

# GLWA's FY 2020 - 2024 Capital Improvement Plan

GLWA CIP Committee Meeting December 18, 2018 1:00 p.m. – 3:00 p.m.



Revised: 2018-12-12

## Agenda

#### • Introduction

- Questions & Answers from CIP Preliminary Draft 1
- Major CIP Changes Since Preliminary Draft 1
- Next Steps and Closing Remarks





GLWA 2020-2024 Capital Improvement Plan Preliminary Draft 1 Comments, Questions and Answers December 13, 2018

#### Summary:

The 2020-2024 Capital Improvement Plan (CIP) review period began with the release of the Preliminary Draft 1.0 at the Great Lakes Water Authority (GLWA) Capital Improvement Planning Committee on October 29, 2018. Preliminary Draft 1.0 was also released at the Charges Roll-Out #1 - CIP meeting held on October 25, 2018. Comments were requested by November 19, 2018.



Written responses were received from

member partners and the GLWA Board of Directors. In addition, feedback, questions and comments were gathered from the Asset Management / Capital Improvement Planning Work Group meeting held on November 27, 2018.

General comments were received from several of the respondents that provided positive feedback and support for the CIP's ease of use, level of detail, as well as the effort that went into developing it and the improvements incorporated year-over-year.

The respondents also provided 45 comments and questions related to many areas within the CIP and in the projects that were presented. Each of these comments and questions have an associated response written after each question. Where applicable, and as indicated in the response to each question or comment, modifications to the overall CIP document have been made and can be viewed within the 2020-2024 Capital Improvement Plan Preliminary Draft 2.

Questions & Answers From CIP Preliminary Draft 1

735 RANDOLPH

## **General Information**

- Preliminary Draft 1 Released
  - To Member Partners at Charges Roll-Out Meeting #1 on 10/25/2018
  - To GLWA CIP Committee Meeting on 10/29/2018
- Comments and Questions
  - Due on 11/19/2018
  - From Member Partners, Directors and AM/CIP Work Group
  - 6 General Comments
  - 45 Specific Questions & Comments
- Preliminary Draft 2 Released Today



### • Overarching Comments :

• Positive in nature specifically related to improvements

"I am very heartened in that the level of detail and effort placed into the CIP plan continues to increase and improve year over year and now clearly sets forth a much improved understanding of the prioritized needs of GLWA in addressing its maintenance of its critical assets."

"Continuing improvements in CIP process, especially in the connection between the financial and technical side."



#### 45 Comments and Questions, Grouped into 8 Types

Comment Type	Quantity
Prioritization, Risk & Project Timing	20
Project Information (Condition Assessments to Inform	6
CIP, BCE versus RFP scope of work, O&M Projects)	0
CIP Delivery & Spend Rate Assumption Policy	5
Financial Information & Procurement (CIP Chapter III)	4
CIP Format & Information Provided	3
Process (Review Committee, Charges-Rollout)	3
External Resource Availability	2
Water Treatment Capacity Reduction Re-evaluation	2
Total	45

**Official responses to questions are available in hard copy.** 



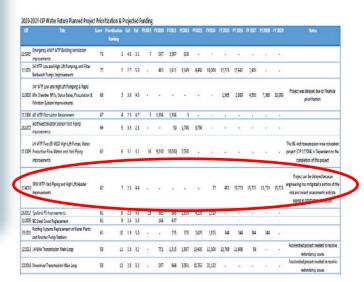
#### **Prioritization, Risk & Project Timing:**

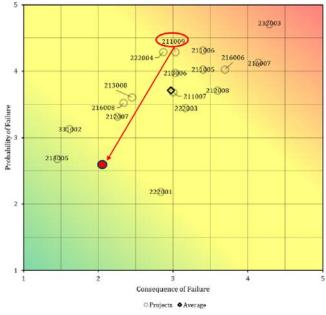
- 1) Future review of the prioritization criteria
- 2) Detailed evaluation of the higher risk projects to ensure justifiable timing

		Table V-1. Project Prioritiza	ation
No.	Weight	Criteria	<b>Risk Factor</b>
1	12%	Condition	Probability
2	15%	Performance (Service Level/Reliability)	Probability
3	18%	Regulatory (Environmental/Legal)	Consequence
4	11%	0&M	Probability
5	17%	Public Health & Safety	Consequence
6	8%	Public Benefit	Consequence
7	10%	Financial	Consequence
8	9%	Efficiency & Innovation	Consequence

**GLWA** 

ater Authority





Wastewater Risk of Future Planned Projects

### **CIP Delivery & Spend Rate Assumption**

- 1) Concern about ability to deliver projects identified
  - Responses
    - Capital Program Management in 2019
    - Newly dedicated CIP Director
- 2) Ensure alignment with CIP spend rate assumption
  - Responses
    - o Both want delivery and execution of the CIP
    - Timing issue related to the transaction being completed and when the CIP was compiled



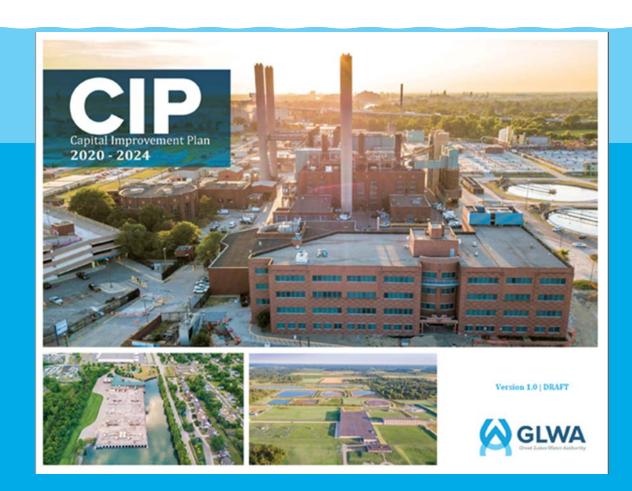
### **Project Information**

- 1) Condition Assessment informing CIP Business Cases
  - Response
    - Where feasible we strive to have condition assessments to inform BCE's, but difficult due to number of assets and long-term horizon of CIP
- 2) BCE versus RFP scope differences
  - Responses:
    - There will be differences RFP's are based upon the latest and more detailed information/evaluation
    - BCE's are now being updated annually to minimize these differences





# CIP Changes Since Preliminary Draft 1



#### **2020-2024 CIP Preliminary Draft 2 – Modifications Made**

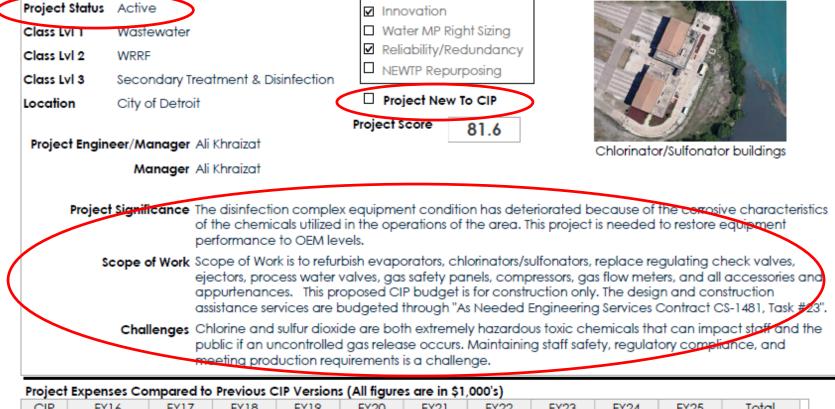
- Identified projects as "New to the FY2020 CIP" with a checkbox for the ease of the reader. The Phase Status of these projects has been changed to either "Active" or "Future Planned"
- Updated the Life-To-Date project information as of June 30, 2018 that became available since the first preliminary draft
- Minor modifications to Phase Status, Task Schedules and general BCE information as identified in an internal quality control and assurance check



CIP Number: 212004

Project Title WRRF Chlorination and Dechlorination Process Equipment Improvements

#### 2020-2024 CIP Preliminary Draft 2 – Modifications



				·						
FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
		400	2,800	1,800				0	0	5,000
0	86		2,101	2,422	661				0	5,270
0	0	117	913	2,345	1,670	0	0	0	0	5,045
	FY16 0 0		0 86	400 2,800 0 86 2,101	400 2,800 1,800 0 86 2,101 2,422	400         2,800         1,800           0         86         2,101         2,422         661	400         2,800         1,800           0         86         2,101         2,422         661	400         2,800         1,800           0         86         2,101         2,422         661	400         2,800         1,800         0 <td< td=""><td>400         2,800         1,800         <td< td=""></td<></td></td<>	400         2,800         1,800         0 <td< td=""></td<>



#### **2020-2024 CIP Preliminary Draft 2 – Modifications**

 Northeast Pumping Station (CIP# 232003) and North Interceptor East Arm Rehabilitation (CIP# 222003) have been accelerated. These projects will likely be financed by OMID.

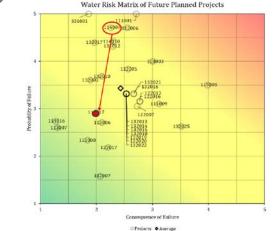
#### **CIP** Title Score Prioritization CoF PoF FY2019 FY2020 FY2021 **Notes** FY2022 FY2023 FY2024 FY 2025 FY 2026 FY 2027 FY 2028 FY 2029 Ranking -**↓**↓ Project has been 232003 Northeast Pumping Station 89 4.3 1,000 10,500 10,500 2,500 Accelerated in Preliminary 1 4.7 7,000 Draft 2 Project has been North Interceptor East Arm (NIEA) 222003 65 8 3.2 3.4 15.000 14.500 Accelerated in Preliminary 500 **Evaluation and Rehabilitation** Draft 2

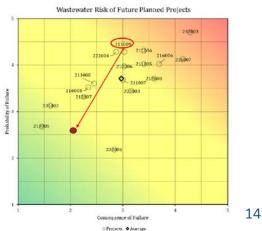
#### 2020-2024 CIP Wastewater Future Planned Project Prioritization & Projected Funding



## CIP Changes Since Preliminary Draft 1 (Continued) 2020-2024 CIP Preliminary Draft 2 – Modifications

- Further evaluation and adjustment of two projects based upon review of risk mitigation strategies
  - Water project, Springwells WTP Powdered Activated Carbon System Improvements (CIP# 114007)
  - Wastewater project, WRRF Rehabilitation of Circular Primary Clarifier Scum Removal (CIP# 211009)







# CIP Changes Since Preliminary Draft 1 (Continued) 2020-2024 CIP Preliminary Draft 2 – Modifications

Modifications to Tables VI-1 – 3 (Water), VI-7-10 (Wastewater)

- Grouped and sorted differently to assist the reader
- "Closed", "Cancelled" and "Reclassified" Projects

   Removed from the tables. Remain in the Chapter VII, Project Descriptions and within the Appendices.
- "Future Planned" and "Active" Projects
  - "Active" projects are sorted (highest lowest) by 2020-2024 5-year projected expenses
  - "Future Planned" projects are sorted by overall priority



#### **2020-2024 CIP Preliminary Draft 2 – Modifications**

		tus	73	tual (18 d)			Project	ed Exper	ditures			2 -	E	5
CIP #	Title	Project Sta	Year Add	Lifetime Ac Thru FY 20 (unaudite	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 & Beyond	2020-202 CIP Tota	Project To	Percent o W/S CIP
122003	WWP to NE Transmission Main	А	2014	1,655	1,121	871	15,786	24,115	29,615	29,994	30,115	100,381	133,272	11.8%
122004	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	A	2016	1,130	837	5,000	6,000	26,453	35,886	23,453	33,907	96,792	132,666	11.4%
114002	Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements	A	2004	498	2,607	5,985	9,302	13,724	13,724	26,145	42,831	68,880	114,816	8.1%
115001	Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement	A	2007	682	899	17,333	17,333	17,333	-	-	-	51,999	53,580	6.1%
122006	Wick Road Water Transmission Main Construction	А	2016	126	1,370	18,028	12,334	60	-	-	-	30,422	31,918	3.6%
111009	Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter, and Select Yard Piping Improvements	A	2018	-	16	9,030	10,030	7,030	-	-	-	26,090	26,106	3.1%
170800	System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation	A	2016	-	482	5,128	5,211	5,182	3,888	5,495	33,778	24,904	59,164	2.9%
114011	Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements	A	2012	473	3,109	5,392	7,754	8,261	-	-	-	21,407	24,989	2.5%
170600	Water Transmission Main Asset Assessment Program		2017	-	2,500	3,000	4,000	4,000	5,000	5,000	25,000	21,000	48,500	2.5%
	Pennsylvania. Springwells and Northeast Raw Water Supply	,												

#### Table VI-1. Water CIP Projects: Active, Ranked by 2020-2024 CIP Total



#### **2020-2024 CIP Preliminary Draft 2 – Modifications**

#### Table VI-2. Water CIP Projects: Pending Closeout, Ranked by Total Cost

		E S	7	13 (J	Pı	rojeo	ted	Exp	pend	litu	res	<u> </u>	2	<u> </u>
CIP #	Title	Project Sta	Year Adde	Lifetime Act Thru FY 20 (unaudite	FY 2019		FY 2021			FY 2024	FY 2025 & Beyond	2020-202 CIP Tota	Project To	Percent o W/S CIP
122001	Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	PC	2005	33,566	-	-	-	-	-	-	-	0	33,566	0.0%
122012	36-inch Water Main in Telegraph Road	PC	2012	9,418	155	-	-	-	-	-	-	0	9,573	0.0%
122002	Replacement of Five (5) PRV Pits of Treated Water Transmission System	PC	2010	1,844	804	-	-	-	-	-	-	0	2,648	0.0%
114009	SPW WTP Service Area Redundancy Study	PC	2014	311	-	-	-	-	-	-	-	0	311	0.0%
132004	North Service Center Pumping Station - Hydraulic Surge Control	PC	2014	215	-	-	-	-	-	-	-	0	215	0.0%
132001	Wick Road Booster Pumping Station Rehabilitation	PC	2004	130	35	-	-	-	-	-	-	0	165	0.0%
122009	Water System Improvements in Joy Road from Southfield Road to Trinity	PC	2014	107	-	-	-	-	-	-	-	0	107	0.0%
116003	Genesee and Lapeer County Transmission System Improvements	PC	2016	-	-	-	-	-	-	-	-	0	0	0.0%
122010	Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and Davison Ave from Lindwood to Livernois	PC	2014		-	-	-	-	-	-	-	0	0	0.0%
380500	Wastewater General Engineering Services on an As-needed Basis	PC	2004	-	-	-	-	-	-	-	-	0	0	0.0%
380800	Geotechnical and Related Services on an As-Needed Basis	PC	2007	-	-	-	-	-	-	-		0	0	0.0%
	Pending Closeout Water Projects Total			45,591	994	0	0	0	0	0	0	0	46,585	0.0%



#### **2020-2024 CIP Preliminary Draft 2 – Modifications**

		tus	g	d) 18			Project	ted Exp	enditu	res		<b>Z</b> -		<u>ت</u>	ion (
CIP #	Title	Project Sta	Year Add	Lifetime Act Thru FY 20 funaudite	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 & Beyond	2020-202 CIP Tota	Project To	Percent o W/S CIP	Prioritizat Score (R(
111001	Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements	FP	2010	-	-	401	1,611	3,169	4,450	10,000	32,757	19,631	52,388	2.3%	71.6
113003	Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and Filtration System Improvements	FP	2014	-	-	-	-		-	-	148,286	0	148,286	0.0%	67.6
132025	Northwest Booster Station Yard Piping Improvements	FP	2020	-	-	-	50	1,700	3,750	-	-	5,500	5,500	0.6%	63.6
114010	Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements	FP	2012	-	-	-	-	-	-	72	110,578	72	110,650	0.0%	62.2
132012	Ypsilanti Booster Pumping Station Improvements	FP	2017	4	28	585	865	2,855	4,205	1,319	-	9,829	9,861	1.2%	61.2
112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits	FP	2018	-	-	166	647	-	-	-	-	813	813	0.1%	61.0
331001	Roofing Systems Replacement at Water Plants and Booster Pump Stations	FP	2014	-	-	-	225	375	1,625	1,825	1,375	4,050	5,425	0.5%	61.0
122016	Downriver Transmission Main Loop	FP	2017	-	-	297	964	3,051	10,763	22,122	-	37,197	37,197	4.4%	58.4
122013	14 Mile Transmission Main Loop	FP	2017	-	-	751	1,315	1,507	13,420	12,000	25,433	28,993	54,426	3.4%	58.4
132016	North Service Center Pumping Station Improvements	FP	2017	-	-	-	-	-	6	6,325	18,589	6,331	24,920	0.7%	58.2
132021	Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System	FP	2018	-	-	-		-	6	2,103	10,000	2,109	12,109	0.2%	58.2
132017	North Service Center Booster Pump Station - On-Site & Off-Site	FP	2018	-	-	6	2.300	2.506	264	-	-	5.076	5.076	0.6%	57.8

#### Table VI-3. Water CIP Projects: Future Planned, Ranked by Prioritization Score

#### **2020-2024 CIP Preliminary Draft 2 – Modifications**

	18 C			Project	ed Expen	litures			8	1	s/1
Totals	Lifetime Act Thru FY 20 (unaudited	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 & Beyond	2020-2024 ( Total	Project Tot	Percent of W CIP
Active Water Projects Total	123,888	67,724	137,159	143,855	140,561	108,332	105,392	313,131	635,299	1,140,042	74.5%
Pending Closeout Water Projects Total	45,591	994	0	0	0	0	0	0	0	46,585	0.0%
Future Planned Water Projects Total	4	28	6,088	22,744	42,034	60,674	85,474	484,991	217,014	702,037	25.5%
Water Projects Total	169,483	68,746	143,247	166,599	182,595	169,006	190,866	798,122	852,313	1,888,664	100.0%

#### Table VI-4. Water CIP Projects: Totals



### WATER Changes Between Version 1 & Version 2

#### WATER: 2020-2024 CIP Summary Table

\$1,000's

WATER	Lifetime Actual Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	2020 - 2024 CIP Total	Project Total
2020 Preliminary Draft 1	192,432	68,746	143,247	166,599	182,595	169,006	190,866	798,122	852,313	1,911,613
2020 Preliminary Draft 2	169,483	68,746	143,247	166,599	182,595	169,006	190,866	798,122	852,313	1,888,664
Draft 1 to Draft 2 Change:	(22,949)	-	-	-	-	-	-	-	-	(22,949)

- Lifetime Actuals Through Fiscal Year 2018 have been updated
- Reduced primarily due to removing the "Closed" projects from the summary



### **WASTEWATER Changes Between Version 1 & Version 2**

#### WASTEWATER: 2020-2024 CIP Summary Table

\$1,000's

WASTEWATER	Lifetime Actual Through FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25+	2020 - 2024 CIP Total	Project Total
2020 Preliminary Draft 1	295,216	104,931	139,480	107,430	139,677	156,884	130,159	321,843	673,630	1,395,620
2020 Preliminary Draft 2	137,135	106,409	161,480	132,430	150,177	159,384	130,159	269,515	733,630	1,246,689
Draft 1 to Draft 2 Change:	(158,081)	1,478	22,000	25,000	10,500	2,500	-	(52,328)	60,000	(148,931)

- Lifetime Actuals Through Fiscal Year 2018 have been updated
- Reduced primarily due to removing the "Closed" projects from the summary
- FY19-23 Increases (and FY2025+ decreases) due to the acceleration of the Northeast Pump Station and the North Interceptor East Arm rehabilitation projects









**Next Steps** 



Version 1.0 | DRAFT



## **Next Steps**

Comments and questions are accepted throughout the remainder of this process. All feedback, comments and suggestions are welcomed!



Completed	Date	Meeting Type	Notes
$\checkmark$	8/20/2018	NA	Distribute & Train Business Case Evaluation Database
$\checkmark$	9/26/2018	NA	BCE's Due
$\checkmark$	10/1/2018	Water Review Committee Meeting	Review existing project priorities, identify new project priorities and potentially adjust schedules
$\checkmark$	10/3/2018	Wastewater Review Committee Meeting	for projects in order to align with overall CIP projected expenditures previously approved
$\checkmark$	10/18/2018	Executive Leadership Team review of BCEs and Modifications to CIP	Review of New BCEs & CIP Modifications
$\checkmark$	10/25/2018	Charges Roll-Out Mtg #1 - CIP @ AM/CIP Work Group	1st Member Partner Review of CIP - <b>Preliminary</b> Draft 1
$\checkmark$	10/29/2018	GLWA CIP Committee	1st CIP Committee Review of CIP - <b>Preliminary</b> Draft 1
$\checkmark$	11/19/2018	NA	Member Partner & Board Comments Due
$\checkmark$	11/30/2018	GLWA CIP Committee	CIP Planned Modifications for Preliminary Draft 2
$\checkmark$	12/18/2018	AM/CIP Committee Work Group Meeting	2nd Member Partner Review of CIP Preliminary Draft 2
$\checkmark$	12/18/2018	GLWA CIP Committee	2nd CIP Committee Review of CIP Preliminary Draft 2
	1/23/2019	GLWA Board	1st CIP Presentation of CIP Preliminary Draft 2
	Feb-19	GLWA CIP Committee	3rd CIP Committee - Deliberations of CIP
	Feb-19	GLWA CIP Committee	4th CIP Committee - Deliberations of CIP

#### FY2020 - 2024 CIP SCHEDULE (Revised 12/13/18)





## Questions



## Have a Great Day!