16	Cost Est. D	ate	Pro	oject Manager				
GLWA		Cost Est. So	ource	CI	P Number				
GLWA		Cost Est. Pi	repared By	D€	escription				
Cost Type		Fiscal Year	Expens	e F	ringe BenefitNo	nPersonne	C	Comment	
Engineering Services	F'	Y18-		\$430		F	Y18		
GLWA Salaries CIP2020) F`	Y18-		\$7	3	0 F	Y18		
		Pha	se Total Exp	enses	By FY (All figur	es are in \$1	,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22		FY24	FY25+	Total	
440								440	
Project	Tota	I Expenses	By FY Co	mpare	ed to Prior C	IPs (All fig	ures are	in \$1,000's)	

		_									<u> </u>	
С	IP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	8		200	375						0	0	575
2019	9	0		131	262	153					0	546
2020	0	0	0	440	262	153	0	0	0	0	0	855

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

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



Project Engineer/Manager Todd King

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/17/2017

Year Project Added to CIP 2017

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

Scope of Work 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.

Project History 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.

Related Project CS-1721 is the study and design project for this proposed work. It is currently underway and at 50% design completion as of March 2017. Also, this project must be completed prior to the decommissioning of the Northeast WTP treatment process.



115004 CIP#

Lookup Driver	1 - Condition
Other Important Info	n/a
Explanation	

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

Project Manager I	Project Ri	sk Matrix Scoring
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	

Project Manager Score

85.8

Review Committee Project Risk Matrix Scoring

		or more manufe cooming
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	

Review Committee Score

84

115004 CIP#

nase GLWA Em	nployees F	roject	managen	nent		С	ontract N	A	Sta	tus Active		
itle GLWA Salc	aries											
Phase Budget	Water							Cost Alloc	cation CTA			
Phase Status	Active							Funding S	ource Bond	d Proceeds		
Start Date					Fund Construction Bond Fund							
End Date							U	seful Life >2	20Yrs? No			
Co	ost Estimat	ion Inf	ormation				Tot. Fede	eral Loan Ar	mount		\$0	
	5		Cost Est. C	lass			Pro	gram/Allow	vance Task	Information		
	1/1/2016		Cost Est. D	ate	F	roject	Manager					
GLWA			Cost Est. So	ource	(CIP Nu	mber					
GLWA			Cost Est. Pr	epared By		Descrip	otion					
Cost Typ	oe	Fisc	cal Year	Expens	e	Fringe	e BenefitNo	nPersonne	(Comment		
SLWA Salaries C	IP2020	FY19		•	\$5		2	0				
SLWA Salaries C	IP2020	FY20			\$5		2	0				
SLWA Salaries C	IP2020	FY21			\$1		0	0				
			Phas	se Total Exp	ense	s By F	Y (All figure	es are in \$	1,000's)			
Prior Yr Actual	ls FY	19	FY20	FY21	FY		FY23	FY24	FY25+	Total		
		7	7			0	0	0	0	15		

115004 CIP#

Water Works Park Water Treatment Plant Chlorine System Upgrade

Phase not appli	icable				Contract	NA	Statu	s Closed Out	
Title Prior Year	Actual Exp	enses							
Phase Budget	Water					Cost Allo	cation CTA		
Phase Status	Closed Ou	ıt				Funding S	ource		
Start Date							Fund		
End Date						Useful Life >2	20Yrs?		
С	ost Estimati	on Information			Tot. Fe	deral Loan Aı	mount		
	5	Cost Est. C	lass		P	rogram/Allov	vance Task In	formation	
	1/1/2016	Cost Est. D	ate	F	Project Manage	er			
GLWA		Cost Est. S	ource	(CIP Number				
GLWA		Cost Est. P	repared By		Description				
Cost Ty	/pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	Сс	omment	
Construction		FY18-	\$2	2,013		F	FY18		
Engineering Ser	vices	FY18-		\$135		ſ	FY18		
Unknown		FY18-		\$371		F	FY17		
GLWA Salaries (CIP2020	FY18-		\$6	2	ſ	FY18		

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

		1 11 010	O TOTAL EXP	, o	. (/ 111 119 01	oo ar o iii q	.,000,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
2,527								2,527

115004 CIP#

hase Construction	1				Contra	ct NA	4	Sta	lus Under f	Procurement
itle Water Works F	Park WTP (Chlorine Syste	m Upgrade							
CON-208,										
Phase Budget Wo	ater						Cost Allo	cation CTA		
Phase Status Und	der Procu	rement					Funding S	ource Bond	l Proceeds	
Start Date		9/1,	/2017					Fund Cons	struction Bor	nd Fund
End Date	End Date 6/8/2020					U	seful Life >2	20Yrs? Yes		
Cost I	Estimation	n Information			Tot	. Fede	ral Loan Aı	mount		
	1	Cost Est. C	Class			Prog	gram/Allov	vance Task	Information	
1/1	/2017	Cost Est. D	ate	Proj	ject Man	ager				
CDM Smith	., ., =				CIP Number					
CDM Smith			repared By	Description						
ODIVI GITIIII			7							
Cost Type		Fiscal Year	Expense	e Fri	inge Ben	efitNor	Personne	(Comment	
Construction	F	Y19	\$4	,051						
Construction	F	Y20	\$1	,940						
Task		Start Date	End Date	Durat	ion					
Scope Developme	nt	7/18/2017	10/16/2017		90					
Procurement		10/17/2017	1/9/2018		84					
Project Execution		1/10/2018	4/10/2020		821					
Project Closeout		4/11/2020	7/10/2020		90					
		Pha	se Total Exp	enses B	y FY (All	figure	es are in \$	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY:	23	FY24	FY25+	Total	
	4,0.	51 1,940	0		0	0	0	0	5,991	

115004 CIP#

Phase Design & Con.	struction	n Assistance			Co	ntract	CS	-1721		Statu	JS A	ctive			
Title CS-1721 Water	Works P	ark WTP Chlor	ine System U _l	ograc	de										
CDM															
Phase Budget Wate	er							Cost Allo	cation	СТА					
Phase Status Activ	ve							Funding S	ource	Bond	Proce	eeds			
Start Date	rart Date 7/8/2016								Fund	Const	ructio	n Bor	nd Func	1	
End Date							Us	eful Life >	20Yrs?	Yes					
Cost Es	timation	n Information				Tot. Fe	dei	al Loan A	mount						
	5	Cost Est. C	lass			F	rog	ram/Allov	wance '	Task Ir	nform	ation			
1/1/2	2016	Cost Est. D	ate	Р	roject <i>l</i>	Manage	er								
GLWA		Cost Est. S	ource	C	IP Num	ber									
GLWA		Cost Est. P	repared By	D	escript	ion									
Cost Type		Fiscal Year	Expense)	Fringe	Benefit	Nor	Personne		C	omme	ent			
Engineering Services	F	Y19	9	138											
Engineering Services	F	Y20	9	\$100											
Task		Start Date	End Date	Dur	ation										
Scope Development	-	4/6/2015	7/5/2015		90										
Procurement		7/6/2015	7/5/2016		365										
Project Execution		7/6/2016	4/10/2020		1374										
Project Closeout		4/11/2020	7/10/2020		90										
		Pha	se Total Exp	ense	s By FY	(All fig	ure	s are in \$	1,000's	3)					
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23		FY24	FY2	5+	Tot	al			
	1:	38 100	0		0		0	0		0		238			
Projec	ct Tota	ıl Expenses	By FY Cor	nna	red to	Prior	CIF	Ps (ΔII fic	nures	are i	n \$1	000'	5)		

Proje	ct Total E	xpenses	By FY C	ompare	d to Prio	r CIPs (A	III figures	are in \$1	(s'000, l

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		290	700	8,700					0	0	9,690



115004 CIP#

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



Explanation

GLWA FY 2020-2024 CIP WWP WTP Building Ventilation Improvements

☐ Innovation	Project Statu New	
☐ Water MP Right Si	CIP Type Project	
☐ Reliability/Redund		
□ NEWTP Repurposi	ng	
Project Engineer/Ma	nager Mike Dunn	Budget Water
	nager Terry Daniel	Class Lvi 1 Water
	g Dept Water Eng	Class Lvl 2 Treatment Plants and Facilities
Date Original Busines	ss Case Prepared	Class Lvl 3 Water Works Park
Year Proj	ect Added to CIP 2018	Location City of Detroit
		Fund and Cost Center Water - 5519-882111
Project Significance		ystem improvements for certain chemical storage rooms and the the Water Works Park Water Treatment Plant to improve employee
Scope of Work		
Challenges		
Project History	Needs for this project were identified du	ring the Contract CS-147 condition assessment work.
Related Project		
Lookup Driver	5 - Public Health & Safety	
Other Important Info		



WWP WTP Building Ventilation Improvements

Project Manage	r Project Ris	sk Matrix Scoring
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	

Project Manager Score

76

Review Committee Project Risk Matrix Scoring

		oo
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	

Review Committee Score

76

Prior Yr Actuals

FY19

FY20

GLWA FY 2020-2024 CIP

WWP WTP Building Ventilation Improvements

Phase GLWA Employees Pr	oject managen	nent		Contract NA	4	Status	Active	
Title GLWA Salaries								
Phase Budget Water					Cost Allocation	СТА		
Phase Status Active					Funding Source	Bond Pro	oceeds	
Start Date					Fund	Construc	ction Bond Fund	
End Date				Us	seful Life >20Yrs?	Yes		
Cost Estimation	on Information			Tot. Fede	ral Loan Amount			\$0
5	Cost Est. C	ass		Prog	gram/Allowance	Task Info	rmation	
1/1/2018	Cost Est. De	ate	Р	roject Manager				
HRC	Cost Est. So	ource	C	CIP Number				
HRC	Cost Est. Pr	epared By	D	escription				
Cost Type	Fiscal Year	Expens	e	Fringe BenefitNor	nPersonne	Com	nment	
GLWA Salaries CIP2020	FY19		\$5	2	0 2020CI	Р		
GLWA Salaries CIP2020	FY20		\$5	2	0 2020CI	Р		
GLWA Salaries CIP2020	FY21		\$5	2	0 2020CI	P new		

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

0

FY23

0

FY24

0

FY25+

0

Total

21

FY22

FY21

WWP WTP Building Ventilation Improvements

Phase Design and Build	b				Contract TE	3D	Statu	us Active	
itle Emergency WWF	WTP Buil	ding Ventil	ation Improv	ements					
Phase Budget Water						Cost Alloca	tion CTA		
Phase Status Active	;					rce Bond	Proceeds		
Start Date						F	und Const	ruction Bond	d Fund
End Date					U	Jseful Life >20	Yrs? Yes		
Cost Estimation Information					Tot. Fede	eral Loan Amo	ount		\$0
5 Cost Est. Class					Pro	gram/Allowa	nce Task lı	nformation	
1/1/20	1/1/2018 Cost Est. Date				ct Manager				
	Cost Est. Source			CID N	lumah a r				
HRC		Cost Est. So	ource	CIPN	lumber				
			ource repared By		ription				
HRC				Desci		nPersonne	C	omment	
HRC HRC		Cost Est. Pi	Expense	Desci	ription		C 20CIP	omment	
HRC HRC Cost Type Construction Construction	Fis FY21 FY22	cal Year	Expense \$3	Desci e Fring 3,500 \$500	ription	202 202	20CIP 20CIP	omment	
HRC HRC Cost Type Construction Construction Engineering Services	Fis FY21 FY22 FY20	cal Year	Expense \$3	Desci e Fring 3,500 \$500 \$500	ription	202 202 202	20CIP 20CIP 20CIP	omment	
HRC Cost Type Construction Construction Engineering Services Engineering Services	Fis FY21 FY22 FY20 FY21	cal Year	Expense \$3	Pesci e Fring 3,500 \$500 \$500 \$400	ription	202 202 202 202	20CIP 20CIP 20CIP 20CIP	omment	
HRC HRC Cost Type Construction Construction Engineering Services	Fis FY21 FY22 FY20	cal Year	Expense \$3	Desci e Fring 3,500 \$500 \$500	ription	202 202 202 202	20CIP 20CIP 20CIP	omment	
Cost Type Construction Construction Engineering Services Engineering Services Engineering Services	Fis FY21 FY22 FY20 FY21 FY22	cal Year	Expense \$3	Percentage	ge BenefitNo FY (All figure	202 202 202 202 es are in \$1,0	20CIP 20CIP 20CIP 20CIP 20CIP 20CIP		
HRC Cost Type Construction Construction Engineering Services Engineering Services	Fis FY21 FY22 FY20 FY21	cal Year	Expense \$3 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Pesci e Fring 3,500 \$500 \$500 \$400 \$150	ge BenefitNo FY (All figure FY23	202 202 202 202 202	20CIP 20CIP 20CIP 20CIP 20CIP	Total 5,050	

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 Statu Active

CIP Type Project

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.



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

Project Manag	er Project Risk <i>N</i>	Natrix Scoring	Project Manager Score
Criteria	Score	Comment	85.6
Condition	5		
Efficiency and Innovation	1		
inancial	5		
D&M	5		
Performance (Service Level/Reliability)	5		
Public Benefit	5		
Public Health & Safety	5		
Regulatory (Environmental/Legal)	3		
Review Commi	ittee Project Risk	Matrix Scoring	Review Committee Score
Criteria	Score	Comment	0
Condition			
Condition			
Financial			
O&M			
Performance (Service Level/Reliability)			
Public Benefit			
The state of the s			

Prior Yr Actuals

FY19

121

FY20

121

FY21

121

FY22

121

FY23

120

FY24

0

FY25+

0

Total

604

GLWA FY 2020-2024 CIP

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

Phase GLWA En	nployees Pr	oject manager	nent		Contract	NA	Status Acti	ve
fitle GLWA Sal	aries							
Phase Budget	Water					Cost Alloc	cation CTA	
Phase Status	Active					Funding Sc	Bond Procee	ds
Start Date							Fund Construction	Bond Fund
End Date						Useful Life >2	OYrs? No	
С	ost Estimati	on Information			Tot. Fed	leral Loan An	nount	\$0
	4	Cost Est. C	lass		Pr	ogram/Allow	ance Task Informat	ion
	1/1/2016	Cost Est. D	ate	F	Project Manager	7		
FKE		Cost Est. So	ource	(CIP Number			
FKE		Cost Est. P	repared By	[Description			
Cost Ty	/pe	Fiscal Year	Expens	е	Fringe BenefitN	onPersonne	Commen	t
GLWA Salaries (CIP2020	FY19		\$84	33	4		
GLWA Salaries (CIP2020	FY20		\$84	33	4		
GLWA Salaries (CIP2020	FY21		\$84	33	4		
GLWA Salaries (CIP2020	FY22		\$84	33	4		
OLYTT (Galarios (

116002 CIP#

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

Phase not appli	cable					Contract	NA	Stat	us Closec	tuO k
Title Prior Year	Actual Exp	pense	S							
Phase Budget	Water						Cost Allo	cation CTA		
Phase Status	Closed C)ut					Funding S	Source		
Start Date								Fund		
End Date							Useful Life >	20Yrs?		
Co	ost Estima	tion In	formation			Tot. Fe	ederal Loan A	mount		
	4		Cost Est. C	ass			Program/Allo	wance Task	Information	1
	1/1/2016		Cost Est. Do	ate	Р	roject Manag	er			
FKE			Cost Est. Sc	ource	C	CIP Number				
FKE			Cost Est. Pr	epared By	D	escription				
Cost Ty	pe	Fis	scal Year	Expens	е	Fringe Benefit	NonPersonne	C	Comment	
Construction		FY18	3-	\$2	2,163			FY18		
Unknown		FY18	3-		\$10			FY17		
GLWA Salaries C	CIP2020	FY18	3-		\$4	1	0	FY18		
			Phas	se Total Exp	ense	s By FY (All fig	gures are in S	51,000's)		
Prior Yr Actua	ls FY	′19	FY20	FY21	FY2		FY24	FY25+	Total	
2,	178								2,178	

116002 CIP#

Great Lakes Water	Authority	rennsylva	nia, spring	gweii	is and Nonn	east kaw i	water	supply runner improv	vements
Phase Design ar	nd Build				Contract	DB-150		Status Active	
Title DB-150 Per	nnsylvania,	Springwells and	d Northeast I	Raw W	Vater Supply Tu	nnel Improve	ments		
Phase Budget	Water					Cost Allo	cation	CTA	
Phase Status	Active					Funding S	Source	Bond Proceeds	
Start Date							Fund	Construction Bond Fund	
End Date						Useful Life >	20Yrs?	Yes	
Co	ost Estimati	on Information			Tot. Fe	deral Loan A	mount		
	4	Cost Est. C	lass		F	rogram/Allov	wance '	Task Information	
	1/1/2016	Cost Est. D	ate	Р	roject Manage	er			
FKE	<u> </u>	Cost Est. S	ource	C	CIP Number				
FKE		Cost Est. P	repared By	С	escription				
Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne		Comment	
Design-Build		FY19	\$7	7,392			2020 CI	IP	
Design-Build		FY20	\$5	5,346					
Design-Build		FY21	\$5	5,346					

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY19	\$7,392			2020 CIP
Design-Build	FY20	\$5,346			
Design-Build	FY21	\$5,346			
Design-Build	FY22	\$5,346			
Design-Build	FY23	\$3,878			

Task	Start Date	End Date	Duration
Scope Development	11/15/2016	2/13/2017	90
Procurement	2/14/2017	2/14/2018	365
Project Execution	1/25/2018	1/16/2023	1817
Project Closeout	1/17/2023	4/17/2023	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	7,392	5,346	5,346	5,346	3,878	0	0	27,308



0

0

2,178

2020

GLWA FY 2020-2024 CIP

116002 CIP#

30,090

Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements

5,467

3,998

0

0

	Proje	ct Total E	xpenses	By FY C	ompare	d to Prio	CIPs (Al	I figures	are in \$1	(s'000, l	
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

5,467

7,513

5,467

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Transmission main



Project Engineer/Manager Todd King

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 4/27/2017

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 Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance Project critical to maintaining chlorine residual to customers connected to the 72" main feeding Flint and Genesee County and abandonment of the 72" main once Flint and Genesee County are off the system. Projects need to be substantially complete by July

Scope of Work With the departure of Flint and Genesee County from the GLWA system, the water age in the 72-inch transmission main increases to levels where minimum chlorine residuals cannot be maintains. Chlorine booster stations are needed along the 72-inch transmission main to maintain acceptable chlorine residuals.

Challenges Live tapping and line stops on 72" PCCP required for both projects and is specialized construction. Work requires close coordination with operations to meet pressure requirements required to tap the pipe.

Project History The memorandum of understanding executed between the State of Michigan, City of Flint, GLWA, KWA, and GCDC regarding a new model contract between GLWA and Flint, reciprocal backup water service between GLWA and GCDC, and GLWA's securing of KWA's raw water rights have all established the need for this CIP.

Related Project none

Lookup Driver 5 - Public Health & Safety

Other Important Info n/a

Explanation Not provided.

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

Project Manager	Project Ris	sk Matrix Scoring
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	

Project Manager Score

56.2

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

54.6

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

ase Design ar	na Bulla		Contract DBW-0/0	Status Pending Close-out
le DBW-070 G	Genesee an	d Lapeer County Transmissic	on System Improvements	
)BW-070				
Phase Budget	Water		Cost Alloco	ation CTA
Phase Status	Pending CI	ose-out	Funding So	urce Bond Proceeds
Start Date		2/5/2016	1	Fund Construction Bond Fund
End Date		9/26/2019	Useful Life >20	Yes Yes
Co	ost Estimatio	n Information	Tot. Federal Loan Am	ount
	5	Cost Est. Class	Program/Allowo	ance Task Information
	1/1/2015	Cost Est. Date	Project Manager	
CDM Smith		Cost Est. Source	CIP Number	
CDM Smith		Cost Est. Prepared By	Description	

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

ase Design		Contract NA	Status Pending Close-out
le Genesee and Lapee	County Transmission System	Improvements	
Phase Budget Water		Cost A	Allocation CTA
Phase Status Pending C	lose-out	Fundin	g Source Bond Proceeds
Start Date			Fund Construction Bond Fund
End Date		Useful Life	e >20Yrs? Yes
Cost Estimation	on Information	Tot. Federal Loar	n Amount
5	Cost Est. Class	Program/A	llowance Task Information
1/1/2015	Cost Est. Date	Project Manager	
CDM Smith	Cost Est. Source	CIP Number	
CDM Smith	Cost Est. Prepared By	Description	

Task	Start Date	End Date	Duration
Scope Development			
Procurement			
Project Execution			
Project Closeout			

116003 CIP#

Genesee and Lapeer County Transmission System Improvements

le GLWA Salaries	ees Projec	ct managemen	†	Со	ntract NA	4	Status	Pending Close-out
Phase Budget Wat	er					Cost Allocatio	n CTA	
Phase Status Pend	ding Close	÷-out				Funding Sourc	e Bond Pr	roceeds
Start Date						Fun	d Constru	ction Bond Fund
End Date					U	seful Life >20Yrs	? No	
Cost Es	timation lı	nformation			Tot. Fede	ral Loan Amour	nt	\$0
	5	Cost Est. Class	i		Prog	gram/Allowanc	e Task Info	ormation
1/1/2	2015	Cost Est. Date		Project A	Manager			
CDM Smith		Cost Est. Source	:e	CIP Num	ber			
CDM Smith		Cost Est. Prepo	ared By	Descripti	ion			

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

		oi ioiai i	-xponsor	, , , , , ,		a 10 11101		90.00	are my	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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



122001 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

A large water main



Project Engineer/Manager Khader Hamad

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 6/2/2005

Year Project Added to CIP 2005

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Macomb County

Fund and Cost Center Water - 5519-882411

Project Significance Paralleling original 36" water main that is critical to the supply of three communities and has had history of breaks

Scope of Work This project will provide for the installation of approximately 35,650 feet of parallel 42-inch diameter prestressed embedded concrete cylinder pipe (PCCP) and approximately 1,070 linear feet of 36-inch diameter of PCCP in 24 Mile Road from Rochester Station to Romeo Plank Road. The work will also provide for all interconnections and valves.

Challenges N/A - Pending Closeout

Project History

Related Project

Lookup Driver N/A - Pending Closeout

Other Important Info

Explanation N/A - Pending Closeout

Prior Yr Actuals

33,565

FY19

FY20

FY21

GLWA FY 2020-2024 CIP

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

Phase not applicab	ole				Contract	NA	Status	Closed Out	
Title Prior Year Act	ual Expense	es							
Phase Budget Wa	ıter					Cost Allo	cation CTA		
Phase Status Clo	sed Out					Funding S	Source		
Start Date							Fund		
End Date						Useful Life >	20Yrs?		
Cost E	stimation lı	nformation			Tot. Fe	deral Loan A	mount		
	1	Cost Est. C	lass		F	rogram/Allov	wance Task Info	rmation	
1/1,	/2012	Cost Est. D	ate	P	roject Manage	er			
Somat		Cost Est. So	ource	C	CIP Number				
Somat		Cost Est. Pi	epared By	D	escription				
Cost Type	Fi	iscal Year	Expense)	Fringe Benefit	VonPersonne	Com	ment	
Construction	FY1	8-	Ç	862			WS-681		
Engineering Service	es FY1	8-		5131			WS-681		
Unknown	FY1	8-	\$1	,611			FY1 <i>7</i>		
Unknown	FY1	8-	\$1	,898			FY16		
Unknown	FY1	8-	\$29	,062			Pre-Bifurcation		
GLWA Salaries CIP2	020 FY1	8-		\$1			2020CIP		

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

FY23

FY24

FY25+

Total 33,565

FY22

122001 CIP#

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

Phase Construction)			C	ontract W	S-681	Statu	s Pendin	ig Close-out
itle WS-681 Paralle	el 42-Inch	Main in 24 M	ile Road from	Rochester S	Station to R	omeo Plank Ro	oad		
Ric-Man Detroit, Av	waiting fir	nal change o	rder.						
Phase Budget Wo	ater					Cost Allocation	on CTA		
Phase Status Per	nding Clo	se-out				Funding Source	e Bond F	Proceeds	
Start Date		4/7	/2014			Fur	nd Constr	uction Bor	nd Fund
End Date		10/9	/2016		U	seful Life >20Yr	's? Yes		
Cost I	Estimation	n Information			Tot. Fede	ral Loan Amou	ınt		
	1	Cost Est. C	Class		Prog	gram/Allowand	ce Task In	formation	
1/1	/2012	Cost Est. D	ate	Project	Manager				
Somat		Cost Est. S	ource	CIP Nun	nber				
Somat		Cost Est. P	repared By	Descrip	tion				
Task		Start Date	End Date	Duration					
Project Execution		1/1/2017	1/2/2017	1					
Project Closeout		1/3/2017	12/31/2018	727	7				
		Pho	se Total Exp	enses By FY	' (All figure	es are in \$1,00	00's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24 F	Y25+	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)

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	33,565	0	0	0	0	0	0	0	33,565



122002 CIP#

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

Innovation
Water MP Right Sizing

□ Water MP Right Sizing□ Reliability/Redundancy□ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

An example PRV



Project Engineer/Manager Eric Kramp

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 3/12/2010

Year Project Added to CIP 2010

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Replacement of the PRVs to enhance operability of the system and improve control of the system to meet customer pressure needs
Scope of Work	This project will replace five existing pressure reducing valves (PRVs) that are defective and no longer controlling downstream pressures. During the replacement, the PRV pits will be upgraded to improve accessibility, provide new sump pumps as needed, and make other necessary improvements.
Challenges	N/A - Active
Project History	Only element remaining of project is the completion of Proposed Change Order Number One. Once this and associated close work paperwork is complete, the project will be closed.
Related Project	
Lookup Driver	N/A - Active
Other Important Info	
Explanation	N/A - Active

122002 CIP#

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

'hase Construction	on				Contract	DWS-891		Stat	us Pendin	g Close-out
itle DWS-891 Re	placeme	nt of Five (5) PR	V Pits of Trea	ted Wate	er Transmiss	ion System				
Lakeshore Globa	al									
Phase Budget V	Vater					Cost A	llocation	СТА		
Phase Status P	ending C	lose-out				Fundin	g Source	Bond	Proceeds	
Start Date		5/14/	2015				Fund	Cons	truction Bo	nd Fund
End Date		6/30/	2017			Useful Life	e >20Yrs?	Yes		
Cos	st Estimatio	on Information			Tot. Fe	ederal Loar	n Amount	+		
	1	Cost Est. C	lass		ı	Program/A	llowance	Task I	nformation	
1,	/1/2016	Cost Est. D	ate	Proje	ect Manag	er				
Metco		Cost Est. So	ource	CIP	Number					
Metco		Cost Est. P	epared By	Desc	cription					
Cost Type	e	Fiscal Year	Expense	e Frir	nge Benefit	NonPerson	ne	С	comment	
Construction		FY19		\$804	_		2020C	IP .		
Task		Start Date	End Date	Duratio	on					
Project Execution		1/31/2018	3/31/2018		59					
Project Closeout		4/1/2018	6/30/2018		90					
		Pha	se Total Exp	enses By	FY (All fig	ures are i	n \$1,000'	s)		
Prior Yr Actuals	FY19		FY21	FY22	FY23	FY24		25+	Total	
		804 0	0		0	0	0	0	804	

122002 CIP#

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

Phase Budget Water		Cost Allo	cation CTA	
Phase Status Active		Funding S	Source Bond	Proceeds
Start Date			Fund Const	ruction Bond Fund
End Date		Useful Life >	20Yrs? No	
Cost Estimatio	n Information	Tot. Federal Loan A	mount	\$0
1	Cost Est. Class	Program/Allov	vance Task Ir	nformation
1/1/2016	Cost Est. Date	Project Manager		
Metco	Cost Est. Source	CIP Number		
Metco	Cost Est. Prepared By	Description		

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

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

Phase not applicable				Contract	NA	Sta	tus Closed Out	
Title Prior Year Actual E	xpenses							
Phase Budget Water			Cost Allocation CTA					
Phase Status Closed Out					Funding S	ource		
Start Date						Fund		
End Date					Useful Life >	20Yrs?		
Cost Estim	ation Information	1	1	Tot. Fe	deral Loan A	mount		
1 Cost Est. Class				P	rogram/Allov	vance Task	Information	
1/1/201	6 Cost Est.	Date	Pı	oject Manage	r			
Metco	Metco Cost Est. Source			CIP Number				
Metco	Cost Est.	Prepared By	d By Description					
Cost Type	Fiscal Year	Expens	е	Fringe Benefit	VonPersonne	(Comment	
Engineering Services	FY18-		\$148			FY18		
Unknown	FY18-		\$811			FY16		
Unknown	FY18-		\$611			FY17		
Unknown	FY18-		\$274			Pre-Bifurcat	ion	
	Ph	ase Total Ext	enses	By FY (All fig	ures are in S	1,000's)		
Prior Yr Actuals	FY19 FY20	FY21	FY2		FY24	FY25+	Total	
1,844							1,844	
Project	Total Expense	s By FY Co	mpar	ed to Prior (CIPs (All fic	ures 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 Sizing

✓ Reliability/Redundancy

✓ NEWTP Repurposing

Project Statu Active

CIP Type Project

NONE



Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/8/2016

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location City of Detroit

Fund and Cost Center Water - 5519-882111

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, an 81-inch transmission main is proposed between Water Works Park and Northeast to convey 150 MGD of finished water to the Northeast high lift pumping system to provide service to the existing Northeast service area to meet a large portion of the Northeast service area maximum day demands.

Scope of Work This project includes construction of 35,000 feet of 81-inch diameter piping between Water Works Park and Northeast. The project includes a flow control station at the Northeast site to control flows between Water Works Park and the Northeast High Lift Station

Challenges Route determination, utility conflicts and connections to yard piping at Northeast and Water Works Park WTPs. The large new main will cross I-94 and run through 7 miles of residential/commercial streets.

Project History This project was proposed as part of the 2015 Water Master Plan.

Related Project 115001 - WWP WTP Yard Piping, Valves and Venturi 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.



Performance (Service Level/Reliability)

Regulatory (Environmental/Legal)

Public Benefit

Public Health & Safety

0&M

GLWA FY 2020-2024 CIP

WWP to NE Transmission Main

Project Manager Project Risk Matrix Scoring					
Criteria	Score	Comment			
Condition	3				
Efficiency and Innovation	3				
Financial	5				
0014	2				

3

5

Project Manager Score

53.2

Review Committee Project Risk Matrix Scoring

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				

Review Committee Score

62.4



WWP to NE Transmission Main

	'hase	Design and Build	Contract NA	Status	Future Planned Start
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Title Phase 2 WWP to NE Transmission Main - Transmission Main

Phase Budget	Water
Phase Status	Future Planned Start
Start Date	9/11/2017
End Date	9/10/2018

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

Cost Allocation		СТА
Fui	nding Source	Bond Proceeds
	Fund	Construction Bond Fund
Usefu	I Life >20Yrs?	Yes
Tot. Federal I	Loan Amount	
Progran	m/Allowance	Task Information
Project Manager		
CIP Number		
Description		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY21	\$5,215			
Design-Build	FY22	\$21,294			
Design-Build	FY23	\$29,494			
Design-Build	FY24	\$29,800			
Design-Build	FY25+	\$30,115			2020CIP

Task	Start Date	End Date	Duration
Scope Development	7/8/2018	10/6/2018	90
Procurement	10/7/2018	10/7/2019	365
Project Execution	10/8/2019	9/30/2024	1819
Project Closeout	10/1/2024	12/30/2024	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	5,215	21,294	29,494	29,800	30,115	115,918

WWP to NE Transmission Main

Status Active Phase Study Contract CS-152

Title CS-152 New Waterworks Park to Northeast Transmission Main

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	\$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			

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,000	750	450	500	0	0	0	2,700

WWP to NE Transmission Main

Phase GLWA Employees Pr	oject manager	ment	Contract	NA	Status	Active				
Title GLWA Salaries										
Phase Budget Water				Cost Allo	cation CTA					
Phase Status Active				Funding S	ource Revenu	e Financed Capit	tal			
Start Date					Fund Improve	ement & Extension	า Fun			
End Date	End Date				Useful Life >20Yrs? No					
Cost Estimation	Cost Estimation 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	Cost Est. S	ource	CIP Number							
CDM Smith	M Smith Cost Est. Prepared By		Description							
Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Cor	nment				
GLWA Salaries CIP2020	FY19	\$84	33	4						

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY19	\$84	33	4	
GLWA Salaries CIP2020	FY20	\$84	33	4	
GLWA Salaries CIP2020	FY21	\$84	33	4	
GLWA Salaries CIP2020	FY22	\$84	33	4	
GLWA Salaries CIP2020	FY23	\$84	33	4	
GLWA Salaries CIP2020	FY24	\$134	53	7	

		1 11 43	C TOTAL EXP	cinco by i	. (/ 1.901	Co ale iii q	.,000 0)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	121	121	121	121	121	194	0	799

WWP to NE Transmission Main

Phase not applic	able				Contract	NA	Status	Closed Out		
Title Prior Year A	ctual Expe	nses								
Phase Budget \	Water				Cost Allocation CTA					
Phase Status (Closed Out					Funding S	Source			
Start Date							Fund			
End Date						Useful Life >	20Yrs?			
Со	st Estimatio	n Information			Tot. Fe	deral Loan A	mount			
	5	Cost Est. C	lass		P	rogram/Allov	wance Task Inf	ormation		
1	1/1/2015	Cost Est. D	ate	P	Project Manage	er				
CDM Smith		Cost Est. S	ource	(CIP Number					
CDM Smith		Cost Est. P	repared By		Description					
Cost Typ	ре	Fiscal Year	Expens	e	Fringe Benefit	VonPersonne	Со	mment		
Engineering Servi	ices I	FY18-	\$	1,612			FY18			
Unknown	i	FY18-		\$19			FY17			
GLWA Salaries CI	IP2020 I	FY18-		\$17	7		FY18			

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
1,655								1,655

WWP to NE Transmission Main

hase Design and Bu			С	ontract N	1 A	St	atus Futur	re Planned Start		
itle Phase 1 WWP t	o NE Trai	nsmission Mai	n - Flow Con	rol Sta	ation c	at NE				
Phase Budget Wat	er						Cost Alloc	cation CTA	4	
Phase Status Futu	Phase Status Future Planned Start						Funding S	ource Bor	nd Proceed	ds
Start Date	Start Date							Fund Co	nstruction E	Bond Fund
End Date						I	Useful Life >2	20Yrs? Yes	}	
Cost Es	Cost Estimation Information						eral Loan Ar	nount		\$0
5 Cost Est. Class						Pro	ogram/Allow	ance Tas	k Informatio	on
		Cost Est. D	ate	Project Manager						
		Cost Est. S	ource	CIP Number						
		Cost Est. P	repared By	Description						
Cost Type		Fiscal Year	Expense)	Fringe	BenefitNo	onPersonne		Comment	
Design-Build	F'	Y21	\$10	,000				2020CIP		
Design-Build	-						2	2020CIP		
		Pha	se Total Exp	ense:	By F	Y (All fiqu	res are in Si	l.000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY23	FY24	FY25+	Total	
			10,000	2	2,200				12,20	00
Droio	ol Tolo	LEvnoncos	D. EV Car		a al L	Drier C	IDa / All fia		in ¢1 00)O'o)

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			1,500	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 Statu Active

CIP Type Project

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 Lvl 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.



122004 CIP#

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

Project Manager I	Project Ri	sk Matrix Scoring
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	

Project Manager Score

72.6

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

65.2

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

Phase	Construction	Contract NA	Status	Future Planned Start
Title	96-inch Main Relocation, Isolation Valves Inst	allations, and New Parallel Main		
Pha	se Budget Water	Cost Allocation	СТА	

rnase Buaget	water
Phase Status	Future Planned Start
Start Date	4/3/2017
End Date	5/22/2023

Cost Estimati	on Information
5	Cost Est. Class
	Cost Est. Date
	Cost Est. Source
	Cost Est. Prepared By

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

Cost Type	Fiscal Year	Expense	Fringe Benefit NonPersonne	Comment
Construction	FY21	\$1,116		2020CIP
Construction	FY22	\$24,786		
Construction	FY23	\$34,091		
Construction	FY24	\$19,615		
Construction	FY25+	\$33,907		2020CIP

Task	Start Date	End Date	Duration
Scope Development	10/19/2020	1/17/2021	90
Procurement	1/18/2021	7/25/2021	188
Project Execution	7/26/2021	7/18/2025	1453
Project Closeout	7/19/2025	10/17/2025	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	1,116	24,786	34,091	19,615	33,907	113,515

Project Execution

Project Closeout

GLWA FY 2020-2024 CIP

122004 CIP#

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

					,				•			
Phase Design &	Construction	on Assistance			Coi	ntract N	A		Status	Ad	ctive	
Title 96-inch Mo	ain Relocat	ion, Isolation Vo	alves Installat	ions, c	and Nev	v Parallel	Main					
CS-165 CH2 Hill?	śśś											
Phase Budget	Water						Cost Alloc	cation	СТА			
Phase Status	Active						Funding S	ource	Bond Pr	oce	eds	
Start Date								Fund	Constru	ctio	on Bond Fund	
End Date						Į	seful Life >2	20Yrs?	Yes			
Co	ost Estimatio	on Information				Tot. Fed	eral Loan Ar	nount				
	5	Cost Est. C	lass			Pro	gram/Allow	ance	Task Info	orm	ation	
		Cost Est. D	ate	P	roject N	lanager						
		Cost Est. S	ource	С	IP Num	ber						
		Cost Est. P	repared By	D	escription	on						
			_				_					
Cost Ty	•	Fiscal Year	Expense		Fringe E	senetitNo	nPersonne		Cor	nme	∍nf	
Engineering Serv		FY19		\$133								
Engineering Serv		FY20		,994								
Engineering Serv		FY21	•	,873								
Engineering Serv		FY22	·	,606								
Engineering Serv		FY23	-	,734								
Engineering Serv	vices	FY24	\$3	,676								
Task	(Start Date	End Date	Dur	ation							
Scope Develop	ment	11/1/2018	1/4/2019		64							
Procurement		1/7/2019	5/31/2019		144							

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

92

2192

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

6/1/2025

9/1/2025

6/1/2019

6/1/2025

122004 CIP#

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

Phase Study					Contract	CS	5-165	Sta	tus Active	9
Title CS-16596-inch	Main Re	elocation, Isol	ation Valves I	nstallati	ons, and N	ew F	arallel Ma	in		
CH2M CS-165										
Phase Budget Wat	ter						Cost Allo	cation CTA		
Phase Status Acti	ive						Funding S	ource Reve	enue Finan	ced Capital
Start Date		3/28	/2017					Fund Impr	ovement 8	k Extension Fun
End Date		3/28	/2018			U	seful Life >2	20Yrs? No		
Cost F	stimation	Information			Tot. F	ede	ral Loan Aı	mount		
3031 2	5	Cost Est. C	lass.					vance Task	Information	n
	3	Cost Est. D		Pro	ject Manag			rance rask	iiiioiiiiaiio	··•
					Number	,				
		Cost Est. S	ource							
		Cost Est. P	repared By	Des	cription					
Cost Type		Fiscal Year	Expense	e Fr	inge Benef	Nor	Personne	(Comment	
Engineering Services	s F	Y19		5700	J					
Task		Start Date	End Date	Durat	ion					
Scope Developmen	ıt									
Procurement										
Project Execution		10/24/2017	6/29/2018		248					
Project Closeout										
		Pha	se Total Exp	enses B	y FY (All fi	gure	es are in \$	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23		FY24	FY25+	Total	
	70	00 0	0		0	0	0	0	700	

GLWA Salaries CIP2020

FY24

GLWA FY 2020-2024 CIP

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

hase GLWA Em	nployees P	roject manager	ment		Contract	NA	St	atus	Active	
tle GLWA Salo	aries									
Phase Budget	Water					Cost Allo	cation CT/	A		
Phase Status	Active					Funding S	ource Bor	nd Pro	oceeds	
Start Date							Fund Co	nstruc	ction Bond Fun	d
End Date						Useful Life >	20Yrs? No			
Co	ost Estimati	ion Information			Tot. Fe	ederal Loan A	mount			\$0
	5	Cost Est. C	lass			Program/Allov	vance Tas	k Info	rmation	
	1/1/2017	Cost Est. D	ate	P	roject Manag	er				
Jacobs		Cost Est. S	ource	C	CIP Number					
Jacobs		Cost Est. P	repared By	0	escription (
Cost Ty	pe	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne		Com	ıment	
SLWA Salaries C	CIP2020	FY19		\$3	1	0				
SLWA Salaries C	CIP2020	FY20		\$4	2	0				
SLWA Salaries C	CIP2020	FY21		\$8	3	0				
GLWA Salaries C	CIP2020	FY22		\$42	17	2				
El WA Salaries C	TP2020	FY23		\$42	17	2				

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

44

Thase folds Expenses by 11 (All lightes die in \$1,000 3)										
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	4	6	11	61	61	162	0	305		

\$112

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

hase not applicable			Contract	NA	Sta	Status Closed Out			
Title Prior Year Actua	al Expe	enses							
Phase Budget Wate	er					Cost Allo	cation CTA		
Phase Status Closed Out				Funding S	ource				
Start Date							Fund		
End Date						Useful Life >	20Yrs?		
Cost Es	timatio	on Information			Tot. Fe	ederal Loan A	mount		
	5	Cost Est. C	Class			Program/Allov	vance Task	Information	
1/1/2	2017	Cost Est. D	ate	Р	roject Manag	er			
Jacobs		Cost Est. S	ource	C	CIP Number				
Jacobs		Cost Est. P	repared By	D	escription				
Cost Type		Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	(Comment	
Engineering Services		FY18-		\$542			FY18		
Engineering Services		FY18-		\$89			FY18?		
Unknown		FY18-		\$460			FY17		
GLWA Salaries CIP202	20	FY18-		\$29	10		FY18		
		Pha	se Total Exr	ense	s By FY (All fig	aures are in S	1.000's)		
Prior Yr Actuals	FY1		FY21	FY2		FY24	FY25+	Total	
1,130								1,130	
Proie	ct Tot	lal Expenses	By FY Co	mpa	red to Prior	CIPs (All fic	aures 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 Statu Active

CIP Type Project

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 Lvl 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.

Challenges

Project History

Related Project

Lookup Driver

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

Explanation



Schoolcraft Road Water Transmission Main Replacement

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

65.6

Review Committee Project Risk Matrix Scoring

		or more manufe cooming
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	

Review Committee Score

42



Schoolcraft Road Water Transmission Main Replacement

Phase Design & Construction Assistance

Contract CS-1488

Status Active

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

Phase Budget	Water
Phase Status	Active
Start Date	
End Date	

Cost Estimat	ion Information
5	Cost Est. Class
1/1/2016	Cost Est. Date
Somat	Cost Est. Source
Somat	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

Prog	am/Allowance lask information
Project Manager	
CIP Number	
Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19	\$150			
Engineering Services	FY20	\$125			
Engineering Services	FY21	\$125			
Engineering Services	FY22	\$50			

Task	Start Date	End Date	Duration
Scope Development	10/1/2016	12/30/2016	90
Procurement	12/31/2016	12/31/2017	365
Project Execution	1/1/2018	7/2/2021	1278
Project Closeout	7/3/2021	10/1/2021	90

Prior Yr Actuals	FY10	FY20	FY21	FY22	FY23	FY24	FY25+	Total
Thor IT Actoris	1117	ΓΙZU	1121	1122	1125	Γ1 Z4	11201	TOTAL
	150	125	125	50	0	0	0	450

122005 CIP#

Schoolcraft Road Water Transmission Main Replacement

hase not applicable				Contract NA				Status Closed Out		
lle Prior Year Actu	ual Expen	ses								
Phase Budget Water				Cost Allocation CTA						
Phase Status Closed Out				Funding Source						
Start Date							Fund			
End Date				Useful Life >20Yrs?						
Cost Estimation Information				Tot. Federal Loan Amount					\$0	
5		Cost Est. Class		Program/Allowance Task Information						
1/1/2016		Cost Est. Date		Projec	t Manager					
Somat		Cost Est. Source		CIP Nu	ımber					
Somat		Cost Est. Prepared By		Description						
Cost Type		Fiscal Year	Expense	e Fring	Fringe BenefitNonPersonne		C	Comment		
ngineering Services F		Y18-		\$4	\$4 FY18		Y18			
		Pha	se Total Exp	enses By F	Y (All figur	es are in S	1.000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
4								4		



Schoolcraft Road Water Transmission Main Replacement

Phase Construction Contract NA Status Future Planned Start

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

	· · · · · · · · · · · · · · · · · · ·					
oroject is 95% designed und	ler CS-1488 by SOMAT					
Phase Budget Water		Cost Allocation	CTA			
Phase Status Future Plann	ned Start	Funding Source	Bond Proceeds			
Start Date		Fund	Construction Bond Fund			
End Date		Useful Life >20Yrs?	Yes			
Cost Estimation 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 BenefitNonPersonn	e Comment
Construction	FY20	\$7,945		
Construction	FY21	\$8,990		
Construction	FY22	\$565		

Task	Start Date	End Date	Duration
Scope Development	10/1/2018	12/30/2018	90
Procurement	12/31/2018	7/7/2019	188
Project Execution	7/8/2019	7/2/2021	725
Project Closeout	7/3/2021	10/1/2021	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	7,945	8,990	565	C	0	C	17,500

Schoolcraft Road Water Transmission Main Replacement

hase GLWA Employ	yees Pro	ject manager	ment		Contract	NA	Statu	s Active	
itle GLWA Salaries									
Phase Budget Water					Cost Allocation CTA				
Phase Status Acti	ive					Funding S	ource Bond	Proceeds	
Start Date							Fund Consti	ruction Bond F	und
End Date						Useful Life >2	20Yrs? No		
Cost Estimation Information					Tot. Fe	deral Loan Ar	mount		\$0
	5 Cost Est. Class				P	rogram/Allow	ance Task Ir	nformation	
1/1/	1/1/2016 Cost Est. Date			Proj	ect Manage	r			
Somat		Cost Est. S	ource	CIP	Number				
Somat		Cost Est. P	repared By	By Description					
Cost Type		Fiscal Year	Expens	e Fri	inge Benefit	VonPersonne	С	omment	
GLWA Salaries CIP20)20 F	Y19		\$21	8	1			
GLWA Salaries CIP20)20 F	Y20		\$21	8	1			
GLWA Salaries CIP20)20 F	Y21		\$21	8	1			
GLWA Salaries CIP20)20 F	Y22		\$12	5	1			
		Pha	se Total Exc	penses B	v FY (All fig	ures are in \$1	1.000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		30 30	30		18	0 0	0	108	
	1 = 1	.l. Francosco	Dv. EV.Co		d to Drier	CIPs (All fig		c1 000'a)	

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

Wick Road Water Transmission Main Construction

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Transmission main



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 Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Placement of parallel water main to minimize service disruptions to customer communities

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 require shut down of large transmission mains.

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 - Performance

Other Important Info n/a

Explanation



Wick Road Water Transmission Main Construction

Project Manager Project Risk Matrix Scoring							
a	Score						

_	-	<u> </u>
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	

Project Manager Score

59

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

54.2



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

	Cost Allocation	on CTA			
	Funding Source	e Bond Proceeds			
	Fun	Construction Bond Fund			
	Useful Life >20Yrs	Yes			
ation Information	Tot. Federal Loan Amount				
Cost Est. Class	Program/Allowance Task Information				
Cost Est. Date	Project Manager				
Cost Est. Source	CIP Number				
Cost Est. Prepared By	Description				
	Cost Est. Date Cost Est. Source	Funding Source Funding Source			

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

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	7/30/2021	108

F	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		1,000	17,689	11,995	0		0 0	0	30,684

GLWA Salaries CIP2020

GLWA Salaries CIP2020

FY21

FY22

GLWA FY 2020-2024 CIP

122006 CIP#

Wick Road Water Transmission Main Construction

0

NI 0114/4 F	1 5				• • • •	\	61.1	A 1.	
Phase GLWA Em	nployees Pr	oject manager	nent		Contract	NA	Statu	s Active	
itle GLWA Salo	aries								
Phase Budget	Water					Cost Allo	cation CTA		
Phase Status	Active					Funding S	ource Bond	Proceeds	
Start Date							Fund Consti	ruction Bond Fu	nd
End Date						Useful Life >2	20Yrs? No		
Co	ost Estimatio	on Information			Tot. Fe	ederal Loan Ai	mount		\$0
	5	Cost Est. C	lass		ı	Program/Allov	vance Task Ir	nformation	
	1/1/2016	Cost Est. D	ate	F	Project Manage	er			
Somat		Cost Est. Se	ource	(CIP Number				
Somat		Cost Est. P	repared By	[Description				
Cost Ty	pe	Fiscal Year	Expense	9	Fringe Benefit	NonPersonne	С	omment	
GLWA Salaries C	CIP2020	FY19		\$7	3	0			
GLWA Salaries C	CIP2020	FY20		\$10	4	0			

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

\$10

\$7

			<u> </u>		. (/90.		., <u>,</u>	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	10	14	14	10	0	0	0	48

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

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

S1488 task 7			
Phase Budget Water		Cost Allocation	СТА
Phase Status Active		Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	Yes
Cost Estimati	on 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
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

122006 CIP#

Wick Road Water Transmission Main Construction

hase not applicab	le			(Contract N	Α	Sta	itus Closed	Out
itle Prior Year Actu	Jal Expens	es							
Phase Budget Wa	ter					Cost Alloc	cation CTA		
Phase Status Clo	sed Out					Funding So	ource		
Start Date							Fund		
End Date					U	Iseful Life >2	OYrs?		
Cost E	stimation I	nformation			Tot. Fede	eral Loan An	nount		
	5	Cost Est. C	lass		Pro	gram/Allow	ance Task	Information	
1/1,	/2016	Cost Est. D	ate	Projec	t Manager				
Somat		Cost Est. S	ource	CIP No	umber				
Somat		Cost Est. P	repared By	Descri	ption				
Cost Type	F	iscal Year	Expens	e Fring	je BenefitNo	nPersonne	(Comment	
Jnknown	FY	18-		\$23		F	Y17		
		Pha	se Total Exp	enses By I	FY (All figur	es are in \$1	,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
23								23	



Wick Road Water Transmission Main Construction

Great Bailes Water Mathon	et g		*****	. 11.00	- TT -			111331311	/VICIIII	0011		•		
hase Design					Co	ntract	CS-	1488		Statu	s Active			
itle CS-1488, Tran	smission :	System Water	Main Work-W	ick Ro	ad Par	allel Wa	ıter	Main						
CS-1488 task 4														
Phase Budget Wo	ater							Cost Allo	cation	СТА				
Phase Status Ac	tive						1	Funding S	ource	Bond F	Proceeds			
Start Date									Fund	Constr	ruction Bo	nd Func	d	
End Date							Use	eful Life >2	20Yrs?	Yes				
		1 6 19				Tot Fe	der	al Loan Aı	mount]
Cost	Estimatio	n Information												
	5	Cost Est. C	Class			P	rogr	am/Allov	vance 1	Task In	formation	I		
1/1	/2016	Cost Est. D	ate	Pr	oject /	Manage	r							
Somat	<u> </u>	Cost Est. S	ource	С	IP Num	nber								
Somat		Cost Est. P	repared By	D	escript	ion								
Cost Type		Fiscal Year	Expense)	Fringe	Benefit	lon	Personne		Сс	mment			
Engineering Service	∋s	FY19	9	260										
Task		Start Date	End Date	Durc	ation									
Scope Developme	nt	10/1/2016	12/30/2016		90									
Procurement		12/31/2016	12/31/2017		365									
Project Execution		1/1/2018	4/12/2021		1197									
Project Closeout		4/13/2021	7/12/2021		90									
		Pha	se Total Exp	enses	By FY	(All figu	ures	are in \$	1,000's)				
Prior Yr Actuals	FY19	FY20	FY21	FY2	2	FY23		FY24	FY25	5+	Total			
		260 C	0		0		0	0		0	260			

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

Great Lakes Water Authority

122006 CIP#

Wick Road Water Transmission Main Construction

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	23	1,370	18,028	12,334	60	0	0	0	31,815



Newburgh Road Water Transmission Main

☐ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Water main installation



Project Engineer/Manager Eric Kramp

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 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance 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.

Scope of Work This project involves design and construction services associated with the installation of 3 miles of new 24-inch transmission main along Hannon Road.

Challenges

Project History

Related Project

Lookup Driver 2 - Performance

Other Important Info

Explanation



Newburgh Road Water Transmission Main

Project Manager Project Risk Matrix Scoring										
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									

Project Manager Score

58.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

57



0

0

0

0

0

4,019

0

4,019

GLWA FY 2020-2024 CIP

Newburgh Road Water Transmission Main

Phase Construction Title Newburgh Road Tran			Co	ntract N	NA		Status	Futu	re Plann	ied Start		
Phase Budget Water		Cost Allocation CTA										
Phase Status Future Pla	nned Start					Funding So	ource	Bond Pr	ocee	ds		
Start Date							Fund	Constru	ction	Bond Fu	nd	
End Date						Useful Life >2	OYrs?	Yes				
Cost Estimati	on Information				Tot. Fed	eral Loan An	nount					
5	Cost Est. Cl	ass	Program/Allowance Ta					Task Info	ormati	on		
1/1/2015	Cost Est. Do	ate	Project Manager Eric Kramp)						
CDM Smith	Cost Est. So	urce	CIP Number									
CDM Smith	Cost Est. Pre	epared By	De	escripti	on							
Cost Type	Fiscal Year	Expense	;	Fringe I	BenefitNo	onPersonne		Con	nmen	†		
Construction	FY24	\$4,	,019			2	2020CIF)				
Task	Start Date	End Date	Durc	ation								
Scope Development	1/1/2019	4/1/2019		90								
Procurement	4/2/2019	10/7/2019		188								
Project Execution	10/8/2019	10/4/2021		727								
Project Closeout	10/5/2021	1/3/2022		90								
	Phas	e Total Exp	enses	By FY	(All figu	res are in \$1	,000's)			<u> </u>	
Prior Yr Actuals FY1		FY21	FY2		FY23	FY24	FY25		Total			

122007 CIP#

Newburgh Road Water Transmission Main

Phase GLWA Em	nploye	es Projec	t manager	nent		Contract N	4	Statu	s Active		
Fitle GLWA Salo	aries										
Phase Budget	Water	-			Cost Allocation CTA						
Phase Status	Active)					Funding Sou	rce Bond	Proceeds		
Start Date							F	und Const	ruction Bor	nd Fund	
End Date						U	seful Life >20	Yrs? No			
Cost Estimation Information						Tot. Fede	ral Loan Am	ount			\$0
5 Cost Est. Class				Program/Allowance Task Information							
	1/1/20	15	Cost Est. D	ate	F	Project Manager					
CDM Smith			Cost Est. So	ource	(CIP Number					
CDM Smith			Cost Est. Pr	epared By	[Description					
Cost Ty	ре	Fi	scal Year	Expens	е	Fringe BenefitNo	nPersonne	Co	omment		
GLWA Salaries C	CIP2020	FY2	3		\$21	8	1 20	20CIP			
GLWA Salaries CIP2020 FY24		\$40	16	2 20	20CIP						
			Pha	se Total Exc	ense	s By FY (All figure	es are in \$1.0	000's)			
Prior Yr Actua	ls	FY19	FY20	FY21	FY		FY24	FY25+	Total		
		0	0	0		0 30	58	0	88		



CDM Smith

CDM Smith

GLWA FY 2020-2024 CIP

Great Lakes Water	Authority	Newburgh koda waler fransmission Main							
Phase Design &	Construction Assistance	Contract NA	Status Future Planned Start						
itle Newburgh	Road Transmission Main								
Design and Co Avenue	nstruction Assistance of a new New	vburgh Road 24" Main along Newburgh Roa	d between Cherry Hill and Glenwood						
Phase Budget	Water	Cost Allocation	CTA						
Phase Status	Future Planned Start	Funding Source	Revenue Financed Capital						
Start Date		Fund	Improvement & Extension Fun						
End Date		Useful Life >20Yrs?	No						
Co	ost Estimation Information	Tot. Federal Loan Amount							
	5 Cost Est. Class	Program/Allowance	Task Information						
	1/1/2015 Cost Est. Date	Project Manager Eric Kramp							

Cost Type	Fiscal Year	Expense	Fringe Be	enefit <mark>NonPersonne</mark>	Comment
Engineering Services	FY24	\$1,1	32		2020CIP
Task	Start Date	End Date	Duration		
Scone Development	4/1/2017	4/30/2017	90		

CIP Number

Description

lask	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	10/4/2021	1190
Project Closeout	10/5/2021	1/3/2022	90

Cost Est. Source

Cost Est. Prepared By

1/1/2015

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

							,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	1,132	0	1,132

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

A	GLWA Great Lakes Water Authority

122007 CIP#

Newburgh Road Water Transmission Main

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0		0	0	0	0	30	5,209	0	5,239



122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

	1.
 nnav	ation
 11110	

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Water main being laid



Project Engineer/Manager Khader Hamad

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 2/28/2014

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location City of Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Replacement of original piping with excessive break history with new ductile iron main along Wayne County roadway.

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

Project History

Related Project

Lookup Driver N/A - Pending Closeout

Other Important Info

Explanation N/A - Pending Closeout

122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

hase not applicable					Contract	NA	Sta	tus Closed (Out		
itle Prior Year A	ctual Expe	enses									
Phase Budget	Water			Cost Allocation CTA							
Phase Status	Closed Out					Funding S	ource				
Start Date							Fund				
End Date						Useful Life >2	20Yrs?				
Со	st Estimatio	on Information			Tot. Fe	ederal Loan Ar	mount				
5 Cost Est. Class					Program/Allowance Task Information						
1/1/2015 Cost Est. Date			ate	Project Manager							
CDM Smith		Cost Est. S	ource	CIP Number							
CDM Smith		Cost Est. P	repared By	Description							
Cost Typ	ре	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	(Comment			
nknown		FY18-		\$101		F	-Y16				
Inknown FY18-		\$6		F	FY17						
		Pho	ise Total Exp	ense	s By FY (All fig	ures are in \$	1,000's)				
Prior Yr Actuals	s FY19		FY21	FY2		FY24	FY25+	Total			
1	07							107			



122009 CIP#

Water System Improvements in Joy Road from Southfield Road to Trinity

Phase Construct	tion			Со	ntract	WS-693	Status	Pending Close-out	
Title WS-693 Wo	ater System	Improvement:	in Joy Road	from Southfie	eld Road	I to Trinity			
Major Cement	Company, [DWSD contrac	t.						
Phase Budget	Water					Cost Allocation	CTA		
Phase Status	Pending Cl	ose-out				Funding Source	Bond Pr	oceeds	
Start Date		8/11	/2014			Fund	Constru	ction Bond Fund	
End Date	End Date 8/10/2016					Useful Life >20Yrs?	Yes		
Cost Estimation Information					Tot. Fed	deral Loan Amount			
	1 Cost Est. Class			Program/Allowance Task Information					
9	7/15/2017	Cost Est. [ate	Project A	Manage	r			
Contractor		Cost Est. S	ource	CIP Num	ber				
Biren Saparia		Cost Est. F	repared By	Description					
Task	,	Start Date	End Date	Duration					
Scope Developi	ment								
Procurement									
Project Executio	n								
Project Closeou ⁻	†								
		Pho	se Total Exp	enses By FY	(All figu	res are in \$1,000'	s)		

	Proje	ct Total I	Expenses	By FY C	compare	d to Prio	r CIPs (A	ll figures	are in \$1	(s'000, l
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25

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

122010 CIP#

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

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Water main being replaced



Project Engineer/Manager Eric Kramp

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/18/2016

Year Project Added to CIP 2014

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location City of Detroit

Fund and Cost Center Water - 5519-882431

Project Significance Original piping has history of excessive breaks; replacing to minimize disruption in high-traffic area

Scope of Work Work includes replacement of approx. 18500 ft. of existing water main with 8", 12", and 16" DI pipe along both Joy Rd and Davison. The scope of work also includes approx. 5300 ft. of 24" DI pipe along Joy Rd. A portion of this work is part of the Retail system (amounts not included) CIP No. 463.

Challenges N/A - Active

Project History

Related Project WS-693

Lookup Driver N/A - Active

Other Important Info

Explanation N/A - Active

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	CTA
Funding Source	Federal Loan Programs
Fund	Improvement & Extension Fun
seful 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



GLWA FY 2020-2024 CIP 122010 CIP# Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and

Task		Start Date	End Date	Duration				
Project Closeout		1/3/2017	4/3/2017	90	0			
		Pha	se Total Exp	enses By FY	(All figure	es are in \$1	,000's)	
Prior Yr Actuals	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)

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

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Park-Merriman Water Transmission Main Construction

Innovation	

☐ Water MP Right Sizing

▼ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Water main being installed



Project Engineer/Manager Peter Fromm

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 4/12/2017

Year Project Added to CIP 2015

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance	Replacement of new water main to convert deduct water meters to direct connection meters
Scope of Work	This third and final leg of the 24" water main project will convert a handful of GLWA Master Meters from a deduct to direct connection service and retire Master Meter WY-01 in favor of two new Master Meter vaults.
Challenges	n/a
Project History	n/a
Related Project	CS-1488 – Design Services. Two previous construction contracts.
Lookup Driver	2 - Performance
Other Important Info	n/a
Explanation	



Park-Merriman Water Transmission Main Construction

Project Manager P	roject Ri	sk Matrix Scoring
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	

Project Manager Score

38

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

30.2



Procurement

Project Execution

Project Closeout

GLWA FY 2020-2024 CIP

Park-Merriman Water Transmission Main Construction

Phase Design &	Constructi	on Assistance			Co	ntract	CS-1488		Status	Active	
Title Park-Merrir	man Water	Main-Final Pha	se								
Phase Budget	Water						Cost Allo	cation C	TA		
Phase Status	Active						Funding S	ource B	ond Pro	oceeds	
Start Date								Fund C	onstruc	ction Bond Fund	
End Date							Useful Life >2	20Yrs? Y	es		
Co	ost Estimati	on Information				Tot. Fe	deral Loan Aı	mount			
	5	Cost Est. C	lass			P	rogram/Allov	vance To	ask Info	rmation	
	1/1/2016	Cost Est. D	ate	F	Project N	Nanage	er				
Somat		Cost Est. Se	ource	(CIP Num	ber					
Somat		Cost Est. P	epared By	[Descripti	on					
Cost Typ	pe	Fiscal Year	Expense	;	Fringe I	Benefill	NonPersonne		Com	ment	
Engineering Serv	/ices	FY19	\$	137							
Engineering Serv	vices	FY20	\$	107							
Engineering Serv	/ices	FY21	\$	107							
Task		Start Date	End Date	Dui	ration						
Scope Developr	ment	7/24/2016	10/22/2016		90						

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

90

365

1179

Prior Y	r Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		137	107	107	0	0	0	0	351

10/23/2016

10/24/2017

1/16/2021

10/23/2017

1/15/2021

4/16/2021



Great Lakes Water	Authority		Park-M	vem	man water	iransmissio	n Ma	in Con	struction	
Phase Construc	tion				Contract	CON-268		Status	Active	
Title Park-Merri	man Wate	r Main-Final Pha	se							
Phase Budget	Water					Cost Alloc	cation	СТА		
Phase Status	Active					Funding S	ource	Bond Pro	oceeds	
Start Date							Fund	Construc	ction Bond Fund	
End Date						Useful Life >2	20Yrs?	Yes		
Co	ost Estimati	ion Information			Tot. Fe	deral Loan Ar	mount			
	5	Cost Est. C	lass		P	rogram/Allow	vance '	Task Info	rmation	
	1/1/2016	Cost Est. D	ate	P	Project Manage	r				
Somat		Cost Est. S	ource		CIP Number					
Somat		Cost Est. P	repared By		Description					
						-				
Cost Ty	ne	Fiscal Year	Expense	,	Fringe Benefit	VonPersonne		Com	nment	
Construction	1	FY19		\$900	90 200111			2 311		
Construction		EVOO	¢ 1	400						

Construction	FY21	\$2,100		
Construction	FY20	\$4,600		
Construction	FY19	\$900		
Cost type	Fiscal Year	Expense	Fringe Benefit NonPersonne	Comment

Task	Start Date	End Date	Duration
Scope Development	11/30/2017	8/26/2018	269
Procurement	8/27/2018	1/14/2019	140
Project Execution	1/15/2019	1/15/2021	731
Project Closeout	1/16/2021	4/16/2021	90

		1 1143	C TOTAL EXP	Chises by I	i (All ligol	C3 GIC III Q	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	900	4,600	2,100	0	0	0	0	7,600

122011 CIP#

Park-Merriman Water Transmission Main Construction

hase not appli	cable						Contract \land	1A	Sto	atus	Closed O	ut	
itle Prior Year	Actual	Expense	es										
Phase Budget	Water							Cost Alloc	cation CTA	\			
Phase Status	Closed	tuO b						Funding S	ource				
Start Date									Fund				
End Date							ı	Useful Life >2	20Yrs?				
Co	ost Estir	nation I	nformation				Tot. Fed	eral Loan Ar	mount			\$	60
		5	Cost Est. C	lass			Pro	ogram/Allow	ance Task	Infori	mation		
	1/1/20	16	Cost Est. D	ate	P	rojec	Manager						
Somat			Cost Est. So	ource	C	CIP Nu	mber						
Somat			Cost Est. P	repared By)escri	otion						
Cost Ty	ре	F	iscal Year	Expens	e	Fring	e Benefit <mark>N</mark> o	onPersonne	(Comr	nent		
ngineering Serv	vices	FY1	8-		\$156			F	Y18				
			Pha	se Total Exp	ense	s By F	Y (All figu	res are in S	1,000's)				
Prior Yr Actua	ls	FY19	FY20	FY21	FY:		FY23	FY24	FY25+	To	otal		
	156										156		

Park-Merriman Water Transmission Main Construction

Phase Budget Wo	ater					Cost Alloca	tion CTA		
Phase Status Ac	tive					Funding Sou	rce Bond	Proceeds	
Start Date						F	und Const	truction Bond F	und
End Date					U	seful Life >20	Yrs? No		
Cost	Estimati	on Information			Tot. Fede	eral Loan Amo	ount		\$(
	5	Cost Est. (Class		Pro	gram/Allowaı	nce Task I	nformation	
1/1	/2016	Cost Est. I	Date	P	roject Manager				
Somat		Cost Est. S	ource	C	CIP Number				
Somat		Cost Est. F	repared By	D	escription				
Somat		Cost Est. I	Prepared By	D	escription				
Somat Cost Type		Cost Est. I	Prepared By Expense		Pescription Fringe BenefitNo	nPersonne	С	omment	
	2020					nPersonne	С	omment	
Cost Type		Fiscal Year		ə	Fringe BenefitNo	nPersonne 1	С	omment	
Cost Type GLWA Salaries CIP2	2020	Fiscal Year FY19		\$21 \$21 \$21	Fringe Benefit No 8 8 8	nPersonne 1 1	С	omment	
Cost Type GLWA Salaries CIP2 GLWA Salaries CIP2	2020 2020	Fiscal Year FY19 FY20		€ \$21 \$21	Fringe BenefitNo 8 8	nPersonne 1 1 1 0	С	omment	
Cost Type GLWA Salaries CIP2 GLWA Salaries CIP2 GLWA Salaries CIP2	2020 2020	Fiscal Year FY19 FY20 FY21 FY22	Expense	\$21 \$21 \$21 \$21 \$4	Fringe Benefit No 8 8 8	1 1 1 0		omment	
Cost Type GLWA Salaries CIP2 GLWA Salaries CIP2 GLWA Salaries CIP2	2020 2020	Fiscal Year FY19 FY20 FY21 FY22	Expense	\$21 \$21 \$21 \$21 \$4	Fringe BenefitNo 8 8 8 8 2	1 1 1 0		omment Total	

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



36-inch Water Main in Telegraph Road

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Water main ready to install



Project Engineer/Manager Khader Hamad

Explanation N/A - Active

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/18/2016

Year Project Added to CIP 2012

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance	Excessive joint leaks warrant replacement; new water line to be placed in greenbelt
Scope of Work	This project includes installation of approximately 10,530 feet of 36-inch dia. water main in Telegraph Road from Cherry Hill to Warren Ave.
Challenges	N/A - Active
Project History	
Related Project	WS-684
Lookup Driver	1 - Condition
Other Important Info	



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

36-inch Water Main in Telegraph Road

Project Manager	Project Kis	sk mainx sconing
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	

Project Manager Project Pick Matrix Scoring

Project Manager Score

55

Review Committee Project Risk Matrix Scoring

	er kisk Manix Cooming
Score	Comment
3	
2	
2	
3	
3	
3	
2	
1	
	Score 3 2 2 3

Review Committee Score

45.6

122012 CIP#

36-inch Water Main in Telegraph Road

Phase not applicable					Contract	NA	Status	Status Closed Out		
Title Prior Year	Actual Exp	enses								
Phase Budget	Water					Cost Allo	cation CTA			
Phase Status	Closed O	J†				Funding S	ource			
Start Date							Fund			
End Date						Useful Life >	20Yrs?			
Co	ost Estimat	ion Information			Tot. Fe	deral Loan A	mount			
	1	Cost Est. C	lass		F	rogram/Allov	vance Task Info	ormation		
	1/1/2016	Cost Est. D	ate	P	roject Manage	er				
Somat		Cost Est. S	ource	C	CIP Number					
Somat		Cost Est. P	repared By	0	Description					
Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne	Con	nment		
Construction		FY18-	\$1	,087			FY18			
Engineering Ser	vices	FY18-		\$160			FY18			
Unknown		FY18-	\$7	7,545			FY17			
Unknown		FY18-		\$581			FY16			
GLWA Salaries C	CIP2020	FY18-		\$32	13		FY18			

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
9,418								9,418

36-inch Water Main in Telegraph Road

Phase Construction Contract WS-684A Status Pending Close-

Title WS-684A 36-inch Water Main in Telegraph Road

ic-Man		
Phase Budget Water		Cost Allocation CTA
Phase Status Pending C	Close-out	Funding Source Bond Proceeds
Start Date	4/25/2016	Fund Construction Bond Fund
End Date	6/24/2017	Useful Life >20Yrs? Yes
Cost Estimat	on Information	Tot. Federal Loan Amount
1	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 B	Benefit	NonPersonne	Comment	
Construction	FY19	\$	127			2020CIP	
Task	Start Date	End Date	Duration				
Scope Development	7/20/2015	10/18/2015	90				
Scope Development							
Procurement	10/19/2015	4/24/2016	188				
Project Execution	4/25/2016	1/31/2018	646				
Project Closeout	2/1/2018	12/31/2019	698				

			<u> </u>	, , , , , , , , , , , , , , , , , , , 	. (,		- /	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	127	0	0	0	0	0	0	127

36-inch Water Main in Telegraph Road

							3 - 1				
Phase Design &	Constructi	ion Assistance			Contract	NA		Status	Pending Close-o	ut	
Title 36-inch W	ater Main i	n Telegraph Roc	nd								
Phase Budget	Water					Cost Allo	cation	CTA			
Phase Status	Phase Status Pending Close-out			Funding Source Bond Proceeds							
Start Date	Start Date			Fund Construction Bond Fund							
End Date						Useful Life >	20Yrs? Y	es			
C	ost Estimati	ion Information			Tot. F	ederal Loan A	mount				
	1	Cost Est. C	lass			Program/Allov	wance To	ask Info	rmation		
	1/1/2016	Cost Est. D	ate	P	roject Manag	er					
Somat		Cost Est. So	ource	C	IP Number						
Somat		Cost Est. P	repared By	D	escription						
Cost Ty	pe	Fiscal Year	Expense)	Fringe Benefi	1NonPersonne		Com	nment		
Engineering Ser	vices	FY19		\$10			2020CIP				
Other		FY19		\$15			2020CIP				
Task	(Start Date	End Date	Dur	ation						
Scope Develop	ment	7/21/2013	10/19/2013		90						
Procurement		10/20/2013	10/20/2014		365						
Project Execution	n	10/21/2014	1/31/2018		1198						
Project Closeou	+	2/1/2018	12/31/2010		400						

					1 11 11 3 4 1		-,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	25	0	0	0	0	0	0	25

36-inch Water Main in Telegraph Road

nase GLWA Em	nployees Pr	oject manager	nent	Contract NA	\	Status Activ	е
tle GLWA Salo	aries						
Phase Budget	Water				Cost Allocation	СТА	
Phase Status	Status Active				Funding Source	Bond Proceed	S
Start Date					Fund	Construction B	ond Fund
End Date	d Date			Us	seful Life >20Yrs?	No	
C	ost Estimati	on Information		Tot. Fede	ral Loan Amount		\$0
	1	Cost Est. C	lass	Prog	gram/Allowance	Task Informatio	on
	1/1/2016	Cost Est. D	ate	Project Manager			
Somat		Cost Est. S	ource	CIP Number			
Somat		Cost Est. P	repared By	Description			
Cost Ty	pe	Fiscal Year	Expense	e Fringe BenefitNor	Personne	Comment	
SLWA Salaries C	CIP2020	FY19		\$2 1	0		
		Pha	se Total Exp	enses By FY (All figure	es are in \$1,000'	s)	
Prior Yr Actua	ıls FY1		FY21	FY22 FY23	FY24 FY2		
11101 117 (0100		3 0	0	0 0	0	0	3

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		2,000	5,061						0	0	7,061
2019	0	8,125	2,257	3						0	10,385
2020	0	0	9,418	155	0	0	0	0	0	0	9,573

14 Mile Transmission Main Loop

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/28/2016

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Oakland County

Fund and Cost Center Water - 5519-882111

Project Significance The 14 Mile Transmission Main that currently serves West Bloomfield Township, Farmington Hills, Commerce Township, Novi, Walled Lake, and Wixom is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the 14 Mile system to increase redundancy on this branch of the system.

Scope of Work Install approximately 6 Miles of 48-inch transmission main from 8 Mile Road to 14 Mile Road along Haggerty Road. The work will also include connections to the yard piping and reservoir fill line at the Haggerty Booster Station as well as a control valve to regulate flows along the transmission main.

Challenges Routing and construction staging for the proposed piping in the vicinity of the Haggerty and 8 Mile Intersection appears to be a significant challenge as this intersection is one of the highest traffic volume intersections in Southeast Michigan.

Project History The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. Since that recommendation, GLWA Water Supply Operations Engineering performed a hydraulic analysis of redundancy alternatives for the 14 Mile Transmission System. The results of the hydraulic analysis was presented at the May 15, 2017 and September 19, 2017 Analytical Work Group Meetings and based on the discussion at these meetings, the Haggerty Loop Option described in the scope of work appears to be the preferred alternative.

Related Project CIP 1336 West Service Center Division Valve Upgrades and Newburgh Active Bypass System

Lookup Driver 2 - Performance

Other Important Info GLWA should consider discussing additional connections with the City of Novi as they may desire an additional

14 Mile Transmission Main Loop

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

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

60.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

58.4



14 Mile Transmission Main Loop

Phase Design &	Construction	on Assistance			Contract	NA		Status	Future Planned	Start
Title 14 Mile Tra	insmission A	Main Loop								
Phase Budget	Water					Cost Allo	cation	СТА		
Phase Status	Future Plan	nned Start				Funding S	ource	Bond Pro	oceeds	
Start Date							Fund	Construc	ction Bond Fund	
End Date						Useful Life >	20Yrs?	Yes		
Co	ost Estimatio	on Information			Tot. Fe	ederal Loan A	mount			
	5	Cost Est. C	lass		F	Program/Allov	vance	Task Info	rmation	
		Cost Est. D	ate	Р	roject Manage	er				
		Cost Est. So	ource		CIP Number					
		Cost Est. P	repared By	D	escription					
			1 /							
Cost Ty	ре	Fiscal Year	Expense	9	Fringe Benefit	NonPersonne		Com	nment	
Engineering Ser	vices	FY20		690						
Engineering Ser	vices	FY21	\$1	,254						
Engineering Ser	vices	FY22	\$1	,446						
Engineering Ser	vices	FY23	\$1	,000						
Engineering Sen	vices	FY24	(300						
Task	(Start Date	End Date	Dur	ation					
Scope Develop	ment	6/2/2018	8/31/2018		90					
Procurement		9/1/2018	9/1/2019		365					
Project Execution	n	9/2/2019	2/27/2026		2370					
Project Closeou	t	2/28/2026	5/29/2026		90					

Phase Total	Expenses	Rv FY	(All figures	are in S	1 000's)
I IIU3E IUIUI	LVNCII3C3	Dyll	(VII IIAOIE2	uie III 3	1,000 31

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	690	1,254	1,446	1,000	300	0	4,690

Great Lakes Water Authori	rity		14 Mile Transmission Main Loop						
ase Construction	n		Contract NA	A	Status	Future Planned Start			
e 14 Mile Transn	mission Mo	ain Loop							
Phase Budget Wo	ater			Cost Allocation	СТА				
Phase Status Fut	ture Planr	ned Start		Funding Source	Bond Pr	oceeds			
Start Date				Fund	Constru	ction Bond Fund			
End Date			U	seful Life >20Yrs?	Yes				
Cost I	Estimation	n Information	Tot. Federal Loan Amount						
	5	Cost Est. Class	Prog	gram/Allowance	Task Info	ormation			
		Cost Est. Date	Project Manager						
		Cost Est. Source	CIP Number						
		Cost Est. Prepared By	Description						

Cost Type	Fiscal Year	Expense	Fringe BenefitNonPer	rsonne Comment	
Construction	FY23	\$12,359			
Construction	FY24	\$11,518			
Construction	FY25+	\$25,433		2020CIP	

Task	Start Date	End Date	Duration
Scope Development	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

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

		1 11010	O TOTAL EXP	7011303 	. (/ 11901	OF GIFT III Y	.,000	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	12,359	11,518	25,433	49,310

FY25

0

Total

29,800

GLWA FY 2020-2024 CIP



CIP

2018

FY16

FY17

1,300

FY18

10,500

FY19

12,000

FY20

6,000

14 Mile Transmission Main Loop

Phase GLWA Employees	Project mar	nagement			Co	ntract NA	4	Statu	s Future I	Planned Start	
Title GLWA Salaries											
Phase Budget Water							Cost Alloc	cation CTA			
Phase Status Future Pl	Phase Status Future Planned Start				Funding Source Bond Proceeds						
Start Date								Fund Const	ruction Bor	nd Fund	
End Date						U	seful Life >2	OYrs? No			
Cost Estimo	tion Inform	ation				Tot. Fede	ral Loan An	nount		\$0	
5	Cost	Est. Class				Prog	gram/Allow	ance Task Ir	nformation		
1/1/2017	Cost	Est. Date		Pr	oject M	Nanager					
GLWA	Cost	Est. Source	е	C	P Num	ber					
GLWA	Est. Prepa	red By Description					<u> </u>				
Cost Turos	Fiscal Y	o our	Fyro o pos		-rin a a	Domofid Nor	Doroono	-	omment		
Cost Type GLWA Salaries CIP2020	FY20	ear	Expense		nnge	BenefitNor 17		C	Jiiiiieiii		
GLWA Salaries CIP2020 GLWA Salaries CIP2020	FY21			\$42 \$42		17	2				
GLWA Salaries CIP2020	FY22			\$42		17	2				
GLWA Salaries CIP2020	FY23			\$42		17	2				
GLWA Salaries CIP2020	FY24		(\$126		50	6				
Task	Start D	ate Enc	d Date	Durc	ation	'				'	
Project Execution											
		Phase To	otal Exp	enses	By FY	(All figure	es are in \$1	,000's)			
Prior Yr Actuals F	′19 FY		Y21	FY2		FY23	FY24	FY25+	Total		
	0	61	61		61	61	182	0	426		
Project T	otal Expe	nses By	FY Coi	mpar	ed to	Prior CI	Ps (All fig	ures are i	n \$1,000'	(s)	

FY21

FY22

FY23

FY24

0

122013 CIP#

14 Mile Transmission Main Loop

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				751	1,315	1,507	13,420	37,433	0	54,426
2020	0	0		0	751	1,315	1,507	13,420	12,000	25,433	54,426

Romulus 48-inch Water Main Installation

☐ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Pipe ready to install



Project Engineer/Manager Khader Hamad

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/18/2016

Year Project Added to CIP 2015

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance Placement of a parallel water main to minimize service disruptions to customer communities

Scope of Work The City of Romulus notified DWSD of a significant retail development opening in Autumn 2016 at the southeast corner of Vining and Wick Roads. Romulus was also aware that DWSD has a project pending to place a 48" water main along Wick Road. Placement of the new 48" water main would be disruptive to the retail development traffic entrances/exits facing Wick road. Thus, Romulus asked if the 48" water main project could be expedited so it could be in place at the time of the retail development construction in Spring/Summer 2016. The 48" water main will be placed by Romulus as a part of the pavement upgrade work being pursued by Romulus early in 2016.

Challenges N/A - Active

Project History

Related Project

Lookup Driver N/A - Active

Other Important Info

Explanation N/A - Active

Prior Yr Actuals

4,011

FY19

FY20

FY21

GLWA FY 2020-2024 CIP

Romulus 48-inch Water Main Installation

Phase not appli	cable				Contract	NA	Status	Closed Out
Title Prior Year	Actual Exp	enses						
Phase Budget	Water					Cost Allo	cation CTA	
Phase Status	Closed O	U†				Funding \$	ource	
Start Date							Fund	
End Date						Useful Life >2	20Yrs?	
Co	ost Estimat	ion Information			Tot. Fed	deral Loan Ar	mount	
	5	Cost Est. C	lass		Pr	ogram/Allow	vance Task Inf	formation
	1/1/2016	Cost Est. D	ate	F	Project Manage	r		
Somat		Cost Est. So	ource	(CIP Number			
Somat		Cost Est. P	repared By		Description			
Cost Ty	pe	Fiscal Year	Expens	e	Fringe BenefitN	IonPersonne	Со	mment
Construction		FY18-		\$110		F	Y18	
Engineering Serv	vices	FY18-		\$61		F	Y18	
Unknown		FY18-	\$3	3,404		F	-Y17	
Unknown		FY18-		\$436		F	-Y16	
		Pha	se Total Exp	ense	s By FY (All figu	res are in \$	1,000's)	

FY23

FY24

FY25+

FY22

Total

4,011

Romulus 48-inch Water Main Installation

Phase Construction Contract MOU-4848 Status Pending Close-out

Title MOU-4848 Romulus 48-inch Water Main Installation

ity of Romulus				
Phase Budget Wate	er		Cost Allocation	СТА
Phase Status Penc	ding Close	-out	Funding Source	Bond Proceeds
Start Date			Fund	Construction Bond Fund
End Date			Useful Life >20Yrs?	Yes
Cost Es	timation Ir	nformation	Tot. Federal Loan Amount	
	4	Cost Est. Class	Program/Allowance	Task Information
10/30/2	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
F	Project Execution	1/1/2017	6/30/2018	545
F	Project Closeout	7/1/2018	9/29/2018	90

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

١.			11100	C TOTAL EXP	CHISCS By I	shoes by it (/ iii ligores are iii 41,000 s)						
	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
		0	0	0	0	0	0	0	0			

Romulus 48-inch Water Main Installation

hase GLWA Emplo	oyees Projec	t manageme	nt	C	Contract N	A	Status	Pending Close-	out
itle GLWA Salarie	S								
Phase Budget Wo	ater					Cost Alloco	ation CTA		
Phase Status Per	nding Close-	out				Funding So	urce Bond Pr	oceeds	
Start Date						I	Fund Constru	ction Bond Fund	
End Date					U	seful Life >20	Yrs? No		
Cost I	Estimation In	formation			Tot. Fede	ral Loan Am	ount		\$0
	5	Cost Est. Clas		Droinol		gram/Allowo	ance Task Info	ormation	
1/1	/2016	Cost Est. Date	9	-	Manager				
Somat		Cost Est. Soul	rce	CIP Nu	mber				
Somat		Cost Est. Prep	oared By	Descrip	otion				
						es are in \$1,			
Prior Yr Actuals	FY19 0	FY20 0	FY21 0	FY22 0	FY23 0	FY24 0	FY25+ 0	Total 0	

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

		<u> </u>			<u> </u>	<u> </u>	<u> </u>		<u> ч</u>	, ,	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018	1021	3,514							0	0	4,535
2019	0	3,840	403							0	4,243
2020	0	0	4,011	0	0	0	0	0	0	0	4,011

122015 CIP#

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

Innovation
Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Water main



Project Engineer/Manager Khader Hamad

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/21/2016

Year Project Added to CIP

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location City of Detroit

Fund and Cost Center Water - 5519-882111

Project Significance	This project was completed to replace a critical water main that suffered a break and that serves the GLWA WRRF.
Scope of Work	
Challenges	
Project History	Project is completed.
Related Project	
Lookup Driver	
Other Important Info	
Explanation	

122015 CIP#

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

hase not applic	cable				Contr	act N	Α	Sta	tus Closed	Out
tle Prior Year A	ctual Exp	enses								
Phase Budget	Water						Cost Alloc	cation CTA		
Phase Status	Closed Ou	J†					Funding So	ource		
Start Date								Fund		
End Date						U	Jseful Life >2	OYrs?		
Со	st Estimati	on Information			To	t. Fede	eral Loan An	nount		
	5	Cost Est. C	Class			Pro	gram/Allow	ance Task	Information	
1	1/1/2016	Cost Est. D	ate	Р	roject Ma	nager				
GLWA	, , , , , , , , , , , , , , , , , , ,	Cost Est. S	ource	C	IP Numbe	r				
GLWA		Cost Est. P	repared By	D	escription					
Cost Typ	ре	Fiscal Year	Expens	е	Fringe Bei	nefitNo	nPersonne	(Comment	
onstruction		FY18-		\$115			F	Y18		
nknown		FY18-	\$2	2,345			F	Y17		
		Pho	se Total Exp	enses	s By FY (A	ll figur	es are in \$1	l,000's)		
Prior Yr Actuals	s FY1		FY21	FY2		Y23	FY24	FY25+	Total	
2,4	160								2,460	

122015 CIP#

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

Phase Construction Contract CON-105 Status Pending Close-out

Title CON-105 30" Water main Replacement - Water main Replacement Under Jefferson & Rouge River

Phase Budget	Water			Cost Allocation	CTA
Phase Status	Pending Clo	se-out		Funding Source	Bond Proceeds
Start Date				Fund	Construction Bond Fund
End Date			Us	seful Life >20Yrs?	Yes
Co	st Estimation	n Information	Tot. Feder	al Loan Amount	
	5	Cost Est. Class	Prog	ram/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 Exe	ecution	1/1/2017	6/30/2017	180
Project Clo	oseout	7/1/2017	9/29/2017	90

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

Findse foldi Expenses by FT (All lightes die in \$1,000 s)											
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	0	0	0	0	0	0	0	0			

122015 CIP#

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

Phase GLWA Em	ployees Projec	t management	Co	ontract NA		Status	Pending Close-out
itle GLWA Sala	aries						
Phase Budget	Water				Cost Allocation	CTA	
Phase Status	Pending Close-	out		F	unding Source	Bond Pr	oceeds
Start Date					Fund	Constru	ction Bond Fund
End Date				Use	ful Life >20Yrs	? No	
Co	st Estimation In	formation		Tot. Federa	l Loan Amoun	t	\$0
	5	Cost Est. Class		Progre	am/Allowance	e Task Info	ormation
	1/1/2016	Cost Est. Date	Project I	Manager			
GLWA		Cost Est. Source	CIP Nun	nber			
GLWA		Cost Est. Prepared	l By Descript	ion			
			I Expenses By FY				
Prior Yr Actual		FY20 FY2		FY23		25+	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)

		<u> </u>	Apolito			<u> </u>	<u> </u>		<u> </u>	,000	
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	2,460	0	0	0	0	0	0	0	2,460

Downriver Transmission Main Loop

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Example transmission main



Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/12/2017

Year Project Added to CIP 2017

Budget Water

Class Lvl 1 Water

Class Lvl 2 Field Services

Class Lvl 3 Transmission System

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882411

Project Significance The Downriver Transmission Main that currently serves Brownstown, Riverview, Woodhaven, Trenton, Flat Rock, Gibraltar, Rockwood, South Rockwood, and Berlin Township is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the Downriver system to increase redundancy on this branch of the system.

Scope of Work Install approximately 6 Miles of 16-inch transmission main and 3 Miles of 24-inch transmission main from along the Electric Avenue corridor to parallel the existing transmission system in this branch of the system.

Challenges Assuming ownership of the 24-inch transmission main through the City of Trenton may require condition assessment of this portion of pipeline.

Project History The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. Since that recommendation, GLWA Water Supply Operations Engineering performed a hydraulic analysis of redundancy alternatives for the Downriver Transmission System. The results of the hydraulic analysis were presented at the May 15, 2017 and September 19, 2017 Analytical Work Group Meetings and based on the discussion at these meetings, the Electric Avenue Transmission loop option described in the scope of work appears to be the preferred alternative.

Related Project None

Lookup Driver 2 - Performance

Other Important Info

Explanation

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Downriver Transmission Main Loop

Project Manager I	Project Ri	sk Matrix Scoring
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	

Project Manager Score

57.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

58.4



Downriver Transmission Main Loop

Phase Design & Construc Title Downriver Transmiss			(Contract	NA		Status	Future Planned	Start	
Phase Budget Water					Cost Allo	cation (CTA			
Phase Status Future Pla	Phase Status Future Planned Start				Funding Source Bond Proceeds					
Start Date						Fund (Constru	ction Bond Fund		
End Date					Useful Life >	20Yrs? Y	es			
Cost Estima	tion Information			Tot. Fed	deral Loan A	mount				
5	Cost Est. C	lass		Pr	ogram/Allov	vance To	ask Info	ormation		
	Cost Est. D	ate	Projec	t Manage	r					
	Cost Est. S	ource	CIP Number							
	Cost Est. P	repared By	d By Description							
Cost Turo	Fiscal Year	- Fyrn a nac	Frino	o Donofil	In Domanna		Con	nment		
Cost Type Engineering Services	FY20	Expense	\$276	e beneiiin	IonPersonne		Con	rimeni		
Engineering Services	FY21		\$934							
Engineering Services	FY22		\$801							
Engineering Services	FY23	(\$931							
Engineering Services	FY24	\$1	,058							
Task	Start Date	End Date	Duration							
Scope Development	10/1/2018	12/30/2018		90						
Procurement	12/31/2018	12/31/2019	3	65						
Project Execution	1/1/2020	11/18/2025	21	48						
Project Closeout	11/19/2025	2/17/2026		90						

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	276	934	801	931	1,058	0	4,000

Project Execution

Project Closeout

11/24/2021

11/19/2025

11/18/2025

2/17/2026

Downriver Transmission Main Loop

Phase Construction					Contrac	t NA	Status	Future Planned	Start
Title Downriver Tran	smission <i>N</i>	Main Loop							
Phase Budget Wat	er					Cost Allo	cation CTA		
Phase Status Futu	hase Status Future Planned Start				oceeds				
Start Date							Fund Constru	ction Bond Fund	
End Date						Useful Life >:	20Yrs? Yes		
Cost Es	stimation	Information			Tot.	Federal Loan A	mount		
	5	Cost Est. C	lass			Program/Allov	vance Task Info	ormation	
		Cost Est. D	ate	Р	roject Mana	ger			
		Cost Est. S	ource	CIP Number					
		Cost Est. P	repared By	D	escription		,		
Cost Type		Fiscal Year	Expense	9	Fringe Bene	fitNonPersonne	Cor	nment	
Construction	FY	22	\$2	,220					
Construction	FY	23	\$9	,802					
Construction	FY	24	\$20	,979					
Task		Start Date	End Date	Dur	ration				
Scope Developmen	t	2/17/2021	5/18/2021		90				
Procurement		5/19/2021	11/23/2021		188				

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

90

1455

				, , , , , , , , , , , , , , , , , , , 	. (/		.,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	2,220	9,802	20,979	0	33,001

Downriver Transmission Main Loop

	Project man	agemeni		Contract N	77	Status		
le GLWA Salaries								
Phase Budget Water					Cost Alloco	ition CTA		
Phase Status Future P	lanned Start				Funding So	urce Bond P	roceeds	
Start Date					I	Fund Constru	ıction Bond F	und
End Date				I	Useful Life >20	Yrs? No		
Cost Estim	ation Informa	tion		Tot. Fed	eral Loan Am	ount		\$0
5	Cost	Est. Class		Pro	ogram/Allowo	ınce Task Inf	ormation	
1/1/2015	Cost I	Est. Date	Pro	oject Manager				
CDM Smith	Cost I	Est. Source	CI	P Number				
CDM Smith	Cook		D					
CDIVI SITIIITI	Cost i	Est. Prepared By	De	escription				
		. ,						
Cost Type	Fiscal Ye	. ,	se F	ringe BenefitNo	onPersonne	Cor	nment	
Cost Type GLWA Salaries CIP2020	Fiscal Ye	. ,	se F	Fringe BenefitNo 6	onPersonne	Сог	mment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21	. ,	se F \$14 \$21	Fringe BenefitNo 6 8	onPersonne 1	Сог	mment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21 FY22	. ,	se F \$14 \$21 \$21	Fringe BenefitNo 6 8 8	onPersonne 1 1	Сог	mment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21 FY22 FY23	. ,	se F \$14 \$21 \$21 \$21	Fringe BenefitNo 6 8 8 8	1 1 1	Coi	nment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21 FY22	. ,	se F \$14 \$21 \$21	Fringe BenefitNo 6 8 8	onPersonne 1 1 1 1 3	Сог	mment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21 FY22 FY23	ear Expen	se \$14 \$21 \$21 \$21 \$21 \$59	Fringe BenefitNo 6 8 8 8 8 23	1 1 1 1 3		nment	
Cost Type GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020 GLWA Salaries CIP2020	Fiscal Ye FY20 FY21 FY22 FY23	ear Expen	se \$14 \$21 \$21 \$21 \$21 \$59	Fringe Benefit No. 6 8 8 8 8 23	1 1 1 1 3		mment	

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



122017 CIP#

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

☐ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu New

CIP Type Project

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 Lvl 2 Field Services

Class Lvl 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.



122017 CIP#

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

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

53

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

44

122017 CIP#

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

hase GLWA Employees	Project manage	ment		Contract	Status	Future Planned S	Start	
itle GLWA Salaries								
Phase Budget Water					Cost Alloc	cation CTA		
Phase Status Future P	lanned Start				oceeds			
Start Date						Fund Constru	ction Bond Fund	
End Date					Useful Life >2	20Yrs? Yes		
Cost Estimo	Cost Estimation Information			Tot. Federal Loan Amount				\$0
5 Cost Est. Class			Program/Allowance Task Information					
1/1/2018	1/1/2018 Cost Est. Date		Project Manager					
GLWA	Cost Est. S	ource	CIP Number					
GLWA	Cost Est. P	repared By		escription				
Cost Type	Fiscal Year	Expense)	Fringe Benefit	IonPersonne	Con	nment	
GLWA Salaries CIP2020	FY20		\$49	19	22	2020CIP		
GLWA Salaries CIP2020	FY21		\$49	19	22	2020CIP		
GLWA Salaries CIP2020	FY22		\$49	19	22	2020CIP		
GLWA Salaries CIP2020	FY23		\$49	19	22	2020CIP		
GLWA Salaries CIP2020	FY24		\$49	19	22	2020CIP		

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
		70	70	70	70	70		350

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

_	nd Build				Contract TB	BD	Stat	rus Future Pla	anned Start	
itle 7 Mile/Nev	vada Transı	mission Main Re	ehab							
Phase Budget	Water					Cost Alloc	cation CTA			
Phase Status	Future Plan	ned Start		Funding Source Bond Proceeds						
Start Date				Fund Construction Bond Fund						
End Date					U	seful Life >2	20Yrs? Yes			
Cc	st Estimatio	on Information		Tot. Federal Loan Amount						
	5	Cost Est. C	Class		Pro	gram/Allow	ance Task I	Information		
1/1/2018 Cost Est. Date			ate	Proje	ct Manager					
GLWA Cost Est. Source			ource	CIP Number						
GLWA Cost Est. Prepared By			roparod Pv	Desci	rintion					
		COSI ESI. I	repared by	Desci	прпоп					
32,,,,		CO31 E31. 1	терагеа ву	D 6361	прпоп					
	oe	Fiscal Year	. ,		ge BenefilNo	nPersonne	C	Comment		
Cost Typ	ре		Expense				C 2020CIP	Comment		
Cost Typ Design-Build	De	Fiscal Year	Expense	e Frinç		2		Comment		
Cost Typ Design-Build Design-Build	De .	Fiscal Year FY20	Expense \$	e Frinç \$970			2020CIP	Comment		
Cost Typ Design-Build Design-Build Design-Build	ре	Fiscal Year FY20 FY21	Expense \$ \$5 \$6	Fring \$970 ,980		2	2020CIP 2020CIP	Comment		
	oe .	Fiscal Year FY20 FY21 FY22	Expense \$ \$ \$ \$ \$ \$ 6 \$ \$ \$ 3	e Fring \$970 ,980 ,840		2	2020CIP 2020CIP 2020CIP	Comment		
Cost Typ Design-Build Design-Build Design-Build Design-Build	De .	Fiscal Year FY20 FY21 FY22 FY23 FY24	Expense \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Fring 970 ,980 ,840 ,680 ,680	ge BenefilNo		2020CIP 2020CIP 2020CIP 2020CIP 2020CIP	Comment		
Cost Typ Design-Build Design-Build Design-Build Design-Build		Fiscal Year FY20 FY21 FY22 FY23 FY24	Expense \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Fring 970 ,980 ,840 ,680 ,680			2020CIP 2020CIP 2020CIP 2020CIP 2020CIP	Comment		

Project Total Expenses By FY Compared to Prior CIPs (All figures are in \$1

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



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

|--|

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Wick Road Station



Project Engineer/Manager Eric Kramp

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 8/8/2016

Year Project Added to CIP 2004

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

Project Significance Provides improved control on the far-western portion of the transmission system.

Scope of Work Rehab 3 pumps and added VFDs and related controls system upgrades

Challenges Complicated control programming of VFDs and HVAC system.

Project History

Related Project

Lookup Driver 2 - Performance

Other Important Info

Explanation N/A - Pending Closeout



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

Wick Road Booster Pumping Station Rehabilitation

Project Manag	ger Project	Risk Matrix Scoring		Project Manager Score
Criteria	Score	С	Comment	54.4
Condition		3		54.4
fficiency and Innovation		4		
inancial		1		
D&M		4		
Performance (Service Level/Reliability)		4		
Public Benefit		2		
Public Health & Safety		2		
Regulatory (Environmental/Legal)		2		
Review Comm	nittee Proje	t Risk Matrix Scoring		Review Committee Score
Criteria	Score	Comment		0
Condition				
Efficiency and Innovation				
Financial				
O&M				
Performance (Service Level/Reliability)				
Public Benefit				

132001 CIP#

Wick Road Booster Pumping Station Rehabilitation

Phase not appli	cable				Contract N	1A	Sta	tus Closed (Out			
Fitle Prior Year	Actual Exp	enses										
Phase Budget	Water					Cost Allo	cation CTA					
Phase Status	Closed O	ut		Funding Source								
Start Date					Fund							
End Date					ı	Useful Life >2	20Yrs?					
Cost Estimation Information					Tot. Fed	eral Loan Ar	mount		\$0			
1 Cost Est. Class			lass	Program/Allowance Task Information								
	1/1/2015 Cost Est. Date		ate	Project Manager								
CDM Smith	,	Cost Est. So	ource	CIP Number								
CDM Smith		Cost Est. P	epared By	Descr								
Cost Ty	pe	Fiscal Year	Expens	e Frinç	ge BenefitNo	onPersonne	(Comment				
Construction		FY18-		\$130		F	Y18-DWS-8	58				
		Pha	se Total Exp	enses By	FY (All figur	res are in \$	1,000's)					
Prior Yr Actua	ls FY		FY21	FY22	FY23	FY24	FY25+	Total				
	130							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			СТА	
Phase Status Pending Cla	ose-out		Funding Source	Bond Proceeds
Start Date	11/25/2008		Fund	Construction Bond Fund
End Date	6/30/2016	Us	seful Life >20Yrs?	Yes
Cost Estimatio	n Information	Tot. Feder		
1	Cost Est. Class	Prog	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
Design-Build	FY19		\$35			2020CIP	
Task	Start Date	End Date	Duration				
Scope Development							
Procurement							
Project Execution	1/1/2017	1/2/2017		1			
Project Closeout	1/2/2017	12/31/2018	72	3			

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

		I IIG3	C TOTAL EXP	chises by i	i (All light	cs are my	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	35	0	0	0	0	0	0	35

132001 CIP#

Wick Road Booster Pumping Station Rehabilitation

Phase GLWA Empl	loyees Projec	t manageme	ent	C	Contract N	4	Status	Pending Close-out
Title GLWA Salarie	es							
Phase Budget W	ater					Cost Alloca	ation CTA	
Phase Status Pe	Pending Close-out					Funding Sou	urce Bond Pro	oceeds
Start Date	е					F	Fund Constru	ction Bond Fund
End Date					U	seful Life >20	Yrs? No	
Cost	Estimation In	formation			Tot. Fede	ral Loan Am	ount	\$0
	1	Cost Est. Cla	SS		Prog	gram/Allowa	ınce Task Info	ormation
1/	1/2015	Cost Est. Dat	е	Project	Manager			
CDM Smith		Cost Est. Sou	rce	CIP Nu	mber			
CDM Smith		Cost Est. Prej	oared By	Descrip	otion			
						es are in \$1,		
Prior Yr Actuals	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)

CII	Р	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total		
2018	3	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 Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Other Important Info n/a

Explanation Not provided.

Project Statu Active

CIP Type Project

Isolation gate valves



Project Engineer/Manager Timothy Kuhns

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 SCC

Class Lvl 3 Pump Station/Reservoir

Location Oakland County

Fund and Cost Center Water - 5519-882111

	Project needed to provide isolation of the existing pumping units from the distribution and transmission system during pumping unit and discharge flow control valve maintenance. Existing conditions require three pumping units to be taken out of service to
	Currently there is no means to isolate individual pumping units at the West Service Center. Maintenance on individual units require taking out entire high or intermediate pumping systems without isolation valves.
	Sequence of construction and meeting system demands will need to be coordinated with operations and ongoing work to repurpose the Northeast WTP.
Project History	n/a
Related Project	West Service Center Division Valve Replacement, Needs Assessment Study for all Water Booster Stations
Lookup Driver	2 - Performance

Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

132003 CIP#

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

Project Manager P	roject Ri	sk Matrix Scoring
Criteria	Score	
	5	

Comment

Condition	5	
Efficiency and Innovation	3	
Financial	1	
O&M	5	
Performance (Service Level/Reliability)	5	
Public Benefit	4	

Project Manager Score

76.2

Review Committee Project Risk Matrix Scoring

4

3

		ooa
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	

Review Committee Score

70.8

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

hase Construction					Co	ntract N	ΙΑ		Statu	s Fu	ture Planned Start	
itle Isolation Gate	Valves fo	or Line Pumps	for West Serv	ice C	Center P	umping S	tation					
Phase Budget Wo	iter						Cost Allo	cation	СТА			
Phase Status Fut	ure Plann	ed Start					Funding S	ource	Bond F	Proce	eds	
Start Date		2/27,	/2018	Fund							n Bond Fund	
End Date		8/26,	/2019			l	Jseful Life >2	20Yrs?	Yes			
Cost E	stimation	Information				Tot. Fed	eral Loan Ar	mount				
	2	Cost Est. C	lass			Pro	gram/Allow	vance	Task In	formo	ation	
		Cost Est. D	ate	F	Project A	Manager						
	Cost Est. Source				CIP Number							
	Cost Est. Prepar				Descripti	on			<u> </u>			
Cost Type		Fiscal Year	Expense		Fringe I	BenefitNo	nPersonne		Сс	omme	nt	
Construction	F`	Y19	\$1	,056								
Construction	F`	Y20	(\$392								
Task		Start Date	End Date	Dui	ration							
Scope Developmer	nt	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							
		Pha	se Total Exp	ense	s By FY	(All figur	es are in \$	1,000'	5)			
Prior Yr Actuals	FY19	FY20	FY21	FY		FY23	FY24	FY2		Toto	lc	
	1 04	392	0		0	0	Λ		Λ	1	118	

132003 CIP#

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

Phase not applic	able					С	ontract	NA		Stat	us C	Closed	Out	
Title Prior Year A	ctual E	xpense	S											
Phase Budget	Water							Cost A	lloc	ation CTA				
Phase Status (Closed	Out						Fundin	g So	urce				
Start Date										Fund				
End Date								Useful Life	>20	OYrs?				
Со	st Estim	ation Ir	formation				Tot. Fe	deral Loan	Am	ount				
		1	Cost Est. C	lass			P	rogram/Al	low	ance Task I	Inform	nation		
1	/1/201	5	Cost Est. D	ate	P	roject	Manage	er						
CDM Smith			Cost Est. So	ource	(CIP Nui	mber							
CDM Smith			Cost Est. Pr	epared By		Descrip	tion							
Cost Typ			scal Year	Expens	е	Fringe	Benefit	NonPersoni			comm	nent		
Engineering Servi	ces	FY1			\$71					/18				
Unknown		FY1			\$66					(17				
GLWA Salaries Cl	P2020	FY1	8-		\$1		0		0 F	/18 				
			Pha	se Total Exp	ense	s Bv F	(All fia	ures are in	n \$1	.000's)				
Prior Yr Actuals	s F	FY19	FY20	FY21	FY:		FY23	FY24		FY25+	То	otal		
1	38											138		

132003 CIP#

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

				_	- 1- 5						
Phase Design & Constr	ruction /	Assistance			Contro	act N	4		Status A	ctive	
Title Isolation Gate Vo	alves for	Line Pumps	for West Serv	vice C	Center Pum	nping St	ation				
HRC - CS-062											
Phase Budget Water											
Phase Status Active	,				eeds						
Start Date		10/24,	/2017					Fund	Construction	on Bond Fun	d
End Date		8/26,	/2019			U	seful Life >	20Yrs?	Yes		
Cost Estir	mation I	nformation			То	ot. Fede	ral Loan A	mount			
	1	Cost Est. C	lass			Prog	gram/Allov	wance	Task Inform	ation	
	Co				roject Mar	nager					
		Cost Est. Source			CIP Numbe	er					
		Cost Est. Prepared By			Description						
		CO31 E31. 1	repared by		•						
Cost Type	F	iscal Year	Expense		Fringe Ber	nefitNo	nPersonne		Comm	ent	
Engineering Services	FY	19	Ç	\$100							
Engineering Services	FY2	20		\$80							
Task		Start Date	End Date	Dur	ation						
Scope Development		7/24/2016	10/22/2016		90						
Procurement	, ,				365						
Project Execution		10/24/2017	7/12/2019		626						
Project Closeout		7/12/2019	10/10/2019		90						

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

							,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	100	80	0	0	0	0	0	180

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

hase GLWA Em	nployees Pr	oject managei	ment		Contract NA	١	Status Active	
itle GLWA Salo	aries							
Phase Budget	Water					Cost Allocation	СТА	
Phase Status	Active					Funding Source	Bond Proceeds	
Start Date						Fund	Construction Bond	Fund
End Date					Us	seful Life >20Yrs?	No	
Co	ost Estimati	on Information			Tot. Feder	ral Loan Amount		\$0
	1	Cost Est. C	Class		Prog	ram/Allowance	Task Information	
	1/1/2015	Cost Est. D	ate	Pı	roject Manager			
CDM Smith		Cost Est. S	ource	С	IP Number			
CDM Smith		Cost Est. P	repared By	D	escription			
Cost Typ	эе	Fiscal Year	Expens	e	Fringe BenefitNor	Personne	Comment	
SLWA Salaries C	IP2020	FY19		\$21	8	1		
SLWA Salaries C	CIP2020	FY20		\$12	5	1		
		Pha	se Total Exp	enses	By FY (All figure	es are in \$1.000'	 s)	
Prior Yr Actual	ls FY1		FY21	FY2		FY24 FY2		
		30 18	0		0 0	0	0 48	
Pr	oiect Io	tal Expenses	By FY Co	mpar	ed to Prior CI	Ps (All figures	are in \$1.000's)	

	<u> </u>									<u> </u>	
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

Project History n/a

Related Project none

Other Important Info n/a

Lookup Driver 6 - Public Benefit

Explanation N/A - Under Procurement

GLWA FY 2020-2024 CIP North Service Center Pumping Station - Hydraulic Surge Control

☐ Innovation☐ Water MP Right Sizin☐ Reliability/Redunda☐ NEWTP Repurposing	ncy	Observed pressure data from meter at the border of Warren and Madison Heights.	
Project Engineer/Manager Timothy Kuhns		Budget Water	
Manager Grant Gartrell		Class Lvl 1 Water	
Managing Dept Water Eng		Class Lvl 2 SCC	
Date Original Business Case Prepared 6/26/2014		Class Lvl 3 Pump Station/Reservoir	
Year Project Added to CIP 2014		Location Oakland Coun	ty
		Fund and Cost Center Water - 5519-88	32111
Se	·	sperience pressure spikes from the suction sid ic transient study is needed to identify the ma	
Th St	In recent years, the North Service Center has experienced power failures resulting in pump trips at the facility. The pump trips have caused high pressure transients along the transmission mains serving Madison Heights, Sterling Heights, Troy, Warren, Fraser, Clinton Township, and Roseville. The proposed project involves the study of control measures to mitigate the hydraulic transients present within the system.		

Challenges Coordination with operations and customers necessary to complete the work.

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

Project Manager Project Risk Matrix Scoring					
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				

Project Manager Score

37.2

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

28.2

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

Phase Budget	Water		Cost Allocation CTA					
Phase Status	Pending Clo	ose-out	Funding Sour	Bond Proceeds				
Start Date			Fu	nd Construction Bond Fund				
End Date			Useful Life >20Y	rs? No				
Co	ost Estimatio	n Information	Tot. Federal Loan Amou	unt	\$0			
	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					

Phase Total E	xpenses B	y FY (All figures	are in \$	1,000's)
---------------	-----------	--------	-------------	-----------	----------

		11143	C TOTAL EXP	Jenses by i	1 (/ 111 11901	CS GIC III Q	1,000 5)	
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

hase Design &	Construction	n Assistance	Contract NA	4	Status	Pending Close-out	
tle Hydraulic S	Surge Contro	ol for North Service Center P	rumping Station				
Phase Budget	Water			Cost Allocation	СТА		
Phase Status	Pending Clo	ose-out		Funding Source	Bond Pro	oceeds	
Start Date		2/26/2018		Fund	Constru	ction Bond Fund	
End Date		9/20/2022	Useful Life >20Yrs? Yes				
Со	ost Estimatio	n Information	Tot. Fede	ral Loan Amount			
	5	Cost Est. Class	Program/Allowance Task Information				
		Cost Est. Date	Project Manager				
		Cost Est. Source	CIP Number				
		Cost Est. Prepared By	Description				

Task	Start Date	End Date	Duration
Scope Development			
Procurement			
Project Execution			
Project Closeout			

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

North Service Center Pumping Station - Hydraulic Surge Control

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

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

ater		Cost Allocation	CTA
nding Close-	out	Funding Source	Revenue Financed Capital
		Fund	Improvement & Extension Fun
		Useful Life >20Yrs?	No
Estimation Inf	ormation	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	
n	stimation Inf	stimation Information Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By	Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source Project Manager CIP Number Funding Source Fund Useful Life >20Yrs? Tot. Federal Loan Amount Program/Allowance Project Manager CIP Number

	Task	Start Date	End Date	Duration
Pr	roject Execution	12/19/2016	4/15/2018	482
Pr	roject Closeout	4/16/2018	7/15/2018	90

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

١.	Thase foral Expenses by 11 (All lightes die in \$1,000 s)												
	Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total				
		0	0	0	0	0	0	0	0				

215

GLWA FY 2020-2024 CIP

132004 CIP#

215

North Service Center Pumping Station - Hydraulic Surge Control

Phase not applicable			Contract	NA	Status Close	d Out		
Title Prior Year Actual E	xpenses							
Phase Budget Water				Cost Allo	cation CTA			
Phase Status Closed	Out		Funding Source					
Start Date					Fund			
End Date				Useful Life >	20Yrs?			
Cost Estim	ation Information		Tot. Federal Loan Amount					
	lass	Program/Allowance Task Information						
1/1/2015 Cost Est. Date		ate	Project Manage	er				
CDM Smith	Cost Est. S	ource	CIP Number					
CDM Smith	Cost Est. P	repared By	Description					
Cost Type	Fiscal Year	Expense	Fringe Benefit	VonPersonne	Comment			
Engineering Services	FY18-	\$13	0		FY18			
Unknown	FY18-	\$7.	5		FY17			
GLWA Salaries CIP2020	FY18-	\$	7 3	0	FY18			
	Pho	se Total Expens	ses By FY (All fig	ures are in S	1 000's)			
Prior Yr Actuals	FY19 FY20		FY22 FY23	FY24	FY25+ Total			

132004 CIP#

North Service Center Pumping Station - Hydraulic Surge Control

Phase Construction			Cor	ntract NA	\	Status	Pending Close-out	
itle Hydraulic Surge Co	ontrol for North Se	rvice Center	Pumping Stati	on				
Phase Budget Water					Cost Allocation	СТА		
Phase Status Pending	g Close-out				Funding Source	Bond Pr	oceeds	
Start Date	Start Date 1/15/2020				Fund	Constru	ction Bond Fund	
End Date	9/20	/2022		Us	eful Life >20Yrs?	Yes		
Cost Estim	ation Information			Tot. Feder	al Loan Amount			
1	Cost Est. C	Class	Program/Allowance Task Information					
	Cost Est. Date			anager				
	Cost Est. S	ource	CIP Numb	per				
	Cost Est. F	repared By	Descriptio	on				
Task	Start Date	End Date	Duration					
Scope Development	ordin Baro	Life Date	Doranon					
Procurement								
1000101110111								
Project Execution								

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	2,000	100				0	0	2,800
2019	0	75	157							0	232
2020	0	0	215	0	0	0	0	0	0	0	215

Ford Road Pumping Station, Pressure and Control Improvements

$\overline{}$					1.		
	 n	n	\cap	٧a	TΙ	\cap	n
	 1 1	1 1	\cup	v U	11	\bigcirc	

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Ford Road Booster **Pumping Station**



Project Engineer/Manager Timothy Kuhns

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 SCC

Class Lvl 3 Pump Station/Reservoir

Location Wayne County - Outside Detroit

Fund and Cost Center Water - 5519-882111

Project Significance Design of pressure	re and flow control equipment for efficient delivery of consistent pressures to wholesale
customers at Ford	d 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

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

Ford Road Pumping Station, Pressure and Control Improvements

Project Manager	Project Ris	k Matrix Scoring
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	

Project Manager Score

47.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

43.4

Ford Road Pumping Station, Pressure and Control Improvements

Phase not applic	cable					Contract	NΑ	٨	Sto	atus	Closed	Out	
Title Prior Year	Actual Ex	pense	S										
Phase Budget			Cost Allocation CTA										
Phase Status	hase Status Closed Out							Funding S	Source				
Start Date					Fund								
End Date						Useful Life >20Yrs?							
Cost Estimation Information						Tot. Federal Loan Amount							
	5		Cost Est. C	lass			Prog	gram/Allov	wance Tasl	k Infor	mation		
	1/1/2015 Cost Est. Date				P	roject Manag	er						
CDM Smith Cost Est. Source				ource	(CIP Number							
CDM Smith			Cost Est. Pi	epared By		Description							
Cost Typ	oe .	Fi	scal Year	Expens	е	Fringe Benefit	Non	Personne		Com	ment		
Engineering Serv	ices/	FY1	8-		\$146				FY18				
Unknown		FY1	8-		\$8				FY17				
GLWA Salaries C	IP2020	FY1	8-		\$5	2		0	FY18				
			Pha	se Total Exp	ense	s By FY (All fig	gure	es are in S	51,000's)				
Prior Yr Actua	ls FY	′19	FY20	FY21	FY:			FY24	FY25+	Т	otal		
	161										161		

GLWA FY 2020-2024 CIP

132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

Phase GLWA Em	nployees F	Project manager	nent		Contract N	4	Status	Active	;	
Title GLWA Salc	aries									
Phase Budget	Water					Cost Alloc	cation CTA			
Phase Status	Active			Funding Source Bond Proceeds						
Start Date				Fund Construction Bond Fund						
End Date				Useful Life >20Yrs? No						
Co	ost Estimat	tion Information			Tot. Fede	ral Loan Ar	mount			\$0
	5	Cost Est. C	lass		Prog	gram/Allow	vance Task In	ormation	1	
	1/1/2015 Cost Est. I				Project Manager					
CDM Smith		Cost Est. S	ource	(CIP Number					
CDM Smith		Cost Est. P	repared By	[Description					
Cost Typ	oe .	Fiscal Year	Expense	е	Fringe BenefitNo	nPersonne	Со	mment		
GLWA Salaries C	IP2020	FY19		\$17	7	1				
GLWA Salaries C	IP2020	FY20		\$17	7	1				
GLWA Salaries C	IP2020	FY21		\$12	5	1				
		Pha	se Total Exp	ense	s By FY (All figure	es are in S	1.000's)			
Prior Yr Actual	ls FY		FY21	FY		FY24	FY25+	Total		

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	t Wa	ter			Cost Allocation	CTA
Phase Status	Act	tive			Funding Source	Bond Proceeds
Start Date	•		9/6/2017		Fund	Construction Bond Fund
End Date			12/6/2019	Us	eful Life >20Yrs?	Yes
C	ost E	stimatio	n Information	Tot. Feder	al Loan Amount	
		1	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 BenefitNonPerson	ne Comment
Engineering Services	FY19	\$150		
Engineering Services	FY20	\$150		

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

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

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

132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

Phase Status Active Start Date End Date Cost Estimation Information 4 Cost Estimation Cost Estimation Cost Estimation Cost Estimation Fy19	ion st. Class st. Date st. Source st. Prepared By	Projec CIP Nu Descri	Tot. Fede Pro t Manager Imber	Cost Allocation Funding Source	ce Bond Prond Constructions? Yes	oceeds ction Bond Fu	
Phase Status Active Start Date End Date Cost Estimation Information 4 Cost Estimation Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Foot Estimation Information Cost Estimation Information Foot Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Informa	ion st. Class st. Date st. Source st. Prepared By	Projec CIP Nu Descri	Tot. Fede Pro t Manager Imber	Cost Allocation Funding Source Fur Useful Life >20Yr eral Loan Amou	on CTA Bond Pro Construct Yes	oceeds ction Bond Fu	
Phase Status Active Start Date End Date Cost Estimation Information 4 Cost Estimation Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Foot Estimation Information Cost Estimation Information Fiscal Year Cost Estimation FY19 Construction FY20	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	Tot. Fede Pro t Manager imber	Funding Source Fur Useful Life >20Yr eral Loan Amou	Bond Prond Constructions? Yes	ction Bond Fu	und
Cost Estimation Information Cost Estimation Information 4 Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Foot Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Information Fiscal Year Cost Estimation Information Cost Estimation Inf	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	Tot. Fede Pro t Manager imber	Fur Useful Life >20Yr eral Loan Amou	Constructions Yes	ction Bond Fu	ind
Cost Estimation Information 4 Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Fiscal Feature Information Cost Estimation Information Fiscal Feature Information Cost Estimation Information Fiscal Feature Information Cost Estimation Information Fiscal Feature Information Cost Estimation Information Cost Estimation Information Fiscal Feature Information Cost Estimation Inf	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	Tot. Fede Pro t Manager imber	Useful Life >20Yr eral Loan Amou	s? Yes		ind
Cost Estimation Information 4 Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Cost Estimation Information Fiscal Fiscal Year Information Construction FY19 Construction FY20	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	Tot. Fede Pro t Manager imber	eral Loan Amou	nt	ormation	
Cost Type Fiscal Year Construction FY19 Construction FY20	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	Pro t Manager ımber			ormation	
Cost Type Fiscal Year Construction FY19 Construction FY20	st. Class st. Date st. Source st. Prepared By	CIP Nu Descri	t Manager Imber	ogram/Allowand	ce Task Info	ormation	
Cost Es Cost Es Cost Es Cost Type Fiscal Yea Construction FY19 Construction FY20	st. Date st. Source st. Prepared By	CIP Nu Descri	t Manager Imber	ogram/ Allowand	se rask info	ormation	
Cost Es Cost Type Fiscal Yea Construction FY19 Construction FY20	st. Source st. Prepared By	CIP Nu Descri	ımber				
Cost Es Cost Type Fiscal Yea Construction FY19 Construction FY20	st. Prepared By	Descri					
Cost Type Fiscal Yea Construction FY19 Construction FY20			ption				
Construction FY19 Construction FY20							
Construction FY20	ar Expens	se Fring	e BenefitNo	onPersonne	Com	nment	
		\$60					
Task Start Date	\$2	2,340					
rask start Barr	te End Date	Duration					
Scope Development 6/6/20	018 9/4/2018	8	90				
Procurement 9/5/20	018 5/23/2019	9 20	60				
Project Execution 5/24/20	019 10/8/2020	0 50	03				
Project Closeout 10/9/20	020 1/7/202	.1	90				
P	Phase Total Exp	penses By F	Y (All figur	res are in \$1,00	00's)		
Prior Yr Actuals FY19 FY20	0 FY21	FY22	FY23	FY24 F	Y25+	Total	
60 2,	,340 0	0	0	0	0	2,400	

Proje	ect To	tal I	Expenses	s By Fi	/ C	ompare	d to	Prior	CIPs	(All	figure	s are	in Ş	1,000	's)

									T	<u> </u>	
CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018			200	2,800					0	0	3,000

GLWA	Great Lakes Water Authority
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132006 CIP#

Ford Road Pumping Station, Pressure and Control Improvements

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0	3	3 106	245	1,805	445				0	2,609
2020	0	(161	235	2,515	18	0	0	0	0	2,929



132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

✓ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Imlay Pump Station



Project Engineer/Manager Eric Kramp

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 SCC

Class Lvl 3 Pump Station/Reservoir

Location Lapeer County

Fund and Cost Center Water - 5519-882111

Project Significance Project driven by eliminating the application of using existing large pumping units to recirculate and maintain water quality in the existing reservoir during low demand season. Project reduces operating costs, maintains water quality and reduces operating costs, maintains water quality and reduce operating complexity.

Scope of Work The purpose of this project is to minimize the electrical peak demand power charges associated with cycling water in the reservoir during low-demand periods. Rather than running a 6,000 HP motor-driven pump for a few minutes daily, a 150 HP motor-driven pump can run for a few hours to do the same work much less expensively.

Challenges None.

Project History n/a

Related Project | none

Lookup Driver 8 - Efficiency

Other Important Info n/a

Explanation Not provided.



132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

44.2

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

37.6

132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

hase not applicab	ole				Contract N	A	Sta	tus Closed Ou	†
tle Prior Year Actu	Jal Expens	es							
Phase Budget Wa	ter					Cost Alloc	cation CTA		
Phase Status Clo	sed Out					Funding S	ource		
Start Date							Fund		
End Date					l				
Cost E	stimation	Information			Tot. Fed	eral Loan Ar	mount		\$0
	5	Cost Est. C	lass						
1/1,	/2015	Cost Est. D	ate	Project Manager					
CDM Smith		Cost Est. S	ource	CIP Number					
CDM Smith	CDM Smith Cost Est. P		repared By	red By Description					
Cost Type		Fiscal Year	Expens	e Fri	nge Benefil <mark>N</mark> c	nPersonne	(Comment	
SLWA Salaries CIP2	020 FY	18-		\$7	3	OF	-Y18		
		Pha	se Total Exp	enses B	y FY (All figur	es are in \$1	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
10								10	

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

Great Banes water.		oranion Energy Management. Treez	e i roleelloit i omp malandion
Phase Design ar	nd Build	Contract NA	Status Future Planned Start
Title Energy Mo	anagement: Freeze Protection Pu	ump 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
End Date	10/9/2020	Useful Life >20Yrs?	Yes

Cost Estimat	ion Information
5	Cost Est. Class
1/1/2015	Cost Est. Date
CDM Smith	Cost Est. Source
CDM Smith	Cost Est. Prepared By

	Fund	Construction Bond Fund
Us	eful Life >20Yrs?	Yes
Tot. Feder	al Loan Amount	
Prog	ram/Allowance	Task Information
Project Manager		
CIP Number		
Description		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY20	\$520			2020CIP
Design-Build	FY21	\$1,250			
Design-Build	FY22	\$230			2020CIP

Task	Start Date	End Date	Duration
Scope Development	1/27/2018	4/27/2018	90
Procurement	4/28/2018	4/28/2019	365
Project Execution	4/29/2019	9/11/2020	501
Project Closeout	9/12/2020	12/11/2020	90

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

		1 11 43	C TOTAL EXP	CHISCS By I	1 (/ 111 11901	Co die iii q	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	520	1,250	230	0	0	0	2,000

132007 CIP#

Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation

hase GLWA Employ	yees Pro	oject managei	ment		Contract 1	٧A	Stat	us Active		
itle GLWA Salaries										
Phase Budget Wat	er			Cost Allocation CTA						
Phase Status Acti	ve					Funding S	ource Bond	Proceeds		
Start Date				Fund Construction Bond Fund						
End Date										
Cost Estimation Information					\$0					
	5	Cost Est. C	Class	Program/Allowance Task Information						
1/1/	2015	Cost Est. D	ate	Project Manager						
CDM Smith		Cost Est. S	ource	CIP Number						
CDM Smith		Cost Est. P	repared By	Description						
Cost Type		Fiscal Year	Expens	e l	Fringe BenefilN	onPersonne	C	omment		
GLWA Salaries CIP20)20	FY19		\$10	4	0				
GLWA Salaries CIP20)20	FY20		\$50	20	2				
GLWA Salaries CIP2020 FY21		\$45	18	2						
		Pha	se Total Exc	enses	By FY (All figu	res are in S	1,000's)			
Prior Yr Actuals	FY19		FY21	FY2		FY24	FY25+	Total		
		14 72	. 65		0 0	0	0	151		
Proje	ct Tot	al Evnenses	RV EV Co	mnar	ed to Prior C	'IPs / All fic	ures are	n \$1 000's	<u> </u>	

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	10	14	592	1,315	230	0	0	0	2,161

Various Pumping Stations - Needs Assessment Study

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Project

Example of a large pipe and valve installation



Project Engineer/Manager Erich Klun

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 SCC

Class Lvl 3 Pump Station/Reservoir

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance The work includes a comprehensive needs assessment and hydraulic modeling to determine future station capacities for the nineteen (19) water booster pumping station facilities. Study will include assessment of existing condition and providing list of improvements, upgrading the following items: Facility HVAC and Lighting, Pumping System, Electrical Switch Gear, Instrumentation, Control and Ovation, Fire Protection and Alarms, etc.

Scope of Work This project includes a comprehensive condition and needs assessment study of all water booster stations, exclusive of reservoirs. System wide modelling will confirm station decommissioning as recommended by the 2015 Water Master Plan Update. The condition assessments will include all engineering disciplines, with a focus on variable speed pumping applications to meet changing station demands, DTE rate incentive identification, station metering, valve and yard piping improvements and station bypasses.

Challenges Shutdown, operation and manpower required to cover the condition assessment inspections to complete the work.

Project History n/a

Related Project none

Lookup Driver 1 - Condition

Other Important Info n/a

Explanation N/A - Under Procurement



Various Pumping Stations - Needs Assessment Study

Project Manager P	roject Ri	sk Matrix Scoring
a	Score	

	•	•
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	

Project Manager Score

46.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

51.2

Various Pumping Stations - Needs Assessment Study

Phase not applic	ase not applicable						Contract NA Status C				
Title Prior Year A	Actual Exp	oense	·S								
Phase Budget	Water				Cost Allocation CTA						
Phase Status	Closed C	ut			Funding Source						
Start Date								Fund			
End Date	,						Useful Life >	20Yrs?			
Cost Estimation Information						Tot. Fe	ederal Loan A	mount			
5 Cost Est. Class							Program/Allo	wance Task	Informatio	n	
	1/1/2016 Cost Est. Date			ate	Project Manager						
GLWA			Cost Est. So	ource	C	CIP Number					
GLWA			Cost Est. Pr	epared By	0	escription					
Cost Typ	pe	Fi	scal Year	Expens	e	Fringe Benefit	NonPersonne	. (Comment		
Engineering Serv	/ices	FY1	8-		\$858			FY18			
Unknown		FY1	8-		\$33			FY17			
GLWA Salaries C	GLWA Salaries CIP2020 FY18-			\$20	2		FY18				
			Pha	se Total Exp	ense	s By FY (All fig	ures are in S	31,000's)			
Prior Yr Actual	ls FY	19	FY20	FY21	FY:		FY24	FY25+	Total		
9	913								913	3	

132008 CIP#

Various Pumping Stations - Needs Assessment Study

hase GLWA Emplo	yees Proje	ct manager	ment		Contract N	4	Statu	Status Active		
itle GLWA Salaries										
Phase Budget Wa	ter			Cost Allocation CTA						
Phase Status Act	Phase Status Active					Funding Sc	ource Reven	ue Financed	d Capital	
Start Date				Fund Improv	vement & Ex	tension Fun				
End Date	End Date				U	seful Life >2	OYrs? No			
Cost E	stimation I	nformation			Tot. Fede	ral Loan An	nount		\$0	
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. P	repared By	Description						
				l						
Cost Type	F	iscal Year	Expense	e Frin	ge BenefitNoı	nPersonne	Сс	mment		
GLWA Salaries CIP20)20 FY	9		\$10	4	02	020CIP			
		Pha	se Total Exp	enses By	FY (All figure	es are in \$1	,000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	14	0	0	(0	0	0	14		

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Various Pumping Stations - Needs Assessment Study

Great Lakes Water Authori	ty		Vallot)3 I UII	ibiiiê	Januiloi	12 - 14666	43 A336	33111		A y
ase Study					Cor	ntract SC	CP-CS-052		Status	s Active	
le SCP-CS-052 N	eeds As	sessment Stud	y for all Water	Booster	Pump	ping Stati	ons				
etra Tech											
Phase Budget Wo	ater			Cost Allocation CTA							
Phase Status Ac	tive			Funding Source Revenue Financed Capital							
Start Date		5/2016					Fund Ir	nprov	ement &	Extension Fur	
End Date		/2017			U	seful Life >2	20Yrs?	0			
Cash	Cost Estimation Information					Tot Fede	eral Loan Ai	mount			
Cost i											
5 Cost Est. Clo			Class				gram/Allov	vance To	ask Inf	formation	
1/1	1/1/2016 Cost Est. D			Project Manager							
GLWA		Cost Est. S	ource	CIP Number							
GLWA		Cost Est. F	repared By	Des	criptio	on					
Cost Type		Fiscal Year	Expense	e Fr	inge B	Benefit No	nPersonne		Со	mment	
ngineering Service	es	FY19	\$	3750							
Task		Start Date	End Date	Durat	ion						
cope Developmei	nt	3/1/2017	6/29/2017		120						
ocurement		6/29/2017	8/1/2017		33						
oject Execution		8/3/2017	10/31/2018		454						
oject Closeout	oject Closeout 11/1/2018 11/1		11/1/2018		0						
		Pho	ise Total Exp	enses B	y FY	(All figure	es are in \$	1,000's)			
Prior Yr Actuals	FY1		FY21	FY22		FY23	FY24	FY25-		Total	
		750 (0		0	0	0		0	750	

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	1,200						0	0	1,700
2019	0	33	722	1,178						0	1,933

GLWA Great Lakes Water Authority	

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 Statu Futui	ire Planned					
☐ Water MP Right S	izing CIP Type Proje	ect .					
☐ Reliability/Redun	-						
✓ NEWTP Repurposi	ng						
Proiect Engineer/Mg	nager Timothy Kuhns	Budge	t Water				
•	nager Grant Gartrell	Class Lvl 1					
	Dept Water Eng	Class Lvl 2	scc				
Date Original Busine	ss Case Prepared 10/11/2018	6 Class Lvl 3	Pump Station/Reservoir				
Year Proj	ect Added to CIP 2017	Location	n Oakland County				
		Fund and Cost Cente	r Water - 5519-882111				
Project Significance	Service Center to the Spring	e Center Division Valves is needed to convey gwells high service area while the Springwells ive bypass around the Newburgh Pump Statio	raw water tunnel is out of service for				
Scope of Work	Lake Huron WTP needs to pr tunnel is out of service for re	rovide flows to the Springwells high service arepair.	rea while the Springwells raw water				
Challenges	es Coordination with operations critical meet testing of existing valves. Isolation, shutdown and operation of Lake Huron and Springwells WTPs, North Service Center, and other facilities.						
Project History	n/a						
Related Project	Springwells WTP Reservoir Fill	l Line					
Lookup Driver	2 - Performance						
Other Important Info	n/a						



132010 CIP#

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

Project Manager P	Project Manager Project Risk Matrix Scoring									
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									

Project Manager Score

52.6

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

54

Project Execution

Project Closeout

GLWA FY 2020-2024 CIP

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

Phase Design a	nd Build				Со	ntract	NA		Status	Futi	ure Planned	Start	
Title West Servi	ce Center P	S - Reservoir, R	eservoir Pum	ping,	and Div	ision V	alve Upgrade	S					
Phase Budget	Water						Cost Alloc	cation	CTA				
Phase Status	Future Plani	ned Start		Funding Source Bond Proceeds									
Start Date								Fund	Constru	ction	Bond Fund		
End Date							Useful Life >2	20Yrs?	Yes				
Co	ost Estimatio	n Information				Tot. Fe	ederal Loan Ar	mount					
	5	Cost Est. C	lass			F	Program/Allow	vance 1	ask Info	orma	tion		
		Cost Est. D	ate	P	roject A	Manage	er						
Cost Est. Source				CIP Number									
		Cost Est. P	repared By	D	escripti	on							
Cost Ty	pe	Fiscal Year	Expense)	Fringe I	Benefit	NonPersonne		Cor	nmer	nt		
Design-Build		FY20	\$2	,590									
Design-Build		FY21	\$7	,400									
Design-Build		FY22	\$15	,540									
Design-Build		FY23	\$8	,880									
Design-Build		FY24	\$2	,590									
Task	(Start Date	End Date	Dur	ation								
Scope Develop	ment	6/9/2018	9/7/2018		90								
Procurement		9/8/2018	9/8/2019		365								

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

90

1453

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	2,590	7,400	15,540	8,880	2,590	0	37,000

9/1/2023

12/1/2023

9/9/2019

9/2/2023

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

hase GLWA Emp	oloyees Pr	oject man	ageme	ent		Contract NA	4	Status	Future Pla	anned Start
itle GLWA Salari	ies									
Phase Budget W	Vater						Cost Allocation	СТА		
Phase Status F	uture Plar	nned Start					Funding Source	Bond Pr	oceeds	
Start Date							Fund	Constru	ction Bond	Fund
End Date						Us	seful Life >20Yrs?	No		
Cos	t Estimati	on Informa	tion			Tot. Fede	ral Loan Amount			\$0
	5	Cost I	Est. Clo	ISS		Prog	gram/Allowance	Task Info	ormation	
1,	/1/2015	Cost I	Est. Dat	te	Р	roject Manager				
CDM Smith		Cost	Est. Sou	ırce	C	CIP Number				
CDM Smith		Cost I	Est. Pre	pared By	D	escription				
Cost Type	е	Fiscal Ye	ear	Expense	Э	Fringe BenefitNor	nPersonne	Con	nment	
GLWA Salaries CIF	P2020	FY20			\$21	8	1			
GLWA Salaries CIF	P2020	FY21			\$21	8	1			
GLWA Salaries CIF	P2020	FY22			\$21	8	1			
GLWA Salaries CIF	P2020	FY23			\$21	8	1			
GLWA Salaries CIF	P2020	FY24			\$11	4	1			
			Phase	e Total Exp	ense	s By FY (All figure	es are in \$1,000'	s)		
Prior Yr Actuals	FY1	9 FY2		FY21	FY		FY24 FY2		Total	
		0	30	30		30 30	16	0	136	
Pro	iect Io	tal Exper	ises F	Ry FY Co	mpa	red to Prior CII	Ps (All figures	are in	\$1,000's)	1

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

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Project

Ypsilanti Pump Station



Project Engineer/Manager Jorge Nicolas

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 9/28/2017

Year Project Added to CIP 2017

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

Project Significance Ypsilanti does not have a generator and needs one in the event of a power outage in order to help maintain pressures. The pumps, motors and electrical system are original to the facility and are past their useful service life. The electrical system requires substantial maintenance to keep it in service. Replacement of the motors and electrical system will improve the reliability of the station. In addition, the station does not have a sewer discharge, which is required in order to enable any underground construction due to dewatering discharges.

Scope of Work Replace pumps, motors, drive, switchgear with new. Install a new discharge sewer, backup generator and bypass for the station.

Challenges Contaminated groundwater at the site. No existing sanitary, storm or combined sewer at the site. A NPDES permit will be required to discharge treated groundwater to a surface water of the state for all construction dewatering operations.

Project History

Related Project DWS-858 and SCP-DWS-018.

Lookup Driver 1 - Condition

Other Important Info

Explanation



Ypsilanti Booster Pumping Station Improvements

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

72

Review Committee Project Risk Matrix Scoring

	•	•
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	

Review Committee Score

61.2

Ypsilanti Booster Pumping Station Improvements

hase not applic	cable					С	ontract N	Α	Sto	atus C	Closed C	Out	
tle Prior Year	Actual	Expense	es										
Phase Budget	Water							Cost Alloc	cation CTA	4			
Phase Status	Closed	tuO k						Funding S	ource				
Start Date									Fund				
End Date							l	Jseful Life >2	20Yrs?				
Co	st Estir	nation I	nformation				Tot. Fede	eral Loan Ar	mount				\$0
		5	Cost Est. C	Class			Pro	gram/Allow	ance Task	c Inform	nation		
	1/1/20	15	Cost Est. D	ate	F	roject	Manager						
CDM Smith			Cost Est. S	ource	(CIP Nu	mber						
CDM Smith			Cost Est. P	repared By		Descrip	otion						
Cost Typ	эе	F	iscal Year	Expens	e	Fringe	e Benefit <mark>No</mark>	nPersonne		Comm	nent		
SLWA Salaries C	IP2020	FY.	18-		\$3		1	OF	Y18				
			Pha	se Total Exp	ense	s By F	Y (All figur	es are in S	1,000's)				
Prior Yr Actua	ls	FY19	FY20	FY21	FY		FY23	FY24	FY25+	То	tal		
	4										4		



Construction

GLWA FY 2020-2024 CIP

Great Lakes	Water Authority		Yps	ilanti	Booster Pur	nping Station	Improve	ments
Phase Consti	ruction				Contract	NA	Status	Future Planned Start
Title Ypsilar	nti PS Improve	ments						
Phase Budg	get Water					Cost Allocation	on CTA	
Phase Sta	tus Future Pla	nned Start				Funding Source	ce Bond Pro	oceeds
Start Do	ate	9/14/	′2020			Fur	nd Construc	ction Bond Fund
End Do	ate	11/17/	2023			Useful Life >20Yr	Yes	
	Cost Estimati	ion Information			Tot. Fee	deral Loan Amou	ınt	
	5	Cost Est. C	lass		P	rogram/Allowand	ce Task Info	ormation
	1/1/2015	Cost Est. D	ate	Pr	oject Manage	r		
CDM Smith	٦	Cost Est. Se	ource	С	IP Number			
CDM Smith	า	Cost Est. Pi	epared By	D	escription			
		<u></u>						,
Cos	† Туре	Fiscal Year	Expense	е	Fringe Benefit	IonPersonne	Com	nment
Construction		FY21		\$300				
Construction		FY22	\$2	2,290				
Construction		FY23	\$3	3,640				

Task	Start Date	End Date	Duration
Scope Development	7/1/2020	9/11/2020	72
Procurement	9/14/2020	3/19/2021	186
Project Execution	3/22/2021	9/1/2023	893
Project Closeout	9/2/2023	12/1/2023	90

FY24

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	300	2,290	3,640	770	0	7,000

\$770

Ypsilanti Booster Pumping Station Improvements

			_		1 5	_		
Phase Study and Desig	n and Constructior	n Assistance		Contract	NA		Status Active	
Title Ypsilanti PS Impro	ovements							
Phase Budget Water					Cost Allo	cation	СТА	
Phase Status Active					Funding S	ource	Bond Proceeds	
Start Date	3/5	/2018				Fund	Construction Bond Fu	ınd
End Date	11/17	/2023			Useful Life >2	20Yrs?	Yes	
Cost Estin	nation Information			Tot. Fe	deral Loan Aı	mount		
COSI ESIIII	5 Cost Est. C	lace					Task Information	
1/1/001			Pr	oject Manage	_	varice	idsk illioittidilott	
1/1/201								
CDM Smith	Cost Est. S	ource	CI	P Number				
CDM Smith	Cost Est. P	repared By	D€	escription				
Cost Type	Fiscal Year	Expense	e F	ringe Benefit	IonPersonne		Comment	
Engineering Services	FY19		\$15					
Engineering Services	FY20		\$555					
Engineering Services	FY21	;	\$535					
Engineering Services	FY22		\$535					
Engineering Services	FY23	,	\$535					
Engineering Services	FY24		\$535					
Task	Start Date	End Date	Durc	ation				
Scope Development	1/27/2018	4/27/2018		90				
Procurement	4/28/2018	4/28/2019		365				
Project Execution	4/29/2019	9/1/2023		1586				
Project Closeout	9/2/2023	12/1/2023		90				

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

					- (-7	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	15	555	535	535	535	535	0	2,710

Ypsilanti Booster Pumping Station Improvements

GLWA FY 2020-2024 CIP

Phase GLWA Employees Project management					Contract N		Status Active			
fle GLWA Salaries										
Phase Budget Wate	∍r					Cost Allocation	on CTA			
Phase Status Active						Funding Source	ce Bond	Proceeds		
Start Date						Fui	nd Const	ruction Bo	and Fund	
End Date					U	seful Life >20Yr	rs? No			
Cost Es	timation In	formation			Tot. Fede	ral Loan Amou	ınt			\$0
	5	Cost Est. Cl	ass		Prog	gram/Allowan	ce Task Ir	nformation	n	
1/1/2	2015	Cost Est. Do	ate	Pı	roject Manager					
CDM Smith Cost Est. Sour		Cost Est. So	urce	CIP Number						
CDM SHIIII										
CDM Smith		Cost Est. Pro	epared By	D	escription					
	Fis	Cost Est. Pro	epared By Expense		escription Fringe Benefit No	nPersonne	Co	omment		
CDM Smith		scal Year				nPersonne 0	Co	omment		_
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20	scal Year P		e \$9 \$21	Fringe BenefitNoi 4 8	nPersonne 0	Co	omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY2	scal Year)		e \$9 \$21 \$21	Fringe Benefil Noi 4 8 8	nPersonne 0 1	Co	omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY2 20 FY22	scal Year) 1		e \$9 \$21 \$21 \$21	Fringe Benefil Nor 4 8 8	nPersonne 0 1 1	Co	omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY20 20 FY22 20 FY23	scal Year)) 1 2		\$9 \$21 \$21 \$21 \$21	Fringe Benefil Noi 4 8 8	0 1 1 1 1	Co	omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY20 20 FY22 20 FY23	scal Year)) 1 2		e \$9 \$21 \$21 \$21	Fringe Benefil Nor 4 8 8	nPersonne 0 1 1 1 1 0	Co	omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY20 20 FY22 20 FY23	scal Year) 1 2 3 4	Expense	\$9 \$21 \$21 \$21 \$21 \$10	Fringe Benefil Noi 4 8 8 8 8 8 4	0 1 1 1 1 0		omment		
CDM Smith Cost Type GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20: GLWA Salaries CIP20:	20 FY19 20 FY20 20 FY20 20 FY22 20 FY23	scal Year) 1 2 3 4	Expense	\$9 \$21 \$21 \$21 \$21 \$10	Fringe Benefit Nor 4 8 8 8 8 8 4 8 8	0 1 1 1 0		omment		

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 Statu	Cancelled		
☐ Water MP Right Siz	_	Caricellea		
	CIP Type	Project		
☐ Reliability/Redund	dancy			
□ NEWTP Repurposin	ng			
Project Engineer/Man	nager Timothy Kuhns		Budget	Water
Man	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class Lvl 2	SCC
Date Original Busines	s Case Prepared		Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2017		Location	Oakland County
			Fund and Cost Center	
-	Provide new VFDs to m		emands with respect to press	ure (improve customer service) and
		th new more reliable	emands with respect to press valves.	ure (improve customer service) and
	replace gate valves w	th new more reliable	emands with respect to press valves.	ure (improve customer service) and
Scope of Work	replace gate valves w	th new more reliable	emands with respect to press valves.	ure (improve customer service) and
Scope of Work Challenges	replace gate valves w	th new more reliable	emands with respect to press valves.	ure (improve customer service) and
Scope of Work Challenges Project History	replace gate valves w	th new more reliable	emands with respect to press valves.	ure (improve customer service) and
Scope of Work Challenges Project History Related Project	replace gate valves w	th new more reliable	emands with respect to press valves.	ure (improve customer service) and



132013 CIP#

Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery

ase GLWA Em	ployees Proj	ect management	Contract TB	D	Status	Future Planned Start	
e GLWA Sala	ries						
Phase Budget	Water			Cost Allocation	СТА		
Phase Status	Future Plann	ed Start		Funding Source			
Start Date				Fund			
End Date			U	seful Life >20Yrs?	No		
Со	st Estimation	Information	Tot. Fede	ral Loan Amount		\$0	
	5	Cost Est. Class	Prog	gram/Allowance	Task Info	ormation	
		Cost Est. Date	Project Manager				
		Cost Est. Source	CIP Number				
		Cost Est. Prepared By	Description				
			-				
			penses By FY (All figure				
Prior Yr Actuals	s FY19	FY20 FY21	FY22 FY23	FY24 FY2	5+	Total	
					0	0	

132013 CIP#

Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery

Phase Budget Wate	er			Cost Allocation	СТА			
Phase Status Futur	re Planned S	itart		Funding Source	Bond Proceeds			
Start Date		1/23/2018		Fund	Construction Bond	d Fund		
End Date		5/25/2022	ι	Jseful Life >20Yrs?	Yes			
Cost Es	Cost Estimation Information			Tot. Federal Loan Amount				
	C	Cost Est. Class	Pro	gram/Allowance	Task Information			
1/15/2	2015 C	Cost Est. Date	Project Manager					
2015 WMPU	C	Cost Est. Source	CIP Number					
CDM	C	Cost Est. Prepared By	Description					

Project Total Expenses B	v FY	Compared to	Prior CIPs	(All figures are	in \$1	000's)
I I DIECI I DIGI EXPENSES E	y	Compared to		(All ligores are		,000 31

Troject foral Expenses by 11 Compared to their chis (All rights are in \$1,												
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	



Explanation

GLWA FY 2020-2024 CIP Adams Road Booster Pumping Station Improvements

☐ Innovation	Project Statu	Future Planned		
□ Water MP Right Si	izing CIP Type	Proiect		
☐ Reliability/Redun				
□ NEWTP Repurposi	ng			
Project Engineer/Ma	nager Timothy Kuhns		Budget	Water
Ма	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class Lvl 2	SCC
Date Original Busine	ss Case Prepared 1/4/2)18	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2018		Location	Oakland County
			Fund and Cost Center	
Project Significance	Existing pumps, motors replacement to mainto		ration power are beyond	their useful service life and require
Scope of Work	Provide new pumps, hi	gh-efficiency electric mc	otors and electrical gear fo	or entire station.
Challenges				
Project History				
Related Project				
Lookup Driver				
Other Important Info				



Adams Road Booster Pumping Station Improvements

Project Manager P	Project Manager Project Risk Matrix Scoring								
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								

Project Manager Score

64

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score



Adams Road Booster Pumping Station Improvements

Phase Design and Build Contract NA Status Future Planned Start

Title Adams Road Pumping BPS Pumping Improvements

System Pump Study/Design/ Construction Analyze the need for a 5th line pump since all 4 existing pumps run in the summer months at times. Add 5th pump if needed.Improve Transmission Redundancy

Phase Budget	Water
Phase Status	Future Planned Start
Start Date	3/31/2021
End Date	9/23/2027

Cost Estima	tion Information
5	Cost Est. Class
1/15/2015	Cost Est. Date
2015 WMPU	Cost Est. Source
CDM	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
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

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

١.	Thase rotal Expenses by 11 (7th ngoles are in \$1,000 s)										
	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

hase GLWA Employe itle GLWA Salaries	es Projec	t manager	ment		Contract 1	NA	State	us Future f	Planned Start
Phase Budget Wate	r			Cost Allocation CTA					
Phase Status Future	Future Planned Start					Funding So	urce Bond	Proceeds	
Start Date	Date						Fund Const	truction Bor	nd Fund
End Date	е					Useful Life >20	OYrs? No		
Cost Estimation Information					Tot. Fed	eral Loan Am	ount		\$0
5 Cost Est. Class				Program/Allowance Task Information					
1/1/20	1/1/2015 Cost Est. Date			Pı	roject Manager				
CDM Smith		Cost Est. S	ource	CIP Number					
CDM Smith		Cost Est. P	repared By	Description					
Cost Type	Fi	scal Year	Expens	е	Fringe BenefitNo	onPersonne	С	omment	
GLWA Salaries CIP202	0 FY2	2		\$14	6	1			
GLWA Salaries CIP202	0 FY2	3		\$84	33	4			
GLWA Salaries CIP202	0 FY2	4		\$184	73	9			
GLWA Salaries CIP202	0 FY2	5+		\$184	73	9 20	D20CIP		
		Pha	se Total Exp	enses	By FY (All figu	res are in S1	.000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY24	FY25+	Total	
	0	0	0		21 121	266	266	674	
Projec	t Total F	ynansas	By FY Co	mnar	red to Prior C	IPs (All figu	ires are i	n \$1 000'	<u>c)</u>

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



Explanation

Newburgh Road Booster Pumping Station Improvements

☐ Innovation	Project Statu	Future Planned
□ Water MP Right Si	zing CIP Type	Proiect
☐ Reliability/Redund	= =	
□ NEWTP Repurposi	ng	
Project Engineer/Ma	nager TBD	Budget Water
Ма	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 SCC
Date Original Busines	ss Case Prepared 1/4/2	2018 Class Lvl 3 Pump Station/Reservoir
Year Proj	ect Added to CIP	Location Wayne County - Outside Detroit
		Fund and Cost Center
Project Significance	equipment that is more	and electrical gear are beyond useful service life. Replacement will provide new e reliable, energy efficient and optimally sized for system demands. Other building mechanical equipment replacement again because of surpassing useful life.
Scope of Work	Replace all existing pu	mps, motors, VFDs, electrical gear and building mechanical equipment with new.
Challenges		
Project History		
Related Project		
Lookup Driver		
Other Important Info		

GLWA FY 2020-2024 CIP



Newburgh Road Booster Pumping Station Improvements

Project Manager P	roject Ri	sk Matrix Scoring
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	

Project Manager Score

57.2

Review Committee Project Risk Matrix Scoring

	•	•
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	

Review Committee Score

Newburgh Road Booster Pumping Station Improvements

Phase GLWA En	nployees Pro	oject manager	ment		Contract	NA	S	tatus	Future Planned	Start
Title GLWA Salo	aries									
Phase Budget	Water					Cost Alloc	cation CT	A		
Phase Status	Future Plan	ned Start				Funding S	ource Bo	nd Pro	oceeds	
Start Date							Fund Co	nstruc	ction Bond Fund	
End Date						Useful Life >2	20Yrs? No)		
C	ost Estimatio	on Information			Tot. Fe	ederal Loan Ar	mount			\$0
	5	Cost Est. C	lass		F	Program/Allow	vance Tas	k Info	rmation	
	1/1/2015	Cost Est. D	ate	F	Project Manage	er				
CDM Smith		Cost Est. S	ource	(CIP Number					
CDM Smith		Cost Est. P	repared By	[Description					
Cost Ty	pe	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne		Com	ment	
GLWA Salaries C	CIP2020	FY20		\$11	4	1				

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY20	\$11	4	1	
GLWA Salaries CIP2020	FY21	\$21	8	1	
GLWA Salaries CIP2020	FY22	\$21	8	1	
GLWA Salaries CIP2020	FY23	\$21	8	1	
GLWA Salaries CIP2020	FY24	\$44	17	2	

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	16	30	30	30	63	0	169



Discuss Developed W. I

GLWA FY 2020-2024 CIP

Newburgh Road Booster Pumping Station Improvements

	Phase	Design and Build	Contract NA Status	Future Planned Start
--	-------	------------------	--------------------	----------------------

Title NewburghPumpingBoosterPumpsVariousDesign/Construction

Replace all pumps and Install additional unit of pump and motor with the same capacity as that for existing pump units (12 MGD with a TDH of 200 feet). Transmission and Reservoir Renewal and Reliability - & BUILDING ADDITION

rnase Buaget	water
Phase Status	Future Planned Start
Start Date	7/1/2017
End Date	12/29/2023

Cost Estima	tion Information
5	Cost Est. Class
1/15/2015	Cost Est. Date
2015 WMPU	Cost Est. Source
CDM	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
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

Task	Start Date	End Date	Duration
Scope Development	12/23/2018	3/23/2019	90
Procurement	3/24/2019	3/23/2020	365
Project Execution	3/24/2020	3/24/2025	1826
Project Closeout	3/25/2025	6/23/2025	90

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	591	2,366	2,366	2,366	4,311	12,000

132015 CIP#

Newburgh Road Booster Pumping Station Improvements

Proje	ct Total F	Expenses	By FY C	compare	d to Prior	CIPs (A	Il figures	are in \$1	,000's)	
FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Toto

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2019	0				607	2,396	2,396	2,396	4,375	0	12,170
2020	0	0		0	16	621	2,396	2,396	2,429	4,311	12,169

GLWA Great Lakes Water Authority

North Service Center Pumping Station Improvements

GLWA FY 2020-2024 CIP

☐ Innovation	Project Statu	Future Planned		
☐ Water MP Right Si	zing CIP Type	Project		
✓ Reliability/Reduna	, ,			
☐ NEWTP Repurposi	ng			
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 1/4/2	018	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2017		Location	Oakland County
			Fund and Cost Center	
Project Significance	The state of the s	_	dd VFD, replace existing valves of order to provide more reliable	and electrical gear with new due to equipment.
Scope of Work	D 1 1 221 1 22	s I 2 through I 4 re	place motors and electrical ae	ar with new. Work involves process
ocope of Work	mechanical and elect	•	piace motors and electrical get	ar will friew. Work involves process
Challenges		•	place motors and electrical get	ar will flow. Work in volves process
·		•	place motors and electrical get	ar will frew. Work involves process
Challenges		•	piace morels and electrical get	ar will frew. Work in volves process
Challenges Project History	mechanical and elect	•	piace moiors and dicemeding of	ar will thew. Work involves process
Challenges Project History Related Project	mechanical and elect	•	place motors and electrical get	ar will thew. Work involves process



North Service Center Pumping Station Improvements

Project Manager Project Risk Matrix Scoring										
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									

Project Manager Score

54.2

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score



North Service Center Pumping Station Improvements

Phase Design and B	Build				Co	ontract	NA		Status	F uture	e Planned Start	
Title North Service	Center B	PS Improvem	ents									
Phase Budget Wa	ter			Cost Allocation					СТА			
Phase Status Futu	ure Planr	ned Start					Funding	Source	Bond F	roceeds	5	
Start Date								Fund	Constr	uction Bo	ond Fund	
End Date							Useful Life	>20Yrs?	Yes			
Cost E	Cost Estimation Information					Tot. Fe	deral Loan	Amount				
	5	Cost Est. C	Class			P	rogram/Allo	wance	Task In	iormatio	n	
1/1/	/2015	Cost Est. [ate	P	roject l	Manage	r					
CDM Smith		Cost Est. S	ource	C	CIP Nun	nber						
CDM Smith		Cost Est. P	repared By	D	escript	ion						
Cost Type		Fiscal Year	Expense	Э	Fringe	Benefit	NonPersonn	Э	Со	mment		
Design-Build	F	-Y24	\$6	,296				2020CI	Р			
Design-Build	F	-Y25+	\$18	3,560				2020CI	Р			
Task		Start Date	End Date	Dur	ation							
Scope Developmer	n†	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							
		Pho	se Total Exp	ense	s By FY	(All fig	ures are in	\$1,000's				
Prior Yr Actuals	FY19	FY20	FY21	FY2	22	FY23	FY24	FY2	5+	Total		
		0 (0		0		0 6,29	6 18	3,560	24,856	5	

North Service Center Pumping Station Improvements

Phase GLWA Emp	oloyees F	rojec	t managen	nent		C	Contract N	A	Sta	tus Future I	Planned St	art
Title GLWA Salai	ries											
Phase Budget \	Water				Cost Allocation							
Phase Status	uture Pla	nnec	l Start					Funding S	ource Bond	d Proceeds		
Start Date									Fund Con	struction Bor	nd Fund	
End Date							U	seful Life >:	20Yrs? No			
Co	Cost Estimation Information						Tot. Fede	eral Loan A	mount			\$0
	5 Cost Est. Class						Prog	gram/Allov	vance Task	Information		
1	/1/2015		Cost Est. De	ate	Р	roject	Manager					
CDM Smith			Cost Est. Source			CIP Number						
CDM Smith			Cost Est. Pr	epared By	D	Description						
Cost Typ	е	Fis	scal Year	Expens	e	Fringe	e BenefitNor	nPersonne	(Comment		
GLWA Salaries Cl	P2020	FY2	3		\$4		2	0:	2020CIP			
GLWA Salaries CI	P2020	FY2	4		\$20		8	1				
GLWA Salaries Cl	P2020	FY2	5+		\$20		8	1	2020CIP			
			Phas	se Total Exp	ense	s By F	Y (All figure	es are in S	1,000's)			
Prior Yr Actuals	s FY	19	FY20	FY21	FY		FY23	FY24	FY25+	Total		
		0	0	0		0	6	29	29	64		
Des	to al Ta	Jail P		D. FV Ca		. a d 1	o Duiou CII	De / All #:-		in \$1 000'	-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
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 Statu	Future Planned		
☐ Water MP Right Si	zing CIP Type	Project		
✓ Reliability/Redund		•		
☐ NEWTP Repurposi	ng			
Project Engineer/Ma	nager TBD		Budget	Water
Ma	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class LvI 2	SCC
Date Original Busines	ss Case Prepared 1/4/2	018	Class LvI 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2018		Location	Oakland County
			Fund and Cost Center	
D 1 101 171	V 1 · · · 1 1			
Project Significance	piping are needed to i	mprove reliable o		service life. New valves and yard e reliable shutoff and water tightness
Scope of Work	Replace existing yard	alves and yard p	iping with new.	
Challenges	Maintenance of facility	operations during	g construction.	
Project History				
Related Project				
Lookup Driver				
Other Important Info				



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

Project Manager Project Risk Matrix Scoring										
Score	Comment									
5										
2										
2										
5										
5										
2										
1										

Project Manager Score

55.8

Review Committee Project Risk Matrix Scoring

		oo a o. o 9
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	

Review Committee Score

GLWA FY 2020-2024 CIP

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

Phase GLWA Employees Project management				nent	t Contract NA			Sta	tus	Future Planned	Start
Title GLWA Salo	aries										
Phase Budget Water				Cost Allocation CTA							
Phase Status	Future Pl	anned	Start				Funding S	ource Bond	d Pro	ceeds	
Start Date								Fund Cons	struc	tion Bond Fund	
End Date							Useful Life >2	20Yrs? No			
Cost Estimation Information					Tot. Federal Loan Amount					\$0	
	5		Cost Est. Class			P	rogram/Allov	vance Task	Infor	mation	
	1/1/2015	Cost Est. Date			P	roject Manage	er				
CDM Smith			Cost Est. So	ource	(CIP Number					
CDM Smith			Cost Est. P	repared By		Description					
Cost Ty	pe	Fis	cal Year	Expens	е	Fringe Benefit	NonPersonne	(Comr	ment	
GLWA Salaries C	CIP2020	FY20)		\$4	2	0				
GLWA Salaries (CIP2020	FY21			\$21	8	1				
GLWA Salaries (CIP2020	FY22	2		\$21	8	1				
GLWA Salaries CIP2020 FY23			\$7	3	0						
			Pha	se Total Fxr	ense	s By FY (All fig	ures are in S	1.000's)			
Prior Yr Actua	ıls FY	/19	FY20	FY21	FY:		FY24	FY25+	To	otal	

132017 CIP#

North Service Center Booster Pump Station - On-Site & Off-Site Yard Piping & Valve

Phase Design and Build	Contract NA	Status Future Planned Start

Title North Service CenterSiteYard PipingValvesPipingDesign/ConstructionReplace yard valves (BFVs) including those outside fence. Repurpose Northeast Plant

Project Manager

CIP Number

Description

Phase Budget	Water
Phase Status	Future Planned Start
Start Date	4/1/2019
End Date	9/27/2022

Cost Estimation Information							
5	Cost Est. Class						
1/15/2015	Cost Est. Date						
2015 WMPU	Cost Est. Source						
CDM	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							

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY21	\$2,270			
Design-Build	FY22	\$2,476			
Design-Build	FY23	\$254			

Task	Start Date	End Date	Duration
Procurement	7/1/2019	6/30/2020	365
Procurement	4/1/2019	6/30/2019	90
Project Execution	7/1/2020	6/28/2022	727
Project Closeout	6/29/2022	9/27/2022	90

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

Thus total Expenses by the (7th lightes are in \$1,000 b)									
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	2,270	2,476	254	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



Explanation

GLWA FY 2020-2024 CIP Schoolcraft Booster Pumping Station Improvements

☐ Innovation	Project Statu Future Pla	nned				
☐ Water MP Right Size	zing CIP Type Project					
✓ Reliability/Reduna						
□ NEWTP Repurposi	ng					
Project Engineer/Mar	nager TBD	Budget Water				
· ·	nager Grant Gartrell	Class Lvl 1 Water				
	anaging 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	maintain reliable station operation	and station valves are past their useful service life and require replacement to ons. Existing belt drain underdrain system protects reservoir from floating when st perform to prevent catastrophic damage to reservoirs.				
Scope of Work	Replace existing station pumps,	yard valves, select yard piping, and rehabilitate reservoir underdrain system.				
Challenges	Maintenance of facility operations during construction.					
Project History						
Related Project						
Lookup Driver						
Other Important Info						



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

Schoolcraft Booster Pumping Station Improvements

Project Manager Project Risk Matrix Scoring						
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					

Project Manager Score

52.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score



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 Reservoir Fill valves and vaults, replace cone valves, and control panels. Inspect belt drain system; replace duplex sump pumps. Transmission and Reservoir Renewal and Reliability

Phase Budget Water

Phase Status Future Planned Start

Start Date

End Date

Cost Allocation	CTA
Funding Source	Bond Proceeds
Fund	Construction Bond Fund
seful 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			

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

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	1,900	1,990	2,990	3,500	10,380

Schoolcraft Booster Pumping Station Improvements

Phase GLWA Emplo	oyees P	rojec	t manager	nent		C	Contract NA	A	State	us Future I	Planned Start	
Title GLWA Salarie	es											
Phase Budget Wo	ater							Cost Alloc	ation CTA			
Phase Status Fu	ture Pla	nned	Start					Funding So	urce Bond	Proceeds		
Start Date									Fund Const	truction Bor	nd Fund	
End Date							U:	seful Life >20	OYrs? No			
Cost	Estimati	ion In	formation				Tot. Fede	ral Loan Am	ount		\$0	
	5		Cost Est. C	lass			Prog	gram/Allow	ance Task I	nformation		
1/1	1/2015		Cost Est. D	ate	Р	roject	Manager					
CDM Smith			Cost Est. So	ource	C	IP Nu	mber					
CDM Smith			Cost Est. Pi	epared By	D	escrip	otion					
Cost Type		Fis	cal Year	Expens	e	Fringe	e BenefitNor	nPersonne	С	omment		
GLWA Salaries CIP2	2020	FY21	l		\$7		3	0				
GLWA Salaries CIP2	2020	FY22	2		\$40		16	2				
GLWA Salaries CIP2		FY23			\$40		16	2				
GLWA Salaries CIP2	2020	FY24	4		\$40		16	2				
			Pha	se Total Exp	enses	s By F	Y (All figure	es are in \$1	.000's)			
Prior Yr Actuals	FY1	19	FY20	FY21	FY2		FY23	FY24	FY25+	Total		
		0	0	10		58	58	58	0	184		
Droi	oct To	tal	vnoncoc	By EV Co	mna	rod +	o Prior CII	De (All figu	iros aro i	n \$1 000'	(c)	

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 Statu	Future Planned
□ Water MP Right Si	_	
✓ Reliability/Reduna		
☐ NEWTP Repurposi	ng	
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 1/4/2	O18 Class Lvl 3 Pump Station/Reservoir
Year Proj	ect Added to CIP 2018	Location Wayne County - Outside Detroit
		Fund and Cost Center
Project Significance		ntrol valves and hydropneumatic tank at station is beyond useful service life and o maintain station reliability
Scope of Work	-	cal switchgear, L-1 control valve and related controls, hydropneumatic tank and eration of all station control valves
Challenges	Maintenance of station	operations during construction.
Project History	n/a	
Related Project	n/a	
Lookup Driver		
Other Important Info	n/a	
Explanation		

GLWA FY 2020-2024 CIP Great Eakes Water Authority Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank

Project Manager I	Project Ri	sk Matrix Scoring
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	

Project Manager Score

55

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

Prior Yr Actuals

FY19

0

FY20

0

FY21

0

FY22

0

FY23

979

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

FY24

4,421

FY25+

0

Total

5,400

Phase Design and Build	a a rata			Contract	NA	St	atus	Future Planned Start	
Title Wick Rd BPS Improven	nents								
Phase Budget Water					Cost Alloc	ation CTA	4		
Phase Status Future Plani	ned Start				Funding Sc	ource Bor	nd Pro	oceeds	
Start Date						Fund Co	nstruc	ction Bond Fund	
End Date					Useful Life >2	OYrs? Yes	}		
Cost Estimatio	n Information			Tot. Fe	ederal Loan Am	nount			
5	Cost Est. C	ass		ļ	Program/Allow	ance Tas	k Info	rmation	
1/1/2015	Cost Est. De	ate	Proj	ject Manag	er				
CDM Smith	Cost Est. So	ource	CIP	Number					
CDM Smith	Cost Est. Pr	epared By	Des	scription					
Cost Type	Fiscal Year	Expense	e Fri	inge Benefit	NonPersonne		Com	ıment	
Design-Build	FY23	\$	5979						
Design-Build	FY24	\$4,	,421						
Task	Start Date	End Date	Durati	ion					
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					
	Phas	se Total Expe	enses B	By FY (All fig	ures are in \$1	,000's)			

132019 CIP#

e not appli	icable		Contract NA		Status	Future Planned Start
e GLWA Salo	aries					
Phase Budget	Water			Cost Allocation (CTA	
Phase Status	Future Plann	ed Start	1	Funding Source	Bond Pro	oceeds
Start Date				Fund	Construc	ction Bond Fund
End Date			Use	eful Life >20Yrs?	10	
C	ost Estimation	Information	Tot. Federo	al Loan Amount		\$0
	5	Cost Est. Class	Progr	am/Allowance T	ask Info	rmation
	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
GLWA Salaries CIP2020	FY22	\$4	2	0	
GLWA Salaries CIP2020	FY23	\$21	8	1	
GLWA Salaries CIP2020	FY24	\$92	36	5	

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

		1 1143	C IOIGI EXP	CHISCS DY I	i (All ligor	cs are my	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	6	30	133	0	169

132019 CIP#

Great Lakes Water A	Authority Wick Ro	oad Booster Pumpii	ng Station - Switchgear, Contr	ol Valve	s and Hydropneumati	c Tan
Phase Design ar	nd Build		Contract NA	Status	Future Planned Start	
Title PowerUtility	y SupplySwitch	gearStudy/Design/ Cons	structionReplace switchgearTransmiss	ion and Re	eservoir Renewal and Reliab	ility
Phase Budget	Water		Cost Allocation	on CTA		
Phase Status	Future Planned	d Start	Funding Source	e Bond Pr	roceeds	
Start Date		3/31/2021	Fur	d Constru	uction Bond Fund	
End Date		9/23/2027	Useful Life >20Yrs	? Yes		
Co	ost Estimation Ir	nformation	Tot. Federal Loan Amou	nt		
	5	Cost Est. Class	Program/Allowand	e Task Inf	ormation	
12	/27/2017	Cost Est. Date	Project Manager			
2015 Water M	aster Plan Upd	Cost Est. Source	CIP Number			
CDM		Cost Est. Prepared By	Description			

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

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

Prior Yr Actua	s FY	Y19	FY20	FY21	FY22	FY23		FY24	FY25+	Total
		0	0	0	0		0	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	C)					6	1,009	4,555	0	5,570
2020	C	0		0	0	0	6	1,009	4,554	0	5,569

GLWA FY 2020-2024 CIP Great Lakes Water Authority Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

□ Innovation	Project Statu	Future Planned		
☐ Water MP Right Siz	zing CIP Type	Project		
☐ Reliability/Redund		•		
☐ NEWTP Repurposi	ng			
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 1/4/2	018	Class LvI 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2018		Location	Oakland County
			Fund and Cost Center	
Project Significance	Existing gate valves, pureplacement to maintain	•	operators are beyond use	ful service life and require
	replacement to mainto	ain reliable station.		·
Scope of Work	replacement to mainton. Replace existing statio	ain reliable station.	operators are beyond use, valve operators, and elec	·
Scope of Work	replacement to mainton. Replace existing statio	ain reliable station. n pumps, motors, valves	operators are beyond use, valve operators, and elec	·
Scope of Work Challenges	replacement to mainton. Replace existing statio	ain reliable station. n pumps, motors, valves	operators are beyond use, valve operators, and elec	·
Scope of Work Challenges Project History	replacement to mainton Replace existing station Maintenance of station	ain reliable station. n pumps, motors, valves	operators are beyond use, valve operators, and elec	·
Scope of Work Challenges Project History Related Project	replacement to mainton Replace existing station Maintenance of station	ain reliable station. n pumps, motors, valves	operators are beyond use, valve operators, and elec	·

Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

Project Manage	er Project Ris	sk Matrix Scoring
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	

Project Manager Score

57

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

GLWA FY 2020-2024 CIP Great Lakes Water Authority Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

hase GLWA Em		Projec	t managen	nent		С	ontract N	Α	Stat	Status Future Planned Start			
itle GLWA Salc	aries												
Phase Budget	Water							Cost Alloc	cation CTA				
Phase Status	Phase Status Future Planned Start							Funding S	ource Bond	Proceeds			
Start Date									Fund Cons	truction Bo	nd Fund		
End Date	End Date						U	Jseful Life >2	20Yrs? No				
Co	ost Estima	tion In	formation				Tot. Fede	eral Loan Ar	mount		\$0		
	5		Cost Est. C	lass			Pro	gram/Allow	vance Task I	nformation			
	1/1/2015		Cost Est. De	ate	Pı	roject	Manager						
CDM Smith			Cost Est. Sc	ource	CIP Number								
CDM Smith			Cost Est. Pr	epared By	ed By Description								
Cost Typ	эе	Fis	scal Year	Expens	е	Fringe	e BenefitNo	nPersonne	С	Comment			
SLWA Salaries C	IP2020	FY2	5+		\$75		30	42	2020CIP				
			Phas	se Total Exp	enses	By F	Y (All figur	es are in \$1	1,000's)				
Prior Yr Actual	ls FY	19	FY20	FY21	FY2		FY23	FY24	FY25+	Total			
		0	0	0		0	0	0	109	109			

GLWA FY 2020-2024 CIP Great Lakes Water Authority Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements

Phase Design and B	uild				Contract N	IA	Status	Future Plann	ed Start
itle Franklin BPS - Is		ate Valves &	Electrical Ad						
Phase Budget Wa	ter					Cost Alloc	cation CTA		
Phase Status Futu		ad Start					ource Bond Pr	racads	
	rianne					runding 3			
Start Date		10/4/	/2020				Fund Constru	ıction Bond Fui	nd
End Date		3/29/	/2027		l	Jseful Life >2	20Yrs? Yes		
Cost E	stimation	Information			Tot. Fed	eral Loan Ar	mount		
	5	Cost Est. C	lass		Pro	gram/Allow	ance Task Inf	ormation	
1/15/	′2015	Cost Est. D	ate	Projec	t Manager				
2015 WMPU		Cost Est. S	ource	CIP N	umber				
CDM			repared By	Descr	iption				
			,						
Cost Type		Fiscal Year	Expense	e Fring	ge BenefitNo	nPersonne	Cor	mment	
Design-Build	FY	′25+	\$10	,000		2	2020CIP		
Task		Start Date	End Date	Duration	1				
Scope Developmer	nt	10/4/2020	1/2/2021		90				
Procurement		1/3/2021	1/3/2022	3	65				
Project Execution		1/4/2022	12/28/2026	18	19				
Project Closeout		12/29/2026	3/29/2027		90				
		Pha	se Total Exp	enses By	FY (All figur	es are in S	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
		0 0	0	0	0	0	10,000	10,000	
Proie	ct Total	Expenses	By FY Cor	mpgred	to Prior C	IPs (All fig	ures are in	\$1.000's)	
							(O) EVO 4		T = 4 = 1

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



GLWA FY 2020-2024 CIP 132021 CIP# Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

□ Innovation	Project Statu	Future Planned		
☐ Water MP Right Siz	zing CIP Type	Project		
☐ Reliability/Redund	= =	•		
□ NEWTP Repurposir	ng			
Project Engineer/Mar	nager TBD		Budget	Water
Mar	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class Lvl 2	SCC
Date Original Busines	s Case Prepared 1/4/2	018	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2018		Location	Lapeer County
			Fund and Cost Center	
-	Existing pumps, motors operation.	, VFDs and HVAC s	Fund and Cost Center	er to maintain reliability in the station's
	operation.		Fund and Cost Center	
Scope of Work	operation. Replace existing VFDs	with new, chiller sys	Fund and Cost Center	existing station HVAC system.
Scope of Work	operation. Replace existing VFDs	with new, chiller sys	restem need replacement in orderstem VFD cooling, and replace e	existing station HVAC system.
Scope of Work Challenges	operation. Replace existing VFDs	with new, chiller sys	restem need replacement in orderstem VFD cooling, and replace e	existing station HVAC system.
Scope of Work Challenges Project History	operation. Replace existing VFDs	with new, chiller sys	restem need replacement in orderstem VFD cooling, and replace e	existing station HVAC system.
Scope of Work Challenges Project History Related Project	operation. Replace existing VFDs	with new, chiller sys	restem need replacement in orderstem VFD cooling, and replace e	existing station HVAC system.



132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

Project Manager P	roject Ri	sk Matrix Scoring
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	

Project Manager Score

41.8

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

Phase Design and	d Build					C	ontract	N/	4	S	tatus	Future I	Planned Start
itle Imlay BPS - F	Replace	VFDs,	Pumps, Mo	otors and HV	AC								
Phase Budget V	Vater								Cost Allo	cation CT	A		
Phase Status F	uture Pla	nned	l Start						Funding S	ource Bo	nd Pr	oceeds	
Start Date	4/2/2022				Fund Construction Bond Fund						nd Fund		
End Date	9/25/2026							U	seful Life >	20Yrs? Ye	S		
Cos	t Estimat	ion In	formation				Tot. F	ede	ral Loan A	mount			
	5		Cost Est. C	lass				Prog	gram/Allov	vance Tas	k Info	ormation	
1,	/1/2015		Cost Est. D	ate	P	roject	Manag	er					
2015 WMPU			Cost Est. S	ource	(CIP Nur	nber						
CDM			Cost Est. P	repared By		Descrip	tion						
Cost Type	e	Fig	scal Year	Expense)	Fringe	Benefit	Nor	nPersonne		Con	nment	
Design-Build		FY2		·	,000	9							
Design-Build		FY2	5+	\$10	,000					2020CIP			
Task		St	art Date	End Date	Dui	ration							
cope Developm	ent		4/2/2022	7/1/2022		90)						
rocurement			7/2/2023	7/1/2024		36	5						
Project Execution			7/2/2024	6/26/2027		1089	•						
Project Closeout			6/27/2027	9/25/2027		90)						
		_	Pha	se Total Exp	ense	s By FY	' (All fig	jure	es are in \$	1,000's)			
Prior Yr Actuals	FY	19	FY20	FY21	FY		FY23		FY24	FY25+		Total	
		0	0	0		0		0	2,000	10,00	00	12,000	

132021 CIP#

Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System

hase GLWA Employ	yees Proje	ect manager	ment		Contract	NA	Status	Future Plann	ned Start
itle GLWA Salaries									
Phase Budget Wat	ter					Cost Allocation	on CTA		
Phase Status Futu	ıre Planne	ed Start				Funding Source	Bond Pr	oceeds	
Start Date						Fui	nd Constru	ction Bond Fu	nd
End Date						Useful Life >20Yr	s? No		
Cost E	stimation	Information			Tot. Fed	leral Loan Amou	ınt		\$0
	5	Cost Est. C	lass		Pr	ogram/Allowand	ce Task Info	ormation	
1/1/	2015	Cost Est. D	ate	Р	roject Manage				
CDM Smith		Cost Est. S	ource	C	CIP Number				
CDM Smith		Cost Est. P	repared By	D	escription				
Cost Type		Fiscal Year	Expense	9	Fringe BenefitN	onPersonne	Cor	nment	
GLWA Salaries CIP20)20 FY	′ 23		\$4	2	0			
GLWA Salaries CIP20)20 FY	/24		\$71	28	4			
		Pha	se Total Exp	ense	s By FY (All figu	res are in \$1,00	00's)		
Prior Yr Actuals	FY19	FY20	FY21	FY2			Y25+	Total	
		0 0	0		0 6	103	0	109	
Proje	ct Total	Expenses	By FY Co	mpa	red to Prior C	IPs (All figure	es are in	\$1,000's)	

		O						30.00	311 3 111 4	, , , , , ,	
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



132022 CIP#

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

✓ Innovation	Project Statu	Future Planned		
☐ Water MP Right Si	zing CIP Type	Project		
✓ Reliability/Redund				
□ NEWTP Repurposi	ng			
Project Engineer/Ma	nager Eric Kramp		Budget	Water
	nager Grant Gartrell		Class Lvl 1	
Managing	Dept Water Eng		Class Lvl 2	SCC
Date Original Busines	ss Case Prepared 1/4/20)18	Class Lvl 3	Pump Station/Reservoir
Year Proj	ect Added to CIP 2018		Location	Wayne County - Outside Detroit
			Fund and Cost Center	
Project Significance		· · · · · · · · · · · · · · · · · · ·	•	ul service life and require r is heavily corroded and as a result
, ,	replacement to mainta also needs replacemen	in station reliability. In addit	ion, the existing heade	r is heavily corroded and as a result
Scope of Work	replacement to mainta also needs replacemen Replace the station's re	in station reliability. In addit it.	ion, the existing heade	r is heavily corroded and as a result
Scope of Work	replacement to mainta also needs replacemen Replace the station's re	in station reliability. In addit ht. servoirs pumps, motors, valv	ion, the existing heade	r is heavily corroded and as a result
Scope of Work Challenges	replacement to mainta also needs replacemen Replace the station's re	in station reliability. In addit ht. servoirs pumps, motors, valv	ion, the existing heade	r is heavily corroded and as a result
Scope of Work Challenges Project History	replacement to mainta also needs replacemen Replace the station's re Maintaining station ope	in station reliability. In addit ht. servoirs pumps, motors, valv	ion, the existing heade	r is heavily corroded and as a result
Scope of Work Challenges Project History Related Project	replacement to mainta also needs replacemen Replace the station's re Maintaining station ope	in station reliability. In addit ht. servoirs pumps, motors, valv	ion, the existing heade	r is heavily corroded and as a result
Scope of Work Challenges Project History Related Project Lookup Driver	replacement to mainta also needs replacemen Replace the station's re Maintaining station ope	in station reliability. In addit ht. servoirs pumps, motors, valv	ion, the existing heade	r is heavily corroded and as a result

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

132022 CIP#

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

Project Manager Project Risk Matrix Scoring						
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					

Project Manager Score

54.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

56.6

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

hase Design an	nd Build				Contract	NA	Sto	atus	Future Planned S	Start
tle Joy Road B	BPS - Repla	ce Reservoir Pu	mps, Motors	and Isol	ation Valves					
Phase Budget	Water					Cost Allo	cation CTA			
Phase Status	Future Plar	nned Start				Funding S	iource Bon	d Pro	oceeds	
Start Date		4/2/	2022				Fund Con	nstruc	ction Bond Fund	
End Date	9/25/2026				Useful Life >20Yrs? Yes					
Со	st Estimatio	on Information			Tot. Fe	deral Loan A	mount			
	5	Cost Est. C	lass		F	rogram/Allov	vance Task	Info	rmation	
1,	/15/2015	Cost Est. D	ate	Proj	ect Manage	er				
2015 WMPU		Cost Est. So	ource	CIP	Number					
CDM		Cost Est. Pi	epared By	Des	cription					
Cost Typ	oe	Fiscal Year	Expense	e Fri	inge Benefil	NonPersonne		Com	ment	
, , D 11 1		EVO 4	•	000	J		1 1.			

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY24	\$6,000			construction

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	6,000	0	6,000

Joy Road Booster Pumping Station, Reservoir Pumping System Improvements

hase GLWA Em	nployees Pr	oject manage	ment		Contract N.	A	Status	Future Plant	ned Start
itle GLWA Salo	aries								
Phase Budget	Water					Cost Alloc	cation CTA		
Phase Status	Future Plar	ned Start				Funding Sc	ource Bond P	roceeds	
Start Date							Fund Constru	uction Bond Fu	und
End Date					U	seful Life >2	OYrs? No		
Co	ost Estimatio	on Information			Tot. Fede	eral Loan An	nount		\$0
	5	Cost Est. C	Class		Pro	gram/Allow	ance Task Inf	formation	
	1/1/2015	Cost Est. D	ate	Proje	ct Manager				
CDM Smith		Cost Est. S	ource	CIP N	umber				
CDM Smith		Cost Est. P	repared By	Desci	ription				
Cost Ty	pe	Fiscal Year	Expens	e Fring	ge BenefilNo	nPersonne	Со	mment	
GLWA Salaries C	CIP2020	FY23		\$4	2	0			
GLWA Salaries C	CIP2020	FY24		\$71	28	4			
		Pho	se Total Exp	enses By	FY (All figure	es are in S1	,000's)		
	L 5\/1		FY21	FY22	FY23	FY24	FY25+	Total	
Prior Yr Actua	Is FY1	, 1120							

		<u> </u>		, , , , , , , , , , , , , , , , , , , 		<u>u 10 11101</u>			<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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 Statu	Future Planned		
☐ Water MP Right Siz	cing CIP Type	Program		
☐ Reliability/Redund	lancy			
□ NEWTP Repurposir	ng			
Project Engineer/Mar	nager TBD		Budget	Water
Mar	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class Lvl 2	SCC
Date Original Busines	s Case Prepared 1/4/2	018	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2018		Location	Multiple Counties
			Fund and Cost Center	
Project Significance	This project is combine	d into a new overall Reserv	oir Rehabilitation Projec	t.
Scope of Work		nd execute any necessary		ervoirs that results from the inspection
Scope of Work	Conduct inspections a	nd execute any necessary		
Scope of Work	Conduct inspections a	nd execute any necessary		
Scope of Work Challenges	Conduct inspections a	nd execute any necessary		
Scope of Work Challenges Project History	Conduct inspections a	nd execute any necessary		
Scope of Work Challenges Project History Related Project Lookup Driver Other Important Info	Conduct inspections a work as directed and c	nd execute any necessary approved by GLWA.	rehabilitation of the res	



132023 CIP#

Reservoir Inspection, Design & Rehabilitation @ WWP and NEWTP; and Wick, Schoolcraft,

Project Manager Project Risk Matrix Scoring							
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						

Project Manager Score

65.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

47

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
Phase Status	Future Planned Start
Start Date	9/26/2020
End Date	9/25/2026

Cost Estimation Information							
5	Cost Est. Class						
12/13/2017	Cost Est. Date						
GLWA Engineering	Cost Est. Source						
Group	Cost Est. Prepared By						

n CTA
e Bond Proceeds
Construction Bond Fund
? Yes
nt
e Task Information

Task	Start Date	End Date	Duration
Scope Development	9/26/2022	12/25/2022	90
Procurement	12/26/2022	7/2/2023	188
Project Execution	7/3/2023	6/26/2026	1089
Project Closeout	6/27/2026	9/25/2026	90

That foral Expenses by 11 (7th lights are in \$1,000 s)										
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,

nase GLWA Em	nployees Pro	ject management	Contract NA	Sto	itus Future Planned S	tart
lle GLWA Salo	aries					
Phase Budget	Water		C	ost Allocation CTA		
Phase Status	Future Planned Start		Fu	nding Source Bone	d Proceeds	
Start Date				Fund Con	struction Bond Fund	
End Date			Usefu	ul Life >20Yrs? Yes		
Co	ost Estimatio	n Information	Tot. Federal	Loan Amount		\$0
	5	Cost Est. Class	Progra	m/Allowance Task	Information	
	1/1/2015	Cost Est. Date	Project Manager			
CDM Smith		Cost Est. Source	CIP Number			
CDM Smith	CDM Smith Cost Est. Prepared By		Description			

Phase Total Expenses	Dv. EV	(All figures	are in	Ċ1	000'6
rnase lotal expenses	BA LI	(All flaures	are in	21	.UUU S

١.									
	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 Design & Construction Assistance

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	

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

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

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			

CIP Number

Description

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

Prior Yr Actuals	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)

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 FY 2020-2024 CIP Great Lakes Water Authority Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

☐ Innovation	Project Statu	Reclassified		
☐ Water MP Right Si	zing CIP Type	Program		
☐ Reliability/Redund		.		
☐ NEWTP Repurposi	ng			
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 1/4/2	018	Class Lvl 3	Pump Station/Reservoir
Year Proje	ect Added to CIP 2018		Location	Multiple Counties
			Fund and Cost Center	
Project Significance		I to be inspected and any nd in order to assure that re	•	conducted every 5 years according of drinking water quality.
Scope of Work	Conduct inspections of	nd execute any necessary	rehabilitation of the res	ervoirs that results from the inspection
•	work as directed and a	approved by GLWA.	Torrabilitation of the res	'
Challenges	-	approved by GLWA.		·
Challenges Project History	-	approved by GLWA.		·
•	-	approved by GLWA.		·
Project History	work as directed and a	approved by GLWA.		
Project History Related Project Lookup Driver	work as directed and a			nspection , Design and Rehabilitation
Project History Related Project Lookup Driver	work as directed and a			



132024 CIP#

Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

65.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

47

GLWA FY 2020-2024 CIP Great Lakes Water Authority Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Phase Budget Water		Cost Allocation	CTA
Phase Status Future P	anned Start	Funding Source	Bond Proceeds
Start Date		Fund	Construction Bond Fund
End Date		Useful Life >20Yrs?	No
Cost Estime	ation Information	Tot. Federal Loan Amount	\$0
Ę	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	

Phase Total E	xpenses B	y FY (All figures	are in \$	1,000's)
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		11143	C TOTAL EXP	CHISCS By I	1 (/ 111 11901	cs are my	1,000 5)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

GLWA Engineering

Group

GLWA FY 2020-2024 CIP

132024 CIP#

Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road,

Contract NA **Status** Future Planned Start **Phase** Construction

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 Planr	ned Start		Funding Source	Bond Proceeds
Start Date		9/26/2020		Fund	Construction Bond Fund
End Date		9/25/2026	Us	eful Life >20Yrs?	Yes
С	ost Estimatio	n Information	Tot. Feder	al Loan Amount	
	5	Cost Est. Class	Prog	ram/Allowance	Task Information
12	2/13/2017	Cost Est. Date	Project Manager		
GI WA Engine	Perina	Cost Est Source	CIP Number		

Description

Cost Est. Source

Cost Est. Prepared By

Task	Start Date	End Date	Duration
Scope Development	9/26/2022	12/25/2022	90
Procurement	12/26/2022	7/2/2023	188
Project Execution	7/3/2023	6/26/2026	1089
Project Closeout	6/27/2026	9/25/2026	90

		I IIIG3	e iolai Exp	Tellaca by I	i (All light	es die ili ş	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	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,

Phase Design & Construction Assistance

Contract NA

Status Future Planned Start

Title Reservoir Inspection, Design and Rehabilitation @ Adams, East-side, Farmington, Ford Road, Franklin, Haggerty and Joy Road

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

Cost Estimation Information

1/1/2015

Cost Est. Class
Cost Est. Date

CDM Smith

Cost Est. Source

CDM Smith

Cost Est. Prepared By

Cost Allocation	CIA
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

	Task	Start Date	End Date	Duration
Scope	Development	9/26/2020	12/25/2020	90
Procur	ement	12/26/2020	12/26/2021	365
Project	t Execution	12/27/2020	6/26/2025	1642
Project	t Closeout	6/27/2025	9/25/2025	90

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

Prior Yr Actuals	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)

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

Northwest Booster Station Yard Piping Improvements

GLWA FY 2020-2024 CIP

□ Innovation

✓ Water MP Right Sizing

✓ Reliability/Redundancy

✓ NEWTP Repurposing

Project Statu New

CIP Type Project

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 Lvl 3 Pump Station/Reservoir

Location

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



132025 CIP#

Northwest Booster Station Yard Piping Improvements

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.



Northwest Booster Station Yard Piping Improvements

Project Manager F	Project Ri	sk Matrix Scoring
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	

Project Manager Score

54.6

Review Committee Project Risk Matrix Scoring

	•	<u> </u>
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	

Review Committee Score

63.6

Northwest Booster Station Yard Piping Improvements

hase Design & Constructi	ion Assistance			Contract	TBD	Stat	us Future	Planned Start	
itle Northwest Booster St	ation Yard Pipin	g Improveme	ents						
Phase Budget Water			Cost Allocation CTA						
Phase Status Future Pla	nned Start		Funding Source Bond Proceeds						
Start Date			Fund Construction Bond Fund						
End Date					Useful Life >	20Yrs? Yes			
Cost Estimation Information				Tot. Fee	deral Loan A	mount		\$0	
5 Cost Es		lass		Pı	nformatio	n			
		ate	Project Manage		r				
CDM Smith	Cost Est. Se	ource	C	CIP Number					
CDM Smith	Cost Est. P	Cost Est. Prepared By		Description					
Cost Type	Fiscal Year	Expense)	Fringe Benefit	IonPersonne	С	omment		
ngineering Services	FY21		\$50			2020CIP	020CIP		
Engineering Services	FY22	\$	200			2020CIP			
ingineering Services	FY23	\$	250			2020CIP			
	Pha	se Total Exp	ense	s By FY (All figu	ures are in \$	1,000's)			
Prior Yr Actuals FY1		FY21	FY2		FY24	FY25+	Total		

50

200

250

500

132025 CIP#

Northwest Booster Station Yard Piping Improvements

ase GLWA Employe	ees Projec	t management	Contract NA		Status	Future Planned Start		
e GLWA Salaries								
Phase Budget Wate	er			СТА				
Phase Status Future	uture Planned Start			Funding Source	Bond Pro	oceeds		
Start Date				Fund	Constru	ction Bond Fund		
End Date			Us	eful Life >20Yrs?	Yes			
Cost Est	timation Ir	formation	Tot. Feder	al Loan Amount	\$0			
	5	Cost Est. Class	Program/Allowance Task Information					
1/1/2	2015	Cost Est. Date	Project Manager					
CDM Smith		Cost Est. Source	CIP Number					
CDM Smith		Cost Est. Prepared By	Description					

CIP

2020

FY16

GLWA FY 2020-2024 CIP

Northwest Booster Station Yard Piping Improvements

FY22

1,700

FY23

3,750

FY24

FY25

Total

5,500

hase Construc	tion			C	Contract TB	BD	State	us Future Pla	anned Start
tle Northwest	Booster Sto	ation Yard Pipir	ng Improvem	ents					
Phase Budget	Water					Cost Alloc	cation CTA		
Phase Status	Future Plan	ned Start				ource Bond	Proceeds		
Start Date							Fund Const	truction Bond	l Fund
End Date					U	seful Life >2	20Yrs? Yes		
Co	ost Estimatio	on Information			Tot. Fede	eral Loan An	mount		\$0
5 Cost Est. Class					Prog	gram/Allow	vance Task I	nformation	
	1/1/2015	Cost Est. D	ate	Project	l Manager				
CDM Smith		Cost Est. S	ource	CIP Number					
CDM Smith		Cost Est. P	repared By	Description Description					
Cost Ty	pe	Fiscal Year	Expense	e Fringe	e BenefitNoi	nPersonne	С	omment	
Construction		FY22	\$1	,500		2	2020CIP		
Construction		FY23	\$3	,500		2	2020CIP		
		Pha	se Total Exp	enses By F	Y (All figure	es are in \$1	1,000's)		
Prior Yr Actua	ls FY19		FY21	FY22	FY23	FY24	FY25+	Total	
				1,500	3,500			5,000	

FY21

50

FY18

FY19

FY20

FY17

0

0

Water Master Plan Update

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Project

Previous Water Master Plan



Project Engineer/Manager Grant Gartrell

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

Scope of Work 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

Project History

Related Project

Lookup Driver N/A - Active

Other Important Info

Explanation N/A - Active

Water Master Plan Update

hase not applicable						Contract NA Status Closed Out							
Title Prior Year	Actual Ex	pense	S										
Phase Budget	Water				Cost Allocation CTA								
Phase Status	Closed C	Out			Funding Source								
Start Date								Fund					
End Date							Useful Life >2	20Yrs?					
C	ost Estimo	tion In	formation			Tot. Fe	ederal Loan Ar	mount					
	5		Cost Est. C	lass		I	Program/Allow	ance Task I	nformation				
	1/1/2017		Cost Est. D	ate	F	Project Manag	er						
GLWA			Cost Est. So	ource	(CIP Number							
GLWA			Cost Est. Pr	epared By		Description							
					•								
Cost Ty	'pe	Fis	scal Year	Expens	e	Fringe Benefit	NonPersonne	С	omment				
Unknown		FY1	3-		\$222		F	Y16					
Unknown		FY1	3-		\$108		F	Y17					
			Phas	se Total Exp	pense	s By FY (All fig	ures are in \$	1,000's)					
Prior Yr Actua	ils F	′19	FY20	FY21		22 FY23	FY24	FY25+	Total				
	330								330				

161001 CIP#

Water Master Plan Update

ase Study			Contract NA	4	Status	Pending Close-out		
le Water Mas	ster Plan Upo	date						
Phase Budget	Water			Cost Allocation	СТА			
Phase Status Pending Close-out			Funding Source	Revenue	e Financed Capital			
Start Date				Fund	Improve	ement & Extension Fun		
End Date			Us	seful Life >20Yrs?	No			
Co	ost Estimatio	n Information	Tot. Feder	ral Loan Amount				
	5	Cost Est. Class	Prog	gram/Allowance	Task Info	ask Information		
		Cost Est. Date	Project Manager					
		Cost Est. Source	CIP Number					
		Cost Est. Prepared By	Description					

			<u> </u>	<u> </u>	. (/ 111 11901	σο απο πτ γ	- /	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

Water Master Plan Update

hase GLWA Emp tle GLWA Salari		ct managem	ent	C	Contract N	A	Statu	s Pending Close-c	out
Phase Budget V	Vater					Cost Alloc	cation CTA		
Phase Status P	ending Close	-out				Funding So	Durce Reven	nue Financed Capit	al
Start Date	Start Date						Fund Improv	vement & Extension	n Fun
End Date					U	seful Life >2	OYrs? No	-	
Cos	t Estimation I	nformation			Tot. Fede	eral Loan An	nount		\$0
	5	Cost Est. Clo	ass		Pro	gram/Allow	ance Task In	nformation	
1/1/2017		Cost Est. Date		Project	t Manager				
GLWA		Cost Est. Source		CIP Nu	mber				
GLWA		Cost Est. Pre	epared By	Descrip	ption				
					Y (All figur				
Prior Yr Actuals	_	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)

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2018		290							0	0	290
2019	0	330							0	0	330
2020	0	0	330	0	0	0	0	0	0	0	330



Water Treatment Plant / Pump Station Allowance

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Allowance

GLWA Water Service Area



Project Engineer/Manager Grant Gartrell

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/11/2016

Year Project Added to CIP 2012

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 This allowance is reserved for unplanned, emergency and critical project needs that need to be addressed quickly.

Scope of Work This project is an allowance for unplanned, critical projects that may occur at the Water Treatment Plants and Booster Pump Stations throughout the system. These projects may include repair, replacement or rehabilitation of key assets as required to allow the Authority to provide sufficient water quality, quantity and pressure to meet customer demands in accordance with federal and state requirements under the Safe Drinking Water Act.

Challenges Close coordination with operations and ability to jump on needs.

Project History n/a

Related Project none

Lookup Driver Varies

Other Important Info n/a

Explanation Not provided.



Water Treatment Plant / Pump Station Allowance

Project Manager Project Risk Matrix Scoring							
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						

Project Manager Score

68.2

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

64.4



Water Treatment Plant / Pump Station Allowance

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

Tot. Federal Loan Amount

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	FY21	\$2,	500			2020CIP	
Task	Start Date	End Date	Duration				
Project Execution	7/1/2020	4/30/2021	30	3			
Project Closeout	5/1/2021	6/30/2021	6	0			

170100 CIP#

Water Treatment Plant / Pump Station Allowance

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

Prior Yr Actuals	FY19	FY20	FY21	EV22	EV22	EV24	FY25+	Total
FIIOI II ACIUUIS	Г117	FTZU	ΓΙΖΙ	ΓΙΖΖ	FY23	FY24	FIZJT	Total
	0	0	2,500	0	0	0	0	2,500

Phase Construction Contract SCP-SP-009 Status Closed Out

Title SP-009: Weiss: 1958 Sedimentation Basin

Phase Budget Water				Cost Allocation	CTA		
Phase Status	Closed Out			Bond Proceeds			
Start Date	Start Date			Construction Bond Fund			
End Date			l	Jseful Life >20Yrs?	Yes		
Co	ost Estimation	Information	Tot. Fede	eral Loan Amount			
	1	Cost Est. Class	Pro	Program/Allowance Task Information			
		Cost Est. Date	Project Manager				
		Cost Est. Source	CIP Number	170118			
		Cost Est. Prepared By	Description				



Water Treatment Plant / Pump Station Allowance

Status Active Phase Design Build Assistance Contract SCP-CS-1692

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 Ella Dabao **CIP Number** 170120 Description 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.

That total Expenses by TT (7th ngolds are in \$1,000 b)								
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 Active

Title SCP-NE-017: Weiss Construction: Phosphor

Phase Budget	Water
Phase Status	Active
Start Date	7/27/2015
End Date	3/27/2017

Cost Estimation Information Cost Est. Class Cost Est. Date Cost Est. Source 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 Zahid Jawadi

CIP Number

Description

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	90

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

Contract CON-225 **Status** Future Planned Start **Phase** Construction **Title** CON-225 Orion Booster Station Cost Allocation CTA Phase Budget Water **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 ation

1 Cost Est. Class Program/Allowance	
1 Cost Est. Class	Task Informo
11/1/2017 Cost Est. Date Project Manager Jorge Nicolas	
Consultant Cost Est. Source CIP Number 170124	
Cost Est. Prepared By Description	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19	\$1,572			
Construction	FY20	\$116			

Task	Start Date	End Date	Duration
Project Execution	7/2/2018	7/26/2019	389
Project Closeout	7/27/2019	10/25/2019	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,572	116	0	0	0	0	0	1,688

170100 CIP#

Water Treatment Plant / Pump Station Allowance

nase Construc	ction		Contract L	H-398	Status Pending Close-out
le SCP-LH-398	8: Phosphoric	Acid Tank Fill Lines			
Phase Budget	Water			Cost Allocation	CTA
Phase Status	Pending Close-out			Funding Source	Bond Proceeds
Start Date	10/26/2015		Fund C		Construction Bond Fund
End Date	9/16/2016		Useful Life >20Yrs? Yes		Yes
Co	ost Estimation	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	lves 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.	

GLWA Great Lakes Water Authority

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

Cost Allocation
Funding Source
Bond Proceeds
Fund
Construction Bond Fund
Useful Life >20Yrs?
Tot. Federal Loan Amount

Program/Allowance Task Information

Project Manager

Jorge Nicolas

CIP Number

170102

Description

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 Benefit	NonPersonne	Comment
Engineering Services	FY19	\$334			
Engineering Services	FY20	\$10			
Task	Start Date	End Date Dur	ration		

Task	Start Date	End Date	Duration
Scope Development	7/19/2014	10/17/2014	90
Procurement	10/18/2014	10/18/2015	365
Project Execution	7/19/2014	7/31/2019	1838
Project Closeout	8/1/2019	10/30/2019	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	334	10	0	0	0	0	0	344

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

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
Phase Status	Future Planned Start
Start Date	
End Date	

Cost Estimation Information 5 Cost Est. Class 1/1/2018 Cost Est. Date GLWA Cost Est. Source GLWA Cost Est. Prepared By

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

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

							, ,	
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 Cost Est. Class 11/1/2016 Cost Est. Date Consultant Cost Est. Source 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

Jorge Nicolas

170104

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.

Task	Start Date	End Date	Duration
Project Execution	11/16/2016	7/23/2018	614
Project Closeout	7/24/2018	10/1/2018	69

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

170100 CIP#

Water Treatment Plant / Pump Station Allowance

nase Construction		Contract SCP-DWS-059 Status Active					
le SCP-DWS-059: CA Hu	ıll: Intake Lagoon						
Phase Budget Water			Cost Allocation	СТА			
Phase Status Active			Funding Source	Bond Proceeds			
Start Date	6/10/2016		Fund	Construction Bond Fund			
End Date	12/1/2016	l	seful Life >20Yrs?	Yes			
Cost Estimat	ion Information	Tot. Fede	eral 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 main entrance bridge and intake building that provides access to GLWA's water supply intake and lagoon on Belle Isle. This intake supplies raw water to three of GLWA's water treatment plants: Northeast, Springwells, and Water Works Park.				



Water Treatment Plant / Pump Station Allowance

Phase Design & Construction Assistance

Contract CS-1432A

Status Active

Title CS-1432A Belle Isle Water Station

Phase Budget Water

Phase Status Active

Start Date 2/1/2016

End Date 8/1/2018

Cost Estimation Information 5 Cost Est. Class 1/1/2018 Cost Est. Date GLWA Cost Est. Source GLWA Cost Est. Prepared By

Cost Allocation
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

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.

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 SCF	P-NE-007	Status Active		
	Cost Allocation C	TA		
	Funding Source Re	evenue Financed Capital		
	Fund Improvement & Exte			
Use	0			
Tot. Feder	al Loan Amount			
Program/Allowance Task Information				
Project Manager	Zahid Jawadi			
CIP Number	170117			
į	This project involves installation of new instrument air compressor system at Northea			
	Use Tot. Federe Proge Project Manager CIP Number Description	Cost Allocation C Funding Source Re Fund In Useful Life >20Yrs? N Tot. Federal Loan Amount Program/Allowance To Project Manager Zahid Jawadi CIP Number 170117 Description This project involve		



Water Treatment Plant / Pump Station Allowance

Phase Construction Contract DWS-063 Status Active

Title DWS-063 Adams Road Water Isolation Gate

Phase Budget Water

Phase Status Active

Start Date 11/1/2017

End Date 6/30/2019

Cost Estimation Information 5 Cost Est. Class 1/1/2018 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 Biren Saparia

CIP Number 170108

Description Renovation and Upon

Renovation and Upgrade of Suction and Discharge valves for Adams Road Water Booster Station.

			<u> </u>		. (/ 11901	OU GIO III Y	<u> </u>	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

GLWA

GLWA

GLWA FY 2020-2024 CIP

170100 CIP#

Water Treatment Plant / Pump Station Allowance

170111

	'	
Phase Construction	Contract SW-011	Status Pending Close-out
itle SW-011, Alfred Benesh: Heating Improvements		
Phase Budget Water	Cost Allocation CT	ГА
Phase Status Pending Close-out	Funding Source Bo	and Proceeds
Start Date	Fund Co	onstruction Bond Fund
End Date	Useful Life >20Yrs? Ye	es .
Cost Estimation Information	Tot. Federal Loan Amount	
5 Cost Est. Class	Program/Allowance Ta	sk Information
1/1/2018 Cost Est. Date	Project Manager	

Phase Total	Expenses F	By FY	(All figures	are in S	1 000's)
I HUSC IOIGI	LADCIISCS L	.,			1,000 31

CIP Number

Description

Cost Est. Source

Cost Est. Prepared By

Thase total Expenses by 11 (All lightes die iii \$1,000 s)											
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

n ase Design			Contract C	S-1630	Status	Closed Out
fle CS-1630: Black 8	& Veatch	n: Master Specs				
Phase Budget Wate	r			Cost Allocation	СТА	
Phase Status Close	ed Out			Funding Source	Revenu	e Financed Capital
Start Date				Fund	Improve	ement & Extension Fun
End Date			U	seful Life >20Yrs?	No	
Cost Esti	Cost Estimation Information			eral Loan Amount		
	5	Cost Est. Class	Pro	gram/Allowance	Task Info	ormation
		Cost Est. Date	Project Manager			
		Cost Est. Source	CIP Number	170101		
		Cost Est. Prepared By	Description			

170100 CIP#

Water Treatment Plant / Pump Station Allowance

Phase GLWA Employees F	Project manager	nent		Contract N	۱A	Status	Active	
Fitle GLWA Salaries	,							
Phase Budget Water					Cost Alloc	ation CTA		
Phase Status Active					Funding So	ource Bond Pr	oceeds	
Start Date						Fund Constru	ction Bond Fund	
End Date				1	Useful Life >2	OYrs? No		
Cost Estima		Tot. Federal Loan Amount					\$0	
5	5 Cost Est. Class			Program/Allowance Task Information				
1/1/2018	Cost Est. D	ate	Project Manager					
GLWA	Cost Est. So	ource	CIP Number					
GLWA	Cost Est. Pi	epared By		Description				
Cost Type	Fiscal Year	Expense		Fringe BenefitNo	onPersonne	Con	nment	
GLWA Salaries CIP2020	FY19	(\$120	48	6			
GLWA Salaries CIP2020	FY20		\$120	48	6			
GLWA Salaries CIP2020	FY21	(120	48	6			

Thase total Expenses by 11 (All lightes are in \$1,000 s)											
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total			
	174	174	174					522			



Water Treatment Plant / Pump Station Allowance

Phase not applicable	Contract NA	Status Closed Out
Title Prior Year Actual Expenses		
Phase Budget Water	Cost Allocation	n CTA
Phase Status Closed Out	Funding Source	9
Start Date	Fund	d l
End Date	Useful Life >20Yrs?	?
Cost Estimation Information	Tot. Federal Loan Amoun	t
5 Cost Est. Class	Program/Allowance	e Task Information
1/1/2018 Cost Est. Date	Project Manager	
GLWA Cost Est. Source	CIP Number	
GLWA Cost Est. Prepared By	Description	

Cost Type	Fiscal Year	Expense	Fringe Benefil	NonPersonne	Comment
Construction	FY18-	\$259			SCP-DWS-059
Construction	FY18-	\$126			CS-1738
Construction	FY18-	\$263			SCP-CON-094
Engineering Services	FY18-	\$15			SCP-DWS-059
Engineering Services	FY18-	\$64			CS-1656
Engineering Services	FY18-	\$45			CS-1738
Engineering Services	FY18-	\$27			SCP-CS-1692
Engineering Services	FY18-	\$16			SCP-CON-094
Engineering Services	FY18-	\$132			CS-187
Unknown	FY18-	\$5,636			Diff than 2019 CIP (6777)
GLWA Salaries CIP2020	FY18-	\$2	1	0	SPC-NE-017
GLWA Salaries CIP2020	FY18-	\$6	2	0	SPC-DWS-059
GLWA Salaries CIP2020	FY18-	\$22	7	0	CS-1738
GLWA Salaries CIP2020	FY18-	\$1	2	0	CON-153

Water Treatment Plant / Pump Station Allowance

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2020	FY18-	\$12	5	0	SCP-CS-1692
GLWA Salaries CIP2020	FY18-	\$1	1	0	SPC-CON-094
GLWA Salaries CIP2020	FY18-	\$2	1	0	CS-1656
GLWA Salaries CIP2020	FY18-	\$1	1	0	CS-187

	Thase foral Expenses by TT (7th lightes are in \$1,000 s)										
Prior Yr /	Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	6,650								6,650		

GLWA Great Lakes Water Authority

GLWA FY 2020-2024 CIP

Water Treatment Plant / Pump Station Allowance

Phase Study Contract CS-187 Status Active

Title GLWA-CS-187: FK Eng: Raw Water Intake

Was formerly GI	LWA-SCP-CS-1623, change order
Phase Budget	Water
Phase Status	Active
Start Date	3/17/2014
End Date	12/12/2019

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

added funds and changed contract number to GLWA-CS-187.

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

Maher Abbasi

170109

This project involves the comprehensive inspection, condition assessment and 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	Fiscal Year	Expense	Fringe E	Benefit NonPersonne	Comment
Engineering Services	FY19		\$96		2020CIP
Task	Start Date	End Date	Duration		
Project Execution	6/23/2017	12/12/2019	902		
Project Closeout	12/13/2019	3/1/2020	79		

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	96							96

170100 CIP#

Water Treatment Plant / Pump Station Allowance

ase Budget	Water			Cost Allocation	CTA	
Phase Status	Closed Out			Funding Source	Revenu	e Financed Capital
Start Date				Fund	Improve	ement & Extension Fun
End Date			U	seful Life >20Yrs?	No	
Co	ost Estimatio	n Information	Tot. Fede			
	5	Cost Est. Class	Pro	gram/Allowance	Task Info	ormation
		Cost Est. Date	Project Manager			
		Cost Est. Source	CIP Number	170116		
		Cost Est. Prepared By	Description			

GLWA FY 2020-2024 CIP Great Lakes Water Authority Water Treatment Plant / Pump

Water Treatment Plant / Pump Station Allowance

				•					
Phase Construction			Contract Sc	CP-CON-094	Status	Active			
Title SCP-CON-094: 2	Z Contr: Be	elle Isle Water Station							
Phase Budget Wate	er e			Cost Allocation	СТА				
Phase Status Activ	/e			Funding Source	Bond Pro	oceeds			
Start Date	Start Date 2/1/2016			Fund Construction Bo					
End Date		8/1/2018	l						
Cost Es	timation I	nformation	Tot. Federal Loan Amount						
	1	Cost Est. Class	Pro	Task Info	nformation				
		Cost Est. Date	Project Manager	Todd King					
		Cost Est. Source	CIP Number	170103					
		Cost Est. Prepared By	Description		of the thr	ent and ee 90 ft-long Belle Isle e design documents			
						oder CS-1425A Task 45			

	Task	Start Date	End Date	Duration
Pro	oject Execution	7/19/2017	7/19/2018	365
Pro	oject Closeout	7/20/2018	10/11/2018	83

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

Prior Yr Actuals	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)

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	6,650	3,176	3,000	3,000	3,000	3,000	3,000	15,000	39,826



170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

Innovation
Water MP Right Sizing
Reliability/Redundancy

□ NEWTP Repurposing

Project Statu Active

CIP Type Allowance

Example of concrete testing



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 Programs

Class Lvl 3 Programs

Location Multiple Counties

Fund and Cost Center Water - 5519-882111

Project Significance	Provides readily accessible, qualified testing and inspection services for unforeseen and minor projects
Scope of Work	This engineering/technical services contract involves as-needed engineering and technical services related to geotechnical investigations and related geotechnical engineering, construction materials sampling and testing, environmental media sampling and testing, soils sampling and testing, land surveying, corrosion testing and inspection, computer-aided design, and construction inspection.
Challenges	N/A - Under Procurement
Project History	Given the size and age of the system, as-needed services are required to supplement GLWA staff to identify and define problems that arise and must be addressed prior to the next CIP cycle.
Related Project	TBD
Lookup Driver	N/A - Under Procurement
Other Important Info	n/a
Explanation	N/A - Under Procurement



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

Project Manag	ger Project R	isk Matrix Scoring	Project Manager Score
Criteria	Score	Comment	20
Condition	1		20
Efficiency and Innovation	1		
inancial	1		
D&M	1		
Performance (Service Level/Reliability)	1		
Public Benefit	1		
Public Health & Safety	1		
Regulatory (Environmental/Legal)	1		
Review Comm	nittee Project	Risk Matrix Scoring	Review Committee Score
Criteria	Score	Comment	20
Condition	1		
Efficiency and Innovation	1		
Financial	1		
O&M	1		
Performance (Service Level/Reliability)	1		
Public Benefit	1		

170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

Phase Study and Design and Construction Assistance

Contract CS-201

Status Under Procurement

Title CS-201 As Needed Construction Materials, Environmental Media and Special Testing Services, Construction Inspection, and Other Technical Services

Now CS-201			
Phase Budget	Water		Cost Allocation CTA
Phase Status	Under Procurement		Funding Source Revenue Financed Capital
Start Date			Fund Improvement & Extension Fun
End Date			Useful Life >20Yrs? No
Co	ost Estimatio	on Information	Tot. Federal Loan Amount
	5	Cost Est. Class	Program/Allowance Task Information
	1/1/2017	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	\$400			
Engineering Services	FY20	\$500			
Engineering Services	FY21	\$500			

Task	Start Date	End Date	Duration
Scope Development	6/1/2017	9/29/2017	120
Procurement	9/29/2017	5/22/2018	235
Project Execution	5/23/2018	7/5/2021	1139
Project Closeout	7/6/2021	10/4/2021	90

		1 1143	Jenses by i	1 (/ 111 119 01	CS GIC III Q	1,000 5)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	400	500	500	0	0	0	0	1,400



170200 CIP#

As Needed Construction Materials, Environmental Media and Special Testing Services,

ase not applicab	le				Contract N	Sta	tus Closed O	ut		
le Prior Year Actu	ıal Expen	ses								
Phase Budget Wa	ter			Cost Allocation CTA						
Phase Status Clos	sed Out					Funding S	ource			
Start Date							Fund			
End Date					l	Jseful Life >2	20Yrs?			
Cost E	stimation	Information			Tot. Fede	eral Loan Ar	mount		\$0	
	Cost Est. C	lass		Pro	gram/Allow	vance Task	Information			
1/1/	′2015	Cost Est. D	ate	Project Manager						
GLWA		Cost Est. S	ource	CIP Number						
GLWA		Cost Est. P	repared By	d By Description						
Cost Type		Fiscal Year	Expense	e	Fringe Benefit <mark>No</mark>	nPersonne	(Comment		
LWA Salaries CIP20)20 F	′ 18-		\$1		1	170201			
		Pha	se Total Exp	enses	By FY (All figur	es are in S	1.000's)			
Prior Yr Actuals	FY19	FY20	FY21	FY2		FY24	FY25+	Total		
1								1		

As Needed Construction Materials, Environmental Media and Special Testing Services,

	ees Projec	t manager	nent		Contract	NA	Sto	atus Active	
itle GLWA Salaries									
Phase Budget Wate	er					Cost Alloc	cation CTA	\	
Phase Status Activ	е					Funding S	ource Rev	enue Finance	d Capital
Start Date							Fund Imp	rovement & E	xtension Fun
End Date						Useful Life >2	20Yrs? No		
Cost Est	imation In	formation			Tot. Fe	deral Loan Ar	mount		\$0
	5	Cost Est. C	lass		P	rogram/Allow	vance Task	Information	
1/1/2	015	Cost Est. D	ate	Р	roject Manage	er			
GLWA		Cost Est. So	ource	CIP Number					
GLWA Cost Est. Prepared By				_					
GLWA		Cost Est. Pi	epared By	D	escription				
GLWA		Cost Est. Pi	epared By	D	escription				
GLWA Cost Type	Fis	Cost Est. Pi	Expens		Pescription Fringe Benefit	NonPersonne		Comment	
		scal Year			·	NonPersonne 2		Comment	
Cost Type	20 FY1	scal Year 9		e	Fringe Benefil	NonPersonne 2 2		Comment	
Cost Type GLWA Salaries CIP202	20 FY1 ¹	scal Year 9		e \$50	Fringe Benefil 20	2		Comment	
Cost Type GLWA Salaries CIP202 GLWA Salaries CIP202	20 FY1 ¹	scal Year 9 0	Expens	e \$50 \$50 \$50	Fringe Benefill 20 20 20 20	2 2 2		Comment	
Cost Type GLWA Salaries CIP202 GLWA Salaries CIP202	20 FY1 ¹	scal Year 9 0	Expens	e \$50 \$50 \$50	Fringe Benefit 20 20 20 20	2 2 2		Comment	

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	1	472	572	572	0	0	0	0	1,617

Water Treatment Plant Automation Program

	Innovation
	Water MP Right Sizing
	Reliability/Redundancy
	NEWTP Repurposing

Project Statu Active

CIP Type Program



Project Engineer/Manager Jeffrey Dorsey

Manager Terry Daniel

Managing Dept Water Eng

Date Original Business Case Prepared 4/27/2017

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 The automation design and construction project comes from recommendations that identified existing station process data conditions, station needs, GLWA mission critical assets, alternative improvement options to address identified needs, recommended improvements to address the needs, prioritized projects based on the GLWA CIP scoring tool, and scheduling for making the improvements along with associated capital improvement budgets associated with each project established under CS-108.

Scope of Work | The purpose of this project is to implement the recommendations from CS-108 that are prioritized in five (5) year increments with an estimated cost of \$1 million dollars per year over a twenty (20) year span.

Challenges Standardization of multiple different data process equipment already installed throughout the 5 plants could be a problem.

Project History The GLWA Water Operations division is comprised of five water treatment plants. Each plant has process areas ranging from intake, sedimentation, chlorination, filtration and distribution systems. One of the directives from the organizational objectives is to provide the treatment plants with automation. This automation would be one of the main drivers for increased efficiency in data monitoring and regulatory reporting and reduced workload and maintenance cost. The recommendations from this assessment will be the catalyst for automation projects at the pumping stations over the next 20-year planning period. In addition, the recommendations from this assessment are required to be prioritized in 5-year increments with estimated costs.

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.

170300 CIP#

Water Treatment Plant Automation Program

Phase not applicable	le			Contract NA					tus Closec	d Out
Title Prior Year Actu	ıal Exper	nses								
Phase Budget Wat		Cost Allocation CTA								
Phase Status Clos					Funding S	Source				
Start Date								Fund		
End Date							Useful Life >	20Yrs?		
Cost E	Cost Estimation Information						deral Loan A	mount		
	5	Cost Est. C	lass			Pr	ogram/Allov	wance Task	Information	1
1/1/	1/1/2017 Cost Est. Date				Project Manager					
GLWA		Cost Est. So	ource	CIP Number						
GLWA		Cost Est. Pi	epared By	[Descript	ion				
Cost Type		Fiscal Year	Expens	e	Fringe	BenefitN	onPersonne		Comment	
Engineering Services	s F	Y18-	\$1	,364				FY18		
Unknown	F	Y18-		\$13				FY17		
		Pha	se Total Exp	ense	s By FY	(All figu	ıres are in \$	51,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY		FY23	FY24	FY25+	Total	
1,377									1,377	

Water Treatment Plant Automation Program

Capital
ension Fun
\$0
_

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	

i mass retail expenses by it (7 th ingeres are in \$1,000 b)								
Prior Yr Actuals	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
	Funding Source	Revenue Financed Capital
	Fund	Improvement & Extension Fun
Us	seful Life >20Yrs?	No
Tot. Fede	ral Loan Amount	
Prog	gram/Allowance	Task Information
Project Manager		
CIP Number		
Description		

Cost Type	Fiscal Year	Expense	Fringe BenefitNonPersonne	Comment
Construction	FY20	\$1,500		
Construction	FY21	\$1,500		
Construction	FY22	\$1,500		
Construction	FY23	\$1,500		
Construction	FY24	\$105		

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

Phase Design Contract CS-108 Status Pending Close-out

Title CS-108, Arcadis, WTP Automation

CS-108 Arcadis of Michigan

Phase Budget Water

Phase Status Pending Close-out

Start Date 1/1/2017

End Date 5/31/2017

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

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

Jeffrey Dorsey

170301

Project was formerly 170113. This project will provide auditing and a condition assessment of process data networks at each water plant. Additionally, 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)

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 Statu Active

CIP Type Program

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 Lvl 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
Explanation	



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

Water Transmission Improvement Program

Project Manag	Project Manager Score			
Criteria	Criteria Score Comment			
Condition		3	56.4	
Efficiency and Innovation		1		
-inancial		2		
M&C		4		
Performance (Service Level/Reliability)		2		
Public Benefit		5		
Public Health & Safety		5		
Regulatory (Environmental/Legal)		1		
Review Comm	nittee Projec	t Risk Matrix Scoring	Review Committee Score	
Criteria	Score	Comment	0	
Condition				
Efficiency and Innovation				
Financial				
O&M				
Performance (Service Level/Reliability)				
Public Benefit			7	



Water Transmission Improvement Program

Phase Construction				Contract N	IA	Status	Future Planned Start
Title Unallocated Water Tr	ansmission Imp	orovement Pro	ogram				
Phase Budget Water		Cost Allocation CTA					
Phase Status Future Plan	nned Start				Funding S	ource Bond Pro	oceeds
Start Date						Fund Construc	ction Bond Fund
End Date				l	Jseful Life >	20Yrs? Yes	
Cost Estimation	on Information			Tot. Fed	eral Loan A	mount	
5	Cost Est. C	Class		Pro	gram/Allov	vance Task Info	rmation
1/1/2015	Cost Est. D	Date	Proj	ect Manager			
CDM Smith	Cost Est. S	ource	CIP	Number			
CDM Smith	Cost Est. P	repared By	Des	cription		·	
	1						
Cost Type	Fiscal Year	Expense		nge BenefitNo	nPersonne	Com	nment
Construction Construction	FY19		3755				
Construction	FY20 FY21		,205 ,655				
Construction	FY22		,655				
Construction	FY23		,655				
Construction	FY24	-	,655				
Construction	FY25+	\$100				2020CIP	
Task	Start Date	End Date	Duration	on	<u>'</u>		<u>'</u>
Scope Development							
Procurement							
Project Execution							

Water Transmission Improvement Program

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	755	1,205	1,655	1,655	1,655	1,655	100,000	108,580

Prior Yr Actuals

FY19

100

FY20

150

FY21

200

GLWA FY 2020-2024 CIP

170400 CIP#

Water Transmission Improvement Program

Phase Design				Contract N.	A	Status	Future Planned Start
Title Water Transmission	Improvement Pr	ogram					
Phase Budget Water			Cost Allocation CTA				
Phase Status Future Pl	lanned Start				Funding S	ource Bond Pro	oceeds
Start Date						Fund Construc	ction Bond Fund
End Date				U	seful Life >2	20Yrs? Yes	
Cost Estimo	ation Information			Tot. Fede	eral Loan Ar	mount	
5	Cost Est. (Class		Pro	gram/Allow	ance Task Info	rmation
1/1/2015	Cost Est. [ate	Proje	ct Manager			
CDM Smith	Cost Est. S	ource	CIP N	umber			
CDM Smith	Cost Est. F	repared By	Desci	ription			
Cost Type	Fiscal Year	Expense	e Frinc	ge BenefilNo	nPersonne	Com	ıment
Engineering Services	FY19		\$100				
Engineering Services	FY20		150				
	1 120	`	p100				
Engineering Services	FY21		\$200				
Engineering Services Engineering Services		(
	FY21	5	\$200				
Engineering Services	FY21 FY22	\$	\$200				
Engineering Services Engineering Services	FY21 FY22 FY23	\$	\$200 \$200 \$200	n			
Engineering Services Engineering Services Engineering Services	FY21 FY22 FY23 FY24		\$200 \$200 \$200 \$200	n			
Engineering Services Engineering Services Engineering Services Task	FY21 FY22 FY23 FY24		\$200 \$200 \$200 \$200	n			
Engineering Services Engineering Services Engineering Services Task Scope Development	FY21 FY22 FY23 FY24		\$200 \$200 \$200 \$200	n			

FY23

200

FY24

200

FY25+

0

Total

1,050

FY22

200

170400 CIP#

Water Transmission Improvement Program

170403

Phase Construction Contract DBW-070 Status Pending Close-out

Title DBW-070 Weiss: Lapper County Chlor Booster

Phase Budget	Water			
Phase Status	Pending Close-out			
Start Date				
End Date				
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	СТА
	Funding Source	Bond Proceeds
	Fund	Construction Bond Fund
Us	seful Life >20Yrs?	Yes
Tot. Feder	ral Loan Amount	
Prog	gram/Allowance	Task Information
Project Manager		

DBW-070 Weiss: Lapper County Chlor Booster

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

		1 11 010	<u> </u>		. (/		.,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

CIP Number

Description

170400 CIP#

Water Transmission Improvement Program

							•						
Pł	nase GLWA Em	nployees Pr	oject manager	ment		Contract	NA		Status	Active			
Ti	lle GLWA Salo	aries											
	Phase Budget	Water					Cost Allo	cation (CTA				
	Phase Status	Active					Funding S	Source	Bond Pro	oceeds			
	Start Date							Fund	Construc	ction Bond	Fund		
	End Date						Useful Life >	20Yrs?	10				
	Co	ost Estimatio	on Information			Tot. Fe	ederal Loan A	mount				\$0	
		5	Cost Est. C	lass	Program/Allowance Task Information								
		1/1/2015	Cost Est. D	ate	P	roject Manage	er						
	CDM Smith		Cost Est. S	ource	C	CIP Number							
	CDM Smith		Cost Est. P	repared By		escription							
	Cost Ty	pe	Fiscal Year	Expens	е	Fringe Benefit	NonPersonne		Com	ment			
C	SLWA Salaries C	CIP2020	FY19		\$100	40	5						
C	SLWA Salaries C	IP2020	FY20		\$100	40	5						

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
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 CIP2020	FY23	\$100	40	5	
GLWA Salaries CIP2020	FY24	\$100	40	5	

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	145	145	145	145	145	145	0	870

170400 CIP#

Water Transmission Improvement Program

Phase Construction Contract SCP-DWS-018 Status Pending Close-out Title SCP-DWS-018: Z Contract: Ypsilanti Pumping Station By-Pass Valve Cost Allocation CTA **Phase Budget** Water Phase Status Pending Close-out 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** Eric Kramp 1/1/2015 Cost Est. Date **CIP Number** 170401 CDM Smith Cost Est. Source Description Cost Est. Prepared By CDM Smith

GLWA FY 2020-2024 CIP Great Lakes Water Authority Water Transmission Improve

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 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	

Pro	gram/Allowance Task	Information
Project Manager	Biren Saparia	
CIP Number	170402	
Description	Manned visual, soun inspection of 84" wat	ding and electromagnetic

Task	Start Date	End Date	Duration
Scope Development	11/13/2016	11/15/2016	2
Procurement	11/16/2016	11/21/2016	5
Project Execution	11/22/2016	8/30/2017	281
Project Closeout	9/1/2017	9/30/2017	29

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

Water Transmission Improvement Program

Title Prior Year Actual Expenses Phase Budget Water Phase Status Closed Out Phase Status Closed Out Start Date End Date Useful Life >20Yrs? Cost Estimation Information 5 Cost Est. Class Program/Allowance Task Information 1/1/2015 Cost Est. Source CDM Smith Cost Est. Source CDM Smith Cost Est. Prepared By Cost Type Fiscal Year Expense Fringe BenefitNonPersonne Comment FY18- \$573 FY18-DBW-070
Phase Status Closed Out Start Date End Date Cost Estimation Information 5
Start Date End Date Useful Life >20Yrs? Cost Estimation Information 5
Cost Estimation Information 5
Cost Estimation Information 5
5 Cost Est. Class 1/1/2015 Cost Est. Date CDM Smith Cost Est. Source CDM Smith Cost Est. Prepared By Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment
CDM Smith Cost Est. Source CIP Number Description Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment
CDM Smith Cost Est. Source CDM Smith Cost Est. Prepared By CIP Number Description Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment
CDM Smith Cost Est. Prepared By Description Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment
Cost Type Fiscal Year Expense Fringe Benefit NonPersonne Comment
Construction FY18- \$359 FY18-DWS-018
Engineering Services FY18- \$35 FY18-PO4292
Unknown FY18- \$955 FY17
Unknown FY18- \$120 FY16
GLWA Salaries CIP2020 FY18- \$3 1 FY18
Phase Total Expenses By FY (All figures are in \$1,000's)
Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total
2,046

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	

170400 CIP#

Water Transmission Improvement Program

CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2020	0	0	2,046	1,000	1,500	2,000	2,000	2,000	2,000	100,000	112,546

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

☐ Innovation

☐ Water MP Right Sizing

✓ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Program

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.

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

69.4

Review Committee Project Risk Matrix Scoring

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	

Review Committee Score

66.8

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

hase not applic	cable				Contract	NA	Sta	tus Closed O	u†	
tle Prior Year A	Actual Exp	enses								
Phase Budget	Water			Cost Allocation CTA						
Phase Status	Closed O	J†				Funding \$	ource			
Start Date							Fund			
End Date	•					Useful Life >2	20Yrs?			
Co	st Estimati	ion Information			Tot. Fe	ederal Loan Ar	mount		\$0	
	5	Cost Est. C	Class		ı	Program/Allow	vance Task	Information		
1	1/1/2015 Cost Est. Date			Project Manager						
CDM Smith Cost Est. Source			C	CIP Number						
CDM Smith Cost Est. Prepared By			repared By	D	escription					
-										
Cost Typ	oe	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne	(Comment		
Construction		FY18-	\$3	3,430		F	Y18-CON-1	81		
SLWA Salaries Cl	IP2020	FY18-		\$1		(CON-181			
		Pho	se Total Exp	enses	s By FY (All fig	ures are in \$	1,000's)			
Prior Yr Actuals	s FY1		FY21	FY2		FY24	FY25+	Total		
3,4	131							3,431		

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

Phase Construction Contract CON-181 Status Active

CON-181 Transmission System Valve Replacement/Rehabilitation

Water Transmission Main Assessment/Repair Phase Budget Water **Phase Status** Active 8/1/2017 Start Date 6/30/2019 **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? Yes **Tot. Federal Loan Amount**

Program/Allowance Task Information

Project Manager 170502

CIP Number

Description

Todd King

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	NonPersonne	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

Transmission System Valve Rehabilitation and Replacement Program

Phase Design and Build	Contract NA	Status Active
------------------------	-------------	---------------

Title Unallocated Transmission System Valve Assessment and Rehabilitation/Replacement

Phase Budget	Water
Phase Status	Active
Start Date	8/1/2017
End Date	7/30/2019

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	СТА
	Funding Source	Bond Proceeds
	Fund	Construction Bond Fund
Us	seful Life >20Yrs?	Yes
Tot. Feder	al Loan Amount	
Prog	ram/Allowance	Task Information
Project Manager		

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

CIP Number

Description

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

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	726	4,000	4,000	10,000	18,726

170500 CIP#

Transmission System Valve Rehabilitation and Replacement Program

Phase GLWA Emplo	ent	C	Contract N.	A	Statu	s Active				
Title GLWA Salaries										
Phase Budget Wa	ter					Cost Alloco	ation CTA			
Phase Status Act	ive					Funding So	urce Bond F	Proceeds		
Start Date						ı	Fund Constr	ruction Bon	nd Fund	
End Date					U	seful Life >20	Yrs? No			
Cost E	stimation lı	nformation			Tot. Fede	eral Loan Am	ount		\$0	
	5 Cost Est. Class				Program/Allowance Task Information					
1/1/	/2015	Cost Est. Do	te	Project	t Manager					
CDM Smith		Cost Est. So	urce	CIP Nu	mber					
CDM Smith		Cost Est. Pre	epared By	Descri	otion					
		Phas	e Total Exp	enses By F	Y (All figure	es are in \$1,	,000's)			
Prior Yr Actuals	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)

		<u> </u>		<i>- - - - - - - - - -</i>			<u> </u>		σ	,,	
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	3,431	4,000	4,000	3,274	4,000	4,000	4,000	10,000	36,705



Water Transmission Main Asset Assessment Program

✓ Innovation

☐ Water MP Right Sizing

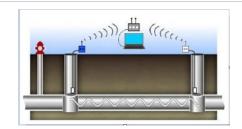
☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Active

CIP Type Program

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.

GLWA Salaries CIP2020

FY24

GLWA FY 2020-2024 CIP

Water Transmission Main Asset Assessment Program

Phase GLWA En Title GLWA Salo		roject manager	ment		Contract	NA	Status	Active	
Phase Budget						Cost Allo	cation CTA		
	Phase Status Active					Funding S	iource Revenue	e Financed Capit	al
Start Date							Fund Improve	ment & Extensior	ı Fun
End Date						Useful Life >	20Yrs? No		
Co	ost Estimati	ion Information			Tot. Fe	ederal Loan A	mount		\$0
	5	Cost Est. C	lass			Program/Allov	vance Task Info	rmation	
		Cost Est. D	ate	Р	roject Manag	er			
		Cost Est. S	ource		CIP Number				
		Cost Est. P	repared By	D	Description				
Cost Ty	pe	Fiscal Year	Expense		Fringe Benefit	NonPersonne	Com	ıment	
GLWA Salaries C	CIP2020	FY19		\$84	33	4			
GLWA Salaries C	CIP2020	FY20		\$84	33	4			
GLWA Salaries C	CIP2020	FY21		\$84	33	4			
GLWA Salaries CIP2020 FY22					33	4			
GLWA Salaries C	CIP2020	FY23		\$84	33	4			

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

33

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
2 70.00	121	121	121	121	121	121	0	726

\$84



Water Transmission Main Asset Assessment Program Phase Design and Build **Status** Future Planned Start Contract NA Unallocated Water Transmission Main Asset Assessment Program Phase Budget Water Cost Allocation CTA **Phase Status** Future Planned Start Funding Source Revenue Financed Capital Fund Improvement & Extension Fun Start Date Useful Life >20Yrs? No. **End Date Tot. Federal Loan Amount Cost Estimation Information** 5 Cost Est. Class **Program/Allowance Task Information Project Manager** 8/1/2018 Cost Est. Date **CIP Number** Cost Est. Source Description Cost Est. Prepared By Cost Type Fiscal Year Fringe BenefitNonPersonne Comment Expense Design-Build FY19 \$2,379 Design-Build FY20 \$2,879 Design-Build \$3,879 FY21 Design-Build FY22 \$3,879 Design-Build FY23 \$4,879 Design-Build \$4,879 FY24 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

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

|--|

Water Transmission Main Asset Assessment Program

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

	CID	ΓV1./	FV17	FV10	FV10	EV00	EVO1	EV00	EV/02	EVO 4	FVOF	Talad
	CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2	2018			2,626	2,000	2,000	2,000	2,000		0	0	10,626
2	2019	0		2,627	2,501	3,001	4,001	4,001	5,001	5,001	0	26,133
2	2020	0	0		2,500	3,000	4,000	4,000	5,000	5,000	25,000	48,500



Reservoirs Inspection, Repair and Rehabilitation Program

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Pending Closeout

CIP Type Program

A GLWA reservoir



Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 4/23/2007

Year Project Added to CIP 2007

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 Identifying issues that may have a direct impact on water quality due to interior/exterior structural failure

Scope of Work The work provides for all Pumping Stations, study, design, and construction contract documents for rehabilitation and upgrades, and management services related to construction including award of contract, inspection during construction, and furnishing all construction work through provisional allowance for subagreements.

Challenges N/A - Pending Closeout

Project History

Related Project

Lookup Driver N/A - Pending Closeout

Other Important Info

Explanation N/A - Pending Closeout

170700 CIP#

Reservoirs Inspection, Repair and Rehabilitation Program

Phase Project Management Contract DWS-874 Status Pending Close-out

Title DWS-874 Unallocated Booster Stations and Reservoirs Inspection, Rehabilitation and Inspection Repair Program

Phase Budget	Water
Phase Status	Pending Close-out
Start Date	7/3/2013
End Date	10/30/2019

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

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

Project Manager	
CIP Number	170701
Description	

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

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

		I IIG3	e loidi Exp	penses by it (All ligores die ili \$1,000 s)					
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
	0	0	0	0	0	0	0	0	

Reservoirs Inspection, Repair and Rehabilitation Program

Phase not applicable			Contract NA Status Closed Out							
itle Prior Year Actual E	Expenses									
Phase Budget Water			Cost Allocation CTA							
Phase Status Closed	Out				Funding S	ource				
Start Date						Fund				
End Date					Useful Life >2	20Yrs?				
Cost Estim	nation Information	ı		Tot. Fee	deral Loan Aı	mount				
	5 Cost Est.	Class		Pı	rogram/Allov	vance Task I	nformation			
1/1/201	5 Cost Est.	Date	Projec	ct Manage	r					
CDM Smith	Cost Est.	Source	CIP Number							
CDM Smith	CDM Smith Cost Est. Prepared B			Description Description						
	J									
Cost Type Fiscal Year Expe			e Fring	ge Benefit	IonPersonne	C	omment			
Construction FY18-			\$63		FY18 DWS-874					
Unknown FY18-			359		F	FY16				
Unknown FY18-			492		FY17					
Unknown	0,063 Pre-Bifurcation									
Phase Total Expenses By FY (All figures are in \$1,000's)										
Prior Yr Actuals	FY19 FY20	FY21	FY22	FY23	FY24	FY25+	Total			
12,977							12,977			
Proiect	Total Expense	s By FY Cor	npared	to Prior (CIPs (All fic	ures are i	n \$1.000's)		

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



170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Innovation
Water MP Right Sizing

Project Statu Active

✓ Reliability/Redundancy

CIP Type Program

☐ NEWTP Repurposing

Project Engineer/Manager Timothy Kuhns

Manager Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared 10/12/2016

Year Project Added to CIP 2016

Budget Water

Class Lvl 1 Water

Class Lvl 2 Programs

Class Lvl 3 Programs

Location Multiple Counties

Fund and Cost Center

Project Significance This project merges all CIPs associated with Reservoir Rehabilitation except 170800 into a single, Omnibus CIP Project. This new project is being managed against a overall repair schedule to mitigate conflicts in the transmission system so as to minimize the impact for MDEQ Mandated inspections and repairs to GLWA Reservoirs at Booster Stations and Water Treatment Plants.

Scope of Work The contract will provide inspection and maintenance of the existing 23 of 33 potable water storage tanks in the system.

Challenges Considerable plant, transmission system, and Jurisdiction Haven Authority buy-in is required to perform this contract. Isolation of the Reservoir has been a challenge for GLWA and its predecessor agency.

Project History This project combines CS132023 and CIP 132024 into a single project.

Related Project CIP 170800 (CS-151A), and previous projects DWS-874 and DWS-823.

Lookup Driver 3 - Regulatory

Other Important Info

Explanation MDEQ requires inspection of potable water storage tanks on a fixed schedule.



170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Project Manager Project Risk Matrix Scoring									
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								

Project Manager Score

62.8

Review Committee Project Risk Matrix Scoring

Review Committee Score

Construction

Construction

Construction

FY23

FY24

FY25+

GLWA FY 2020-2024 CIP

170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

2020CIP

2020CIP

2020CIP

Phase Construc	tion				Contract	TBD	Status	Future Planned Start	•	
Title Constructi	on									
Phase Budget	Water					Cost Allo	cation CTA			
Phase Status	Future Plai	nned Start		Funding Source Bond Proceeds						
Start Date							Fund Construc	ction Bond Fund		
End Date						Useful Life >	20Yrs? Yes			
Cost Estimation Information					Tot. Federal Loan Amount \$0					
5 Cost Est. Class				P	rogram/Allov	wance Task Info	ormation			
	1/1/2015	Cost Est. D	ate	F	Project Manage	er				
CDM Smith		Cost Est. S	ource	CIP Number						
CDM Smith		Cost Est. P	repared By		Description					
Cost Ty	pe	Fiscal Year	Expens	e	Fringe Benefit	VonPersonne	Con	nment		
Construction		FY20	\$4	4,496			2020CIP			
Construction		FY21	\$4	4,630			2020CIP			
Construction		FY22	\$4	4,769			2020CIP			

Phase Total Ex	penses By F	FY (All figure	es are in \$	1,000's)

\$3,275

\$5,060

\$30,130

Thase total Expenses by 11 (All lightes are in \$1,000 s)										
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	0	4,496	4,630	4,769	3,275	5,060	30,130	52,360		

170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

i ase GLWA En le GLWA Salo		ject management	Contract NA	Status	Active
Phase Budget	Water		С	ost Allocation CTA	
Phase Status	Active		Fu	unding Source Bond Prod	ceeds
Start Date				Fund Construct	tion Bond Fund
End Date			Usef	ul Life >20Yrs?	
Co	ost Estimation	n Information	Tot. Federal	Loan Amount	\$0
	5	Cost Est. Class	Progra	m/Allowance Task Infor	mation
	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
GLWA Salaries CIP2020	FY19	\$7	3	0	2020CIP
GLWA Salaries CIP2020	FY20	\$34	13	2	2020CIP
GLWA Salaries CIP2020	FY21	\$35	14	2	2020CIP
GLWA Salaries CIP2020	FY22	\$34	13	2	2020CIP
GLWA Salaries CIP2020	FY23	\$35	14	2	2020CIP
GLWA Salaries CIP2020	FY24	\$34	13	2	2020CIP
GLWA Salaries CIP2020	FY25+	\$208	82	10	2020CIP

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

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	10	49	51	49	51	49	300	559

Prior Yr Actuals

FY19

FY20

FY21

FY22

FY23

FY24

FY25+

Total

GLWA FY 2020-2024 CIP

170800 CIP#

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

	7							
Phase Study and Design	and Construction	Assistance	Co	ontract TBI)	Sto	atus Active	
Fitle Engineering								
Phase Budget Water			Cost Allocation CTA					
Phase Status Active					Funding S	Source Bone	d Proceeds	
Start Date						Fund Con	nstruction Bond Fund	
End Date				Us	seful Life >	20Yrs? Yes		
Coal Falina	adia a Infara adia a			Tot. Feder	al Loan A	mount		
Cost Estimation Information								
	Cost Est. C		Destant	_	jram/Allov	wance Task	Information	
1/1/201	5 Cost Est. D	ate	-	Manager]	
CDM Smith	Cost Est. S	ource	CIP Nun	nber				
CDM Smith Cost Est. Prepare			Descript	ion				
Cost Type	Fiscal Year	Expense	e Fringe	BenefitNor	ıPersonne	(Comment	
Engineering Services	FY19		\$472			2020CIP		
Engineering Services	FY20		\$583			2020CIP		
Engineering Services	FY21		\$530			2020CIP		
Engineering Services	FY22		\$364			2020CIP		
Engineering Services Engineering Services	FY23 FY24		\$562 \$386			2020CIP 2020CIP		
Engineering Services	FY25+		3,348			2020CIP		
Task	Start Date	End Date	Duration					
Scope Development								
D								
Procurement								
Project Execution								

System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Phase not appli			Contract NA				Status Closed Out				
Title Prior Year	Actual E	xpense	es								
Phase Budget	Phase Budget Water				Cost Allocation CTA						
Phase Status	Closed	Out					Funding S	ource			
Start Date								Fund			
End Date						l	Jseful Life >2	20Yrs?			
Cost Estimation Information					Tot. Fede	eral Loan Ar	mount		\$0		
	1 Cost Est. Class					1					
			Cost Est. Do	ıte	Projec	t Manager					
			Cost Est. So	urce	CIP Nu	mber					
			Cost Est. Pr	epared By	Descri	ption					
			Phas	e Total Exp	enses By F	Y (All figur	es are in \$	1,000's)			
Prior Yr Actua	ls F	Y19	FY20	FY21	FY22	FY23	FY24	FY25+	Total		
	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
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	0	482	5,128	5,211	5,182	3,888	5,495	33,778	59,164

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

☐ Innovation

☐ Water MP Right Sizing

☐ Reliability/Redundancy

☐ NEWTP Repurposing

Project Statu Future Planned

CIP Type Program

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.

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

Project Manager I	Project Manager Project Risk Matrix Scoring									
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									

Project Manager Score

20

Review Committee Project Risk Matrix Scoring

_	
Score	Comment
1	
1	
1	
1	
1	
1	
1	
1	
	Score 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Review Committee Score

20

Project Closeout

12/2/2022

3/2/2023

GLWA FY 2020-2024 CIP

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase Construction			(Contract NA		;	Status	Future Pla	anned Start
Title Unallocated Subur	ban Water Mete	er Pit Rehabilit	ation and N	Meter Replace	ment				
Phase Budget Water					Cost Alloc	ation Su	burbc	ın Only	
Phase Status Future P	lanned Start			F	Funding Sc	ource Re	evenue	e Financed	d Capital
Start Date						Fund In	nprove	ment & Ex	tension Fun
End Date				Use	eful Life >2	OYrs? N	0		
Cost Estimo	ation Informatio	n		Tot. Federo	al Loan An	nount			
1	Cost Est.	Class		Progr	am/Allow	ance Ta	sk Info	rmation	
	Cost Est.	Date	Projec	t Manager					
	Cost Est.	Source	CIP No	umber					
	Cost Est	Prepared By	B _{BV} Description						
Cost Type	Fiscal Year	Expens	e Fring	e BenefitNonF	ersonne		Con	nment	
Construction	FY19		,113						
Construction	FY20		\$190						
Construction	FY21		\$190						
Construction	FY22	-	3,997						
Construction	FY23		4,100		_	000015			
Construction	FY24	-	1,200			020CIP			
Construction	FY25+	\$20),500		2	020CIP			
Task	Start Date	End Date	Duration	1					
Scope Development									
Procurement									
Project Execution	1/1/201	8 12/1/2022	17	95					

90

170900 CIP#

Suburban Water Meter Pit Rehabilitation and Meter Replacement

						· · · · · · · · · · · · · · · · · ·		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	1,113	190	190	3,997	4,100	4,200	20,500	34,290

Phase GLWA Employees Project management

Contract NA

Status Active

Title GLWA Salaries

Phase Budget	Water				Cost Allocation	Suburban Only
Phase Status	Active				Funding Source	Revenue Financed Capital
Start Date					Fund	Improvement & Extension Fun
End Date				Us	seful Life >20Yrs?	No
Co	ost Estimati	ion Information		Tot. Feder	ral Loan Amount	\$0
	1	Cost Est. Class		Prog	gram/Allowance	Task Information
		Cost Est. Date		Project Manager		
		Cost Est. Source		CIP Number		
		Cost Est. Prepare	ed Bv	Description		

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

		I IIG3	C IOIGI EXP	ciliaca by i	i (All ligol	C3 GIC III Q	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

Suburban Water Meter Pit Rehabilitation and Meter Replacement

hase Construction					Contract C	ON-285	S	tatus	Under Pi	ocurem	ent
itle Wholesale Wate	er Meter	Pit Rehabilita	ation and Me	ter Replac	cement						
Phase Budget Water				Cost Allocation Suburban Only							
Phase Status Unde	er Procur	ement				Funding	Source Re	venue	Finance	d Capit	al
Start Date	Start Date						Fund Im	proven	nent & E	xtension	Fun
End Date					l	Jseful Life >	20Yrs? No)			
Cost Es	timation	Information			Tot. Fed	eral Loan A	mount				\$0
	1	Cost Est. C	lass		Pro	gram/Allo	wance Tas	sk Infori	mation		
9/4/2	2018	Cost Est. D	ate	Projec	ct Manager						
				CID N	umber	170901					
Previous Work		Cost Est. So	ource	CIFIN	unibei	170701					
Previous Work SA&MO			ource repared By		iption	170701					
						170701					
				Descr				Comr	nent		
SA&MO		Cost Est. Pi	Expense	Descr	iption		e 2020CIP	Comr	nent		
SA&MO Cost Type	FY	Cost Est. Pi	Expense	Descr e Fring	iption			Comr	nent		
SA&MO Cost Type Construction	FY FY	Cost Est. Pr	Expense \$1 \$3	Pescr Fring ,887	iption		2020CIP	Comr	nent		
Cost Type Construction Construction	FY FY	Cost Est. Pi	Expense \$1 \$3	Pescr Fring ,887 ,810	iption ge BenefitNo		2020CIP 2020CIP	Comr	nent		
Cost Type Construction Construction Construction	FY FY	Cost Est. Pa Fiscal Year (19 (20 (21	Expense \$1 \$3 \$3	Pescr Fring ,887 ,810 ,810	iption ge BenefitNo		2020CIP 2020CIP	Comr	nent		
Cost Type Construction Construction Construction Task	FY FY	Fiscal Year (19 (20 (21 Start Date	Expense \$1 \$3 \$3 End Date	Pescr Pering ,887 ,810 ,810 Duration	iption ge BenefitNo		2020CIP 2020CIP	Comr	nent		
Cost Type Construction Construction Construction Task Procurement	FY FY	Fiscal Year (19 (20 (21 Start Date 3/26/2018	Expense \$1 \$3 \$3 End Date 10/31/2018	Percentage Prince Prinscont Prince Prince Prince Prince Prince Prince Prince Prince Pr	ge Benefit No		2020CIP 2020CIP	Comr	nent		
Cost Type Construction Construction Task Procurement Project Execution	FY FY	Fiscal Year (19 (20 (21 Start Date 3/26/2018 11/1/2018 11/1/2021	Expense \$1 \$3 \$3 End Date 10/31/2018 10/31/2021	Pescr Pering ,887 ,810 ,810 Duration 10	ge Benefit No 219 095 80	onPersonne	2020CIP 2020CIP 2020CIP	Comr	nent		
Cost Type Construction Construction Task Procurement Project Execution	FY FY	Fiscal Year (19 (20 (21 Start Date 3/26/2018 11/1/2018 11/1/2021	Expense \$1 \$3 \$3 End Date 10/31/2018 10/31/2021 4/30/2022	Pescr Pering ,887 ,810 ,810 Duration 10	ge Benefit No 219 095 80	onPersonne	2020CIP 2020CIP 2020CIP		nent		

										,	
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

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
2019	0		410	4,613	3,690	3,690	3,997	4,100		0	20,500
2020	0	0		3,000	4,000	4,000	3,997	4,100	4,200	20,500	43,797



Lookup Driver

Explanation

Other Important Info

GLWA FY 2020-2024 CIP LH - WTP Sanitary Survey Improvements

☐ Innovation	Project Statu	Future Planned		
□ Water MP Right Si	zing CIP Type	Program		
☐ Reliability/Redund	= =	3 3		
☐ NEWTP Repurposi	ng			
Project Engineer/Ma	nager Grant Gartrell		Budg	et Water
Ма	nager Grant Gartrell		Class LvI	1 Water
Managing	Dept Water Eng		Class LvI	2 Programs
Date Original Busines	ss Case Prepared 1/4/2	018	Class LvI	3 Programs
Year Proj	ect Added to CIP 2017		Location	on Saint Clair County
			Fund and Cost Cen	er
Project Significance	Address the sanitary su sanitary surveys where	•	· · · · · · · · · · · · · · · · · · ·	part of its 3-year rotation of plant
Scope of Work	Design and construct in MDEQ during its 3-year	•	·	acilities that may be identified by the
Challenges	Possible negotiations w	ith MDEQ on item	ns they identify in sanitary surve	ys that GLWA may take exception.
Project History				
Related Project				



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

LH - WTP Sanitary Survey Improvements

Project Manag	Project Manager Score		
Criteria	Score	Comment	34
Condition	1		
Efficiency and Innovation	1		
inancial	1		
D&M	1		
Performance (Service Level/Reliability)	1		
Public Benefit	1		
Public Health & Safety	3	3	
Regulatory (Environmental/Legal)	3	3	
Review Comm	nittee Project	Risk Matrix Scoring	Review Committee Sco
Criteria	Score	Comment	0
Condition			
Efficiency and Innovation			
Financial			
O&M			1
Performance (Service Level/Reliability)			
Public Benefit			
Public Health & Safety			

Prior Yr Actuals

FY19

0

FY20

0

FY21

0

GLWA FY 2020-2024 CIP

171000 CIP#

LH - WTP Sanitary Survey Improvements

ise Budget	Water		Cost Allocation	CTA	
Phase Status	Active		Funding Source	Revenue Financed Capital	
Start Date	Date		Fund	Improvement & Extension Fun	
End Date			Useful Life >20Yrs?	No	
Co	ost Estimation	n Information	Tot. Federal Loan Amount	\$0	
	5 Cost Est. Class		Program/Allowance	Task Information	
		Cost Est. Date	Project Manager		
		Cost Est. Source	CIP Number		
		Cost Est. Prepared By	Description		

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

0

FY23

0

FY24

0

FY25+

0

Total

0

FY22



LH - WTP Sanitary Survey Improvements

Phase Budget Water		Cost Allocation	CTA
Phase Status New		Funding Source	Revenue Financed Capital
Start Date	4/17/2017	Fund	Improvement & Extension Fun
End Date	6/17/2029	Useful Life >20Yrs?	No
Cost Estima	tion Information	Tot. Federal Loan Amount	
5	Cost Est. Class	Program/Allowance	Task Information
12/27/2017	Cost Est. Date	Project Manager	
Educated Guess	Cost Est. Source	CIP Number	
G. Gartrell	Cost Est. Prepared By	Description	

Task	Start Date	End Date	Duration
Scope Development	4/1/2017	6/30/2017	90
Procurement	7/1/2018	7/1/2019	365
Project Execution	7/2/2019	6/16/2029	3637
Project Closeout	6/17/2029	9/15/2029	90

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

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

171100 CIP#

GLWA FY 2020-2024 CIP NE - WTP Sanitary Survey Improvements

☐ Innovation	Project Statu	Future Planned
☐ Water MP Right Si	zing CIP Type	Program
☐ Reliability/Redund		
□ NEWTP Repurposi	ng	
Project Engineer/Ma	nager Govind Patel	Budget Water
Ma	nager Grant Gartrell	Class Lvl 1 Water
Managing	Dept Water Eng	Class Lvl 2 Programs
Date Original Busines	ss Case Prepared 1/4/2	Class Lvl 3 Programs
Year Proj	ect Added to CIP	Location City of Detroit
		Fund and Cost Center
Project Significance		rvey needs that are identified by the MDEQ as part of its 3-year rotation of plant regulatory needs are identified.
Scope of Work		mprovements or modifications to plant process facilities that may be identified by the cycle of sanitary surveys.
Challenges	Possible negotiations w	ith MDEQ on items they identify in sanitary surveys that GLWA may take exception.
Project History		
Related Project		
Lookup Driver		
Other Important Info		



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

NE - WTP Sanitary Survey Improvements

Project	Risk Matrix Scoring	Project Manager Score
Score	Comment	34
	1	
	1	
	1	
	1	
	1	
	1	
	3	
	3	
e Projec	t Risk Matrix Scoring	Review Committee Score
Score	Comment	0
	Score Project	1 1 1 1 1 1 1 1 3 3 3 Pe Project Risk Matrix Scoring

171100 CIP#

NE - WTP Sanitary Survey Improvements

Phase Design and Build Contract NA Status Active

Title NE - WTP Sanitary Survey Improvements

Phase Budget	Water
Phase Status	Active
Start Date	4/1/2017
End Date	9/15/2028

Cost Estimation Information								
5	Cost Est. Class							
12/26/2017	Cost Est. Date							
GLWA Engineering	Cost Est. Source							
G. Gartrell	Cost Est. Prepared By							

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

Project Manager	,	
CIP Number		
Description		

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	6/16/2028	3637
Project Closeout	6/17/2028	9/15/2028	90

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

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

NE - WTP Sanitary Survey Improvements

hase GLWA Em	nployees Pro	oject manageme	ent	С	ontract N	4	Status	Active	
itle GLWA Salo	aries								
Phase Budget	Water					Cost Allocation	on CTA		
Phase Status	Active					Funding Source	Revenu	Je Financed	l Capital
Start Date						Fui	nd Improv	ement & Ext	tension Fun
End Date					U	seful Life >20Yr	s? No		
Co	ost Estimatio	n Information			Tot. Fede	ral Loan Amou	ınt		\$0
	5	Cost Est. Clo	ISS		Prog	gram/Allowand	ce Task Inf	ormation	
		Cost Est. Dat	le	Project	Manager				
Cost Est. Source				CIP Number					
		Cost Est. Pre	pared By	Descrip	tion				
						es are in \$1,00			
Prior Yr Actua	ls FY19		FY21	FY22	FY23		Y25+	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)

		.		, _ ,		u . u			4. 	.,	
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

GLWA Great Lakes Water Authority

Explanation

GLWA FY 2020-2024 CIP SW-WTP Sanitary Survey Improvements

☐ Innovation	Project Statu	Future Planned						
□ Water MP Right Si	zing CIP Type	Program						
☐ Reliability/Redund								
□ NEWTP Repurposi	ng							
Project Engineer/Ma	nager Shakil Ahmed		Budget	Water				
Ма	nager Grant Gartrell		Class Lvl 1	Water				
Managing	Dept Water Eng		Class Lvl 2	Programs				
Date Original Busines	ss Case Prepared 1/4/2	018	Class Lvl 3	Programs				
Year Proj	Wayne County - Outside Detroit							
		F	und and Cost Center					
Project Significance	-	rvey needs that are identified regulatory needs are identifie		t of its 3-year rotation of plant				
Scope of Work	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.								
Project History								
Related Project								
Lookup Driver								
Other Important Info								



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

SW-WTP Sanitary Survey Improvements

Project Manag	Project Manager Score		
Criteria	Score	Comment	34
Condition	1		3-
fficiency and Innovation	1		
inancial	1		
D&M	1		
Performance (Service Level/Reliability)	1		
Public Benefit	1		
Public Health & Safety	3		
Regulatory (Environmental/Legal)	3		
Review Commi	ttee Project Ri	isk Matrix Scoring	Review Committee Score
Criteria	Score	Comment	0
Condition			
Efficiency and Innovation			
Financial			
O&M			
Performance (Service Level/Reliability)			
Public Benefit			
Public Health & Safety			

171200 CIP#

SW-WTP Sanitary Survey Improvements

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

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

		1 11 614	O TOTAL EXP	, o , , , , , , , , , , , , , , , , , ,	. (/90.	OF GIFT III Y	.,000,	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0



SW-WTP Sanitary Survey Improvements

ase Design a	nd Build		Contract NA	Status Active
le SW-WTP Sc	anitary Survey	/ Improvements		
Phase Budget	Water		Cost Alloc	ation CTA
Phase Status	Active		Funding Sc	Revenue Financed Capital
Start Date		4/1/2018		Fund Improvement & Extension Fun
End Date		9/17/2029	Useful Life >2	OYrs? No
Co	ost Estimation	Information	Tot. Federal Loan Am	nount
	5	Cost Est. Class	Program/Allow	ance Task Information
12	2/26/2017	Cost Est. Date	Project Manager	
GLWA Engine	ering	Cost Est. Source	CIP Number	
G. Gartrell		Cost Est. Prepared By	Description	

Task	Start Date	End Date	Duration
Scope Development	4/1/2018	6/30/2018	90
Procurement	7/1/2018	7/1/2019	365
Project Execution	7/2/2019	6/18/2029	3639
Project Closeout	6/19/2029	9/17/2029	90

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

Prior Yr Actuals FY19 FY20 FY21 FY22 FY23 FY24 FY25+ Total	Drian Vr. A atuala	EV10	EV00	EVO1	EV00	EV02	EVOA	EV25±	Total
	FIIOI II ACTUAIS	ГПЭ	F120	ГІДІ	ГІZZ	F123	Z ' 		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)

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

Other Important Info

Explanation

GLWA FY 2020-2024 CIP WWP - WTP Sanitary Survey Improvements

☐ Innovation	Project Statu	Future Planned						
☐ Water MP Right Sizing	CIP Type	Program						
☐ Reliability/Redundancy								
□ NEWTP Repurposing								
Project Engineer/Manager	· TBD		Budge	• Water				
Manager	Terry Daniel		Class Lvl 1	Water				
Managing Dept	Water Eng		Class Lvl 2	Programs				
Date Original Business Cas	Date Original Business Case Prepared 1/4/2018 Class Lvl 3 Programs							
Year Project Ac	dded to CIP 2018		Location	City of Detroit				
			Fund and Cost Cente	r				
•	ess the sanitary sur ary surveys where i	•	re identified by the MDEQ as pa are identified.	rt of its 3-year rotation of plant				
•	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.								
Project History								
Related Project								
Lookup Driver								



Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

WWP - WTP Sanitary Survey Improvements

Project Manag	ger Project Risk A	Matrix Scoring	Project Manager Score
Criteria	Score	Comment	34
Condition	1		
Efficiency and Innovation	1		
Financial	1		
M&C	1		
Performance (Service Level/Reliability)	1		
Public Benefit	1		
Public Health & Safety	3		
Regulatory (Environmental/Legal)	3		
Review Comm	ittee Project Risk	Matrix Scoring	Review Committee Scor
Criteria	Score	Comment	0
Condition			
Efficiency and Innovation			
Financial			
O&M			
Performance (Service Level/Reliability)			
Public Benefit			
Public Health & Safety			

WWP - WTP Sanitary Survey Improvements

Phase Design and Build	Contract NA	Status	Active
Title WWP - WTP Sanitary Survey Improvements			

Phase Budget Water

Phase Status Active

Start Date 4/1/2017

End Date 9/15/2028

Cost Estimation Information							
5	Cost Est. Class						
12/26/2017	Cost Est. Date						
GLWA engineering	Cost Est. Source						
G. Gartrell	Cost Est. Prepared By						

	Cost Allocation	CIA
	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		

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	6/16/2028	3637
Project Closeout	6/17/2028	9/15/2028	90

			<u> </u>		· · (· · · · · · · · · · · · · · · · ·	<u> </u>	-/	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

171300 CIP#

WWP - WTP Sanitary Survey Improvements

Phase GLWA Employees Project management					Contract NA			:	Status Ac	ctive		
Title GLWA Salo	aries											
Phase Budget	Water						Cost Alloc	ation C	TA			
Phase Status	Active						Funding So	ource Re	evenue Fir	nanced	d Capital	
Start Date								Fund In	nproveme	nt & Ex	tension Fu	n
End Date						U	seful Life >2	20Yrs? N	0			
Co	ost Estimat	ion In	formation			Tot. Fede	eral Loan An	nount			\$0)
	5		Cost Est. Clo	ass	Program/Allowance Task Information							
			Cost Est. Da	te	Project	Manager						
			Cost Est. So	urce	CIP Nu	mber						
			Cost Est. Pre	epared By	Descrip	otion						
			Phase	e Total Exp	enses By F	Y (All figure	es are in \$1	(a'000, I				
Prior Yr Actua	ls FY	19	FY20	FY21	FY22	FY23	FY24	FY25+	Tota	al		
		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	-Apense.	<i>, , , , , , , , , , , , , , , , , , , </i>	ompare	<u>a 10 1 1101</u>		n ngores	are iii q	,000	
	CIP	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
2	2019	0			45	49	49	49	49	247	0	488
2	2020	0	0		0	0	0	0	0	0	0	0

GLWA Great Lakes Water Authority

Energy Management Program @ All Water Facilities

GLWA FY 2020-2024 CIP

☐ Innovation	Project Statu	Future Planned		
☐ Water MP Right Sizing	CIP Type	Program		
☐ Reliability/Redundancy				
☐ NEWTP Repurposing				
Project Engineer/Manager	TBD		Budge	• Water
Manager	Grant Gartrell		Class Lvl 1	Water
Managing Dept	Water Eng		Class Lvl 2	Programs
Date Original Business Cas	e Prepared 1/5/2	018	Class LvI 3	Programs
Year Project Ac	ded to CIP		Location	Multiple Counties
			Fund and Cost Cente	r
-		at most facilities of electrical usage	are energy inefficient. Replacer	nent with new, modern LED lighting
type	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	
type Scope of Work Repla	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	nent with new, modern LED lighting
Scope of Work Replacements	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	nent with new, modern LED lighting
Scope of Work Replastation Challenges	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	nent with new, modern LED lighting
Scope of Work Replostatio Challenges Project History	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	nent with new, modern LED lighting
Scope of Work Replasion Challenges Project History Related Project	systems will reduc ace existing lightin	e electrical usage	are energy inefficient. Replacer and costs.	nent with new, modern LED lighting



Energy Management Program @ All Water Facilities

Project Manager Project Risk Matrix Scoring								
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							
Paviow Commi	ttoe Project Pig	sk Matrix Scoring						

Project Manager Score

34.4

Review Committee Project Risk Matrix Scoring

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

Review Committee Score

0



Energy Management Program @ All Water Facilities

Phase Design and Build Contract NA Status Active

Title Energy Management Program @ All Water Facilities

Phase Budget	Water
Phase Status	Active
Start Date	6/22/2019
End Date	12/6/2030

Cost Estima	tion Information
5	Cost Est. Class
12/13/2017	Cost Est. Date
GLWA Engineering	Cost Est. Source
Group	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
Design-Build	FY23	\$693			2020CIP
Design-Build	FY24	\$693			2020CIP
Design-Build	FY25+	\$4,401			2020CIP

Task	Start Date	End Date	Duration
Scope Development	6/22/2019	9/20/2019	90
Procurement	9/21/2019	9/20/2020	365
Project Execution	9/21/2020	9/6/2030	3637
Project Closeout	9/7/2030	12/6/2030	90

Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	693	693	4,401	5,787

Energy Management Program @ All Water Facilities

Phase GLWA En Title GLWA Sala		rojec	t managem	ent	C	Contract N	A		Status	Active		
Phase Budget	Water						Cost Allo	cation C	TA			
Phase Status	Active						Funding S	ource R	eveni	Je Financ	ed Capital	
Start Date								Fund In	nprov	ement &	Extension F	un
End Date						U	seful Life >2	20Yrs? N	0			
Co	ost Estimati	on Ir	formation			Tot. Fede	eral Loan Ai	mount			(\$O
	5		Cost Est. Clo	ass		Pro	gram/Allov	vance To	ısk Inf	ormation		
	1/1/2016		Cost Est. Do	ite	Project	t Manager						
GLWA			Cost Est. So	urce	CIP Nu	mber						
GLWA			Cost Est. Pre	epared By	Descri	ption						
			Phase	e Total Exp	enses By F	Y (All figure	es are in \$	1,000's)				
Prior Yr Actua	ls FY1		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		<i>, , , , , , , , , , , , , , , , , , , </i>	ompare	a 10 1 1101		905	are mry	,000	
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



Explanation

GLWA FY 2020-2024 CIP Roof Replacement - Various Water Facilities

☐ Innovation	Project Statu	Active		
☐ Water MP Right Si	zing CIP Type	Program		
☐ Reliability/Redund				
□ NEWTP Repurposi	ng			
Project Engineer/Ma	nager TBD		Budget	Water
Ma	nager Grant Gartrell		Class Lvl 1	Water
Managing	Dept Water Eng		Class Lvl 2	Programs
Date Original Busines	ss Case Prepared 1/5/2	2018	Class Lvl 3	Programs
Year Proj	ect Added to CIP 2018		Location	Multiple Counties
		Fu	nd and Cost Center	
Project Significance	pumping stations that	ofing systems on GLWA water p were determined to need repla ent is needed to protect building	acement over the n	ext 5 to 7 years due to their poor
	pumping stations that condition. Replaceme	were determined to need replace	acement over the n g interiors and sensiti	ext 5 to 7 years due to their poor
	pumping stations that condition. Replaceme	were determined to need replant is needed to protect building	acement over the n g interiors and sensiti	ext 5 to 7 years due to their poor
Scope of Work Challenges	pumping stations that condition. Replacement Replace existing roofs A condition assessment roofs located at GLWA	were determined to need replant is needed to protect building with new built-up roofing system at was performed and complete A's 5 water treatment plants, 19 are were 268 separate roof sections.	g interiors and sensitions. ed under Contract Nature water booster pump	ext 5 to 7 years due to their poor ve electrical equipment. No. CS-1674 in 2016 that included all bing stations and 11 sewage
Scope of Work Challenges Project History	pumping stations that condition. Replacement Replace existing roofs A condition assessment roofs located at GLW/pumping stations. The	were determined to need replant is needed to protect building with new built-up roofing system at was performed and complete A's 5 water treatment plants, 19 are were 268 separate roof sections.	g interiors and sensitions. ed under Contract Nature water booster pump	ext 5 to 7 years due to their poor ve electrical equipment. No. CS-1674 in 2016 that included all bing stations and 11 sewage
Scope of Work Challenges Project History	pumping stations that condition. Replacement Replace existing roofs A condition assessment roofs located at GLW/pumping stations. The during this condition of	were determined to need replant is needed to protect building with new built-up roofing system at was performed and complete A's 5 water treatment plants, 19 are were 268 separate roof sections.	g interiors and sensitions. ed under Contract Nature water booster pump	ext 5 to 7 years due to their poor ve electrical equipment. No. CS-1674 in 2016 that included all bing stations and 11 sewage



Public Health & Safety

Regulatory (Environmental/Legal)

GLWA FY 2020-2024 CIP

Roof Replacement - Various Water Facilities

Project Manag	ger Project Ris	k Matrix Scoring	Project Manager Score
Criteria	Score	Comment	42
Condition	5		72
Efficiency and Innovation	1		
inancial	2		
D&M	3		
Performance (Service Level/Reliability)	3		
Public Benefit	1		
Public Health & Safety	1		
Regulatory (Environmental/Legal)	1		
Review Comm	ittee Project F	Risk Matrix Scoring	Review Committee Score
Criteria	Score	Comment	0
Condition			
Efficiency and Innovation			
Financial			
O&M			
Performance (Service Level/Reliability)			
Public Benefit			

171500 CIP#

Roof Replacement - Various Water Facilities

hase Budget	Water		Cost Allocation	CTA
Phase Status	Active		Funding Source	Bond Proceeds
Start Date			Func	Construction Bond Fund
End Date			Useful Life >20Yrs?	No
Co	ost Estimation II	nformation	Tot. Federal Loan Amoun	\$
	4	Cost Est. Class	Program/Allowance	e 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	

Phase Total Expenses By FY (All figures are in \$1,000)	Phase Total Ex	penses By	/ FY (A	All figures	are in \$	1,000's
---	----------------	-----------	---------	-------------	-----------	---------

That for a Expenses by TT (7 th figures are in \$1,000 s)								
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

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
Phase Status	Active
Start Date	
End Date	

Life Date	
Cost Estimation Ir	nformation
4	Cost Est. Class
1/1/2016	Cost Est. Date
Testing Engineers & Consult	Cost Est. Source
Testing Engineers & Consult	Cost Est. Prepared By

	Cost Allocation	СТА
	Funding Source	Bond Proceeds
	Fund	Construction Bond Fund
Us	seful Life >20Yrs?	Yes
Tot. Feder	al Loan Amount	
Prog	ram/Allowance	Task Information
Project Manager		

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY24	\$2,000			
Design-Build	FY25+	\$2,000			2020CIP

CIP Number

Description

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+	Total
	0	0	0	0	0	2,000	2,000	4,000

171500 CIP#

Roof Replacement - Various Water Facilities

hase not applicabl	е				Contract N	A	Sta	tus Closed	Out
tle Prior Year Actu	al Expens	es							
Phase Budget Wat	Phase Budget Water					Cost Allo	cation CTA		
Phase Status Clos	us Closed Out					Funding S	ource		
Start Date							Fund		
End Date					U	seful Life >:	20Yrs?		
Cost Estimation Information				Tot. Federal Loan Amount				\$0	
4 Cost Est. Class					Pro	gram/Allov	vance Task	Information	
1/1/	2016	Cost Est. D	ate	Projec	t Manager				
Testing Engineers	& Consult	Cost Est. S	ource	CIP No	umber				
Testing Engineers	& Consult	Cost Est. P	repared By	Descri	ption				
Cost Type	F	iscal Year	Expens	e Fring	je BenefitNo	nPersonne	(Comment	
ngineering Services	FY FY	18-		\$50			FY18		
		Pha	se Total Exp	enses By I	FY (All figure	es are in \$	1,000's)		
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total	
50								50	

171500 CIP#

Roof Replacement - Various Water Facilities

Phase Design and Build

Contract NA

Status Active

Title Phase 758522114 - Roof replacement at LH-WTP, SW-WTP, WWP-WTP, Imlay and Franklin Booster Stations

Phase Budget	Water
Phase Status	Active
Start Date	1/23/2018
End Date	7/22/2020

Cost Estimation Information

4

Cost Est. Class

12/9/2016 Cost Est. Date

CS-1674 roofing CA contrac Cost Est. Source

Testing Engineers & Consult | 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 BenefitNonPersonne	Comment
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

171500 CIP#

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					
Phase Status	Active					
Start Date						
End Date						
Cost Estimation Information						

Cost Estimation I	nformation
4	Cost Est. Class
1/1/2016	Cost Est. Date
Testing Engineers & Consult	Cost Est. Source
Testing Engineers & Consult	Cost Est. Prepared By

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

Task	Start Date	End Date	Duration
Scope Development	3/31/2026	6/29/2026	90
Procurement	6/30/2026	6/30/2027	365
Project Execution	7/1/2027	6/25/2031	1455
Project Closeout	6/26/2030	9/24/2030	90

		I II G	C TOTAL EXP	Chiaca by i	i (All light	cs are in y	1,000 3)	
Prior Yr Actuals	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	Total
	0	0	0	0	0	0	0	0

171500 CIP#

Roof Replacement - Various Water Facilities

Phase Design and Build Contract NA Status Active

Title Phase 1252759899 - Roof replacement at LH-WTP, SW-WTP, Orion & North Service Center Booster Stations

Phase Budget Water

Phase Status Active

Start Date

End Date

Cost Estimation Information

4

Cost Est. Class

1/1/2016 **Cost Est. Date**

Testing Engineers & Consult | Cost Est. Source

Testing Engineers & Consult | 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

Task	Start Date	End Date	Duration
Scope Development	3/31/2018	6/29/2018	90
Procurement	6/30/2018	6/30/2019	365
Project Execution	7/1/2019	6/23/2023	1453
Project Closeout	6/24/2023	9/22/2023	90

		11143	C TOTAL EXP	cinco by i	i (All ligol	C3 GIC III Q	1,000 3)	
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 1900377390 - Roof replacement at LH-WTP, SW-WTP, WWP-WTP, Imlay Booster Station and Franklin Booster Station (2)

Phase Budget Water **Phase Status** Active **Start Date End Date**

Cost Estimation Information

Cost Est. Class

1/1/2016 Cost Est. Date

Testing Engineers & Consult Cost Est. Source

Testing Engineers & Consult | 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

i iojeci Managei	
CIP Number	
Description	

Task	Start Date	End Date	Duration
Scope Development	3/31/2030	6/29/2030	90
Procurement	6/30/2030	6/30/2031	365
Project Execution	7/1/2031	6/25/2035	1455
Project Closeout	6/26/2035	9/24/2035	90

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

				1				
Prior Yr Actuals	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)

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