



Financial Services Audit Committee Communication

Date: March 27, 2020

To: Great Lakes Water Authority Audit Committee

From: Andrew Sosnoski, Manager, Construction Accounting & Financial Reporting

Re: FY 2020 Q2 Construction Work-in-Progress Report through December 31, 2019
(Unaudited)

Background: The quarterly construction work-in-progress (CWIP) provides information and analysis related to the execution of the Great Lakes Water Authority capital improvement program (CIP).

Analysis: The attached documents summarize the FY 2020 Q2 CWIP activity and provides a detailed snapshot to inform decision makers and stakeholders.

Proposed Action: Receive and file this report.



**Construction Work-in-Progress Quarterly Report
(Unaudited)**

As of December 31, 2019

For questions, please contact:

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December 20, 2019**To Our Stakeholders:**

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of December 31, 2019. The information in this report presents a detailed snapshot and is important as we track the execution of the FY 2020–2024 Capital Improvement Plan (CIP) and look to inform decision makers as we finalize the FY 2021–2025 CIP.

As we continue to refine this report to better communicate pertinent information to inform decision makers and stakeholders, content and formatting may be changed. With the summary of active projects now regularly being reported to the Capital Planning Committee the project highlights previously being reported have been removed from this report.

Report Contents and Organization

This report is divided into two sections: one for the Water System and one for the Wastewater System as identified in the table of contents. Each section includes analysis and reporting of the following:

Executive Summary: Presentation of spend information is necessary to report our progress on CIP projects.

Construction Work-in-Progress Rollforward: This table provides a list of all projects in the CIP along with financial activity. This table may be used to revisit priorities, workload, and phasing.

Project Amendment Summary: The award of CIP contracts and the related execution thereof may result in deviations from the amount and timing of project activity. Project amendments are prepared to fund the related increase or decrease with either an adjustment to Capital Reserve or Program / Allowance accounts to amend the board approved fiscal year CIP accordingly and to inform decision makers in the development of future Capital Improvement Plans.

Financial Information

All project amounts are unaudited. This means that direct contractor costs are generally included in these totals with most pay estimates entered through December 31, 2019. There may, however, be some pay estimates that lag. The totals do not include indirect overhead.

Budget vs. Plan

Generally, GLWA's CIP projects span two or more fiscal years. The GLWA Board of Directors adopts a biennial "budget" and a five-year capital improvement "plan".

- ✓ The adopted **budget** relates to operations and maintenance expense, annual fixed commitments such as debt service, and incremental adjustments to reserves. The budget provides authority to spend within defined amounts. The budget is also referred to as the "revenue requirement" for the utility.
- ✓ After contracts are awarded at amounts variant from the CIP plan and more reliable anticipated spend data becomes available, the amended budget for the current fiscal year may increase or decrease by way of "Capital Reserve" budget amendments.
- ✓ The five-year capital improvement **plan** is a rolling plan that is updated at an administrative tracking level as projects move from estimated to actual bid numbers. An updated mid-cycle CIP would be presented to the Board for approval if the prioritization strategy was revised and/or the plan was in need of material revisions.
- ✓ In addition, the Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established.

WATER SYSTEM

Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2020-2024 and related CIP Plan for FY 2020 were based on anticipation of FY 2020 activity resulting in 75% of planned spend. The Water System spend for the period ending December 31, 2019 is 41.7% of the FY 2020 prorated board approved CIP, 46.4% of the FY 2020 prorated board approved CIP with project amendments, and 55.6% of the FY 2020 Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2020 Board Approved CIP was amended from \$143,247,000 to \$ 128,871,025 is provided in the subsequent Project Amendment Summary section of this report.

Water System Projects		FY 2019 CIP	FY 2019 Activity	FY 2019 Percentage	FY 2020 CIP	FY 2020 Prorated (Six Months)	FY 2020 Activity (Unaudited)	FY 2020 Percentage
FY 2019 Board Approved CIP	\$	66,038,000	\$	61,583,574	93.3%			
FY 2019 Board Approved CIP With Project Amendments		72,348,044		61,583,574	85.1%			
FY 2020 Board Approved CIP					\$ 143,247,000	\$ 71,623,500	\$ 29,887,218	41.7%
FY 2020 Board Approved CIP With Project Amendments					128,871,025	\$ 64,435,513	29,887,218	46.4%
FY 2020 Capital Spend Rate Assumption (SRA)					107,435,250	\$ 53,717,625	29,887,218	55.6%

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

As part of our project life cycle review the CA&FR team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service. Capitalization of project cost occurred in the FY 2020 2nd quarter for the following projects:

<u>Project</u>	<u>Contract</u>	<u>Description</u>
122001	WS-681	42-Inch Parallel Water Main
122009	WS-691	Water System Improvements in Joy Road from Southfield Road to Trinity

\$171.6 million is in CWIP as of December 31, 2019 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is in ascending order by CIP project number.

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
111001	Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements	\$ 52,388,000	\$ 14,083	\$ 401,000	\$ 493,500	\$ 20,498	\$ -	\$ 34,581	\$ 34,581	0%
111002	LHWTP Backflow Replacement	8,324,000	6,836,980	1,882,000	1,882,000	1,443,750	155,348	8,280,730	8,436,078	101%
111004	Electrical Tunnel Rehabilitation at Lake Huron WTP	4,749,000	2,768,607	4,296,000	1,275,214	1,056,798	-	3,825,405	3,825,405	81%
111006	Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake	10,789,000	777,960	3,333,000	3,333,000	262,882	-	1,040,842	1,040,842	10%
111007	Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	9,799,000	639,986	4,660,000	3,738,368	2,117,689	-	2,757,675	2,757,675	28%
111008	LHWTP Architectural Programming - Lab	300,000	-	-	-	110	-	110	110	0%
111009	Lake Huron WTP-35 MGD HLP, Flow Meters	26,106,000	35,864	9,030,000	9,030,000	44,180	-	80,044	80,044	0%
112002	Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP	1,565,000	1,134,767	203,000	203,000	21,786	-	1,156,553	1,156,553	74%
112003	NE WTP High Lift Pumping Electrical	62,234,000	-	-	-	-	-	-	-	0%
112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits	813,000	13,356	166,000	310,000	2,022	-	15,378	15,378	2%
112006	Northeast Water Treatment Plant Flocculator Replacements	2,718,000	2,891	1,356,000	1,356,000	28,643	-	31,534	31,534	1%
113002	High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP	5,432,000	2,479,490	2,876,000	3,028,000	1,826,843	-	4,306,334	4,306,334	79%
113003	Replacement of Butterfly Valves	148,286,000	-	-	-	110	-	110	110	0%
113004	Residual Handling Facility's Decant Flow Modifications at Southwest WTP	898,000	-	380,000	380,000	1,822	853,219	1,822	855,041	95%
113006	SW WTP Chloring Scrubber	7,032,000	-	-	-	-	-	-	-	0%
113007	Architectural and Building Mechanical	37,336,000	-	-	-	-	-	-	-	0%
114001	Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities	97,288,000	73,955,623	-	1,255,609	3,550,074	22,738,455	77,505,698	100,244,153	103%
114002	Springwells Water Treatment Plant - Low Lift and High Lift Pump Station	114,816,000	2,080,861	5,985,000	6,308,877	725,873	-	2,806,735	2,806,735	2%
114003	Water Production Flow Metering Improvements at NE, SW, and SPW WTP	7,105,000	6,331,921	80,000	713,282	891,578	-	7,223,499	7,223,499	102%
114005	Springwells WTP Admin Building Improvements	8,125,000	10,555	413,000	527,664	437,705	-	448,260	448,260	6%
114006	Replacement of Rapid Mix Units at Springwells WTP 1958 Process Train	1,124,000	0	61,000	61,000	9,390	1,021,039	9,390	1,030,429	92%
114007	Powder Activated Carbon Systems	3,938,000	-	-	-	-	-	-	-	0%
114008	1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP	17,125,000	195,644	4,153,000	2,185,000	615,597	-	811,240	811,240	5%
114009	Springwells Water Treatment Plant Service Area Redundancy Study	311,000	-	-	-	-	-	-	-	0%
114010	Yard Piping Improvements	110,650,000	3,947	-	-	8,434	-	12,380	12,380	0%

Great Lakes Water Authority
 Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
 Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
114011	Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP	24,989,000	2,373,087	5,392,000	5,453,373	4,320,279	-	6,693,366	6,693,366	27%
114012	Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement	3,912,000	-	-	-	-	3,911,148	-	3,911,148	100%
114013	Springwells Reservoir Fill Line Improvements	4,732,000	2,829,864	1,551,000	1,551,000	542,116	-	3,371,981	3,371,981	71%
114015	Emergency Grating Replacement at Springwells WTP	3,466,000	-	-	-	-	3,365,903	-	3,365,903	97%
114016	Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement Replacement	862,000	802	206,000	206,000	2,271	-	3,072	3,072	0%
114017	Springwells Water Treatment Plant Flocculator Drive Replacement	2,328,000	-	-	-	-	-	-	-	0%
115001	Yard Piping, Valves and Venturi Meters Replacement at Water Works Park	53,580,000	1,758,683	17,333,000	17,333,000	475,213	-	2,233,897	2,233,897	4%
115003	Comprehensive Condition Assessment at Waterworks Park WTP	855,000	513,538	153,000	153,000	55,898	-	569,437	569,437	67%
115004	ater Works Park WTP Chlorine System Upgrade	8,771,000	6,685,754	2,047,000	2,047,000	207,182	-	6,892,936	6,892,936	79%
115005	WWP WTP Building Ventilation Improvements	5,071,000	-	507,000	507,000	517	-	517	517	0%
116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on	30,090,000	10,200,085	5,467,000	5,467,000	118,489	-	10,318,574	10,318,574	34%
122001	Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	33,566,000	33,241,721	-	-	-	33,241,721	-	33,241,721	99%
122002	Replacement of Five (5) PRV Pits of Treated Water Transmission System	2,648,000	-	-	-	-	2,785,001	-	2,785,001	105%
122003	New Waterworks Park to Northeast Transmission Main	133,272,000	2,615,193	871,000	658,233	901,588	-	3,516,781	3,516,781	3%
122004	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	132,666,000	1,787,389	5,000,000	5,000,000	13,133	-	1,800,523	1,800,523	1%
122005	Replacement Schoolcraft Watermain	18,062,000	141,171	8,100,000	2,328,644	10,589	-	151,760	151,760	1%
122006	Transmission System Water Main Work-Wick Road Parallel Water Main	31,918,000	416,882	18,028,000	8,401,361	754,646	-	1,171,527	1,171,527	4%
122007	Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Ch	5,239,000	783	-	-	802	-	1,585	1,585	0%
122009	Water System Improvements in Joy Road from Southfield Road to Trinity	107,000	106,881	-	-	-	106,881	-	106,881	100%
122011	Park-Merriman Water Main-Final Phase	8,203,000	986,024	4,737,000	3,937,000	799,486	-	1,785,510	1,785,510	22%
122012	36-inch Water Main in Telegraph Road	9,573,000	-	-	-	-	9,986,284	-	9,986,284	104%
122013	Lyon Township Transmission Main Extension Project	54,426,000	637,635	751,000	2,628,978	1,799,085	-	2,436,720	2,436,720	4%
122016	Downriver Transmission Loop	37,197,000	24,251	297,000	820,965	7,729	-	31,980	31,980	0%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	20,500,000	-	1,040,000	1,040,000	-	-	-	-	0%
132001	Wick Road Station Rehabilitation	165,000	135,073	-	-	-	-	135,073	135,073	82%
132003	Isolation Gate Valves for Line Pumps for West Service Center Pumping Station	1,814,000	247,754	490,000	1,522,316	771,218	-	1,018,972	1,018,972	56%
132004	Hydraulic Surge Control for North Service Center Pumping Station	215,000	214,771	-	-	-	-	214,771	214,771	100%
132006	Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chica	2,929,000	289,594	2,515,000	2,399,138	296,487	-	586,081	586,081	20%
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station	2,160,000	97,185	592,000	592,000	19,837	-	117,022	117,022	5%
132008	Needs Assessment Study for all Water Booster Pumping Stations	1,677,000	1,838,406	-	-	1,881	-	1,840,287	1,840,287	110%
132010	West Service Center/Duval Rd Division Valve Upgrades	37,136,000	607,504	2,620,000	2,620,000	13,688	-	621,192	621,192	2%
132012	Ypsilanti PS Improvements	9,861,000	20,539	585,000	510,490	3,374	-	23,913	23,913	0%
132014	Adams Road Booster Pumping Improvements	5,674,000	-	-	-	-	-	-	-	0%
132015	Newburgh BPS	12,169,000	2,811	16,000	458,245	1,726	-	4,537	4,537	0%
132016	North Service Center BPS Improvements	24,920,000	-	-	-	-	-	-	-	0%
132017	North Service Center BPS - On-Site & Off	5,076,000	-	6,000	6,000	-	-	-	-	0%
132018	Schoolcraft BPS	10,564,000	-	-	-	-	-	-	-	0%
132019	Wick Road BPS - Switchgear	5,569,000	-	-	-	-	-	-	-	0%
132020	Franklin BPS - Isolation Gate Valves	10,109,000	-	-	-	-	-	-	-	0%
132021	Imlay BPS - Replace VFDs, Pumps & Motors	12,109,000	-	-	-	-	-	-	-	0%
132022	Joy Road BPS - Replace Reservoir Pumps	6,109,000	-	-	-	-	-	-	-	0%
132025	Northwest Booster Station Yard Piping Improvements	5,500,000	971	-	-	-	-	971	971	0%
170100	Allowance: WTP/Pump Station	39,811,000	-	3,000,000	3,000,000	-	-	-	-	0%
170102	Water Production Plant Flow Metering Improvements at NE, SP & SW WTP	-	359,259	-	-	6,302	-	365,561	365,561	100%
170103	Belle Isle Water Supply Intake and Ice Boom Improvements	-	3,278	-	-	-	286,596	3,278	289,874	100%
170104	Orion and Newburgh Pumping Stations Improvements	-	170,664	-	-	7,104	1,907,825	177,768	2,085,593	100%
170109	Inspection of Raw Water Intakes and Tunnels	-	3,102,765	-	-	38,396	-	3,141,161	3,141,161	100%
170110	Raw Water Sampling Improvements	-	2,926	-	-	-	-	2,926	2,926	100%
170121	Franklin PS Valve Rehab	-	38,681	-	-	416,786	-	455,467	455,467	100%
170122	Meter Pit at Brownstown Township	-	133,306	-	-	71,090	-	204,396	204,396	100%
170200	As Needed Construction Materials, Environmental Media and Special Allowance	1,618,000	-	572,000	572,000	-	-	-	-	0%
170201	Construction & Environmental Testing	-	63,443	-	-	(24,045)	-	39,397	39,397	100%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
170300	Water Treatment Plant Automation Program	7,740,000	-	1,561,000	1,561,000	-	-	-	-	0%
170301	Water Plant Automation	-	1,657,645	-	-	97,497	-	1,755,142	1,755,142	100%
170400	Water Transmission Improvement Program	110,656,000	-	1,500,000	1,500,000	-	-	-	-	0%
170401	Emergency Bypass Around Ypsilanti Station	-	1,643,165	-	-	15,800	-	1,658,965	1,658,965	100%
170500	Transmission System Valve Assessment and Rehabilitation/Replacement Program	36,704,000	-	4,000,000	4,000,000	-	-	-	-	0%
170502	Transmission System Valve Assessment and Rehabilitation/Replaceme	-	0	-	-	1,288,209	6,029,544	1,288,209	7,317,753	100%
170600	Water Transmission Main Asset Assessment Program	48,500,000	-	3,000,000	3,000,000	-	-	-	-	0%
170800	Reservoir Inspection, Design and Rehabilitation Program	59,164,000	-	5,128,000	632,000	-	-	-	-	0%
170801	Reservoir Inspection, Design and Rehabilitation	-	456,574	-	4,513,500	556,363	-	1,012,938	1,012,938	100%
170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement Program	43,797,000	-	4,000,000	925,000	-	-	-	-	0%
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	-	1,237,565	-	3,075,000	1,171,576	-	2,409,140	2,409,140	100%
171400	Energy Management Program	5,787,000	-	-	-	-	-	-	-	0%
171500	Roof Replacement - Var Facilities Program	6,707,000	-	2,657,000	-	-	-	-	-	0%
171501	Roof Replacement - Var Facilities Program	-	119,283	-	2,948,089	1,142,543	-	1,261,826	1,261,826	100%
331001	Roof Replacement - Var Water Facilities	5,425,000	-	-	-	-	-	-	-	0%
341001	Security Infrastructure Improvements	-	962,673	-	1,173,179	916,122	-	1,878,795	1,878,795	100%
351001	Water Facility Lighting Renovations	500,000	6,211	250,000	250,000	457	-	6,667	6,667	1%
361002	Data Center Reliability/Availability Improvements	-	16,080	-	-	-	-	16,080	16,080	100%
380600	General Engineering Services Allowance	95,000	-	-	-	-	-	-	-	0%
380601	General Engineering Services Allowance	-	674	-	-	-	-	674	674	100%
380700	As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services Allowance	620,000	-	-	-	-	-	-	-	0%
381000	Energy Management: Electric Metering Improvement Program	2,500,000	-	-	-	-	-	-	-	0%
Grand Total		\$ 1,888,664,000	\$ 175,031,084	\$ 143,247,000	\$ 128,871,025	\$ 29,887,218	\$ 118,844,199	\$ 171,569,699	\$ 290,413,898	15%
		Project Amendments \$ (14,375,975)								

FY 2020 Project Amendment Summary

The purpose of the Project Amendment Summary is to illustrate the amendments to the current fiscal year board approved CIP for each project with an amendment resulting from the use of allowance and program funding for a specific amount necessitated by contract award.

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, project amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the current fiscal year board approved Capital Improvement Plan accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the project amendments prepared for the Capital Reserve, project amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded and other project information becomes available additional project amendments to and from the Capital Reserve will be prepared to amend the board approved FY 2020 Capital Improvement Plan.

\$14.4 million of Capital Reserve project amendments have been prepared as of December 31, 2019 as shown in the table on the next page along with project amendments detailing the assignment of funding within Program and Allowance accounts.

The order of the report on the subsequent page is in ascending order by CIP project number.

Great Lakes Water Authority
Water System Project Amendment Summary
Unaudited Activity For the Fiscal Year Ended December 31, 2019

Project	Project	Program / Allowance	Capital Reserve	Grand Total
111001	Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements	\$	92,500	\$ 92,500
111004	Electrical Tunnel Rehabilitation at Lake Huron WTP		(3,020,786)	(3,020,786)
111007	Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements		(921,633)	(921,633)
112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits		144,000	144,000
113002	High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP		152,000	152,000
114001	Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities		1,255,609	1,255,609
114002	Springwells Water Treatment Plant - Low Lift and High Lift Pump Station		323,877	323,877
114003	Water Production Flow Metering Improvements at NE, SW, and SPW WTP		633,282	633,282
114005	Springwells WTP Admin Building Improvements		114,664	114,664
114008	1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP		(1,968,000)	(1,968,000)
114011	Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP		61,373	61,373
122003	New Waterworks Park to Northeast Transmission Main		(212,767)	(212,767)
122005	Replacement Schoolcraft Watermain		(5,771,356)	(5,771,356)
122006	Transmission System Water Main Work-Wick Road Parallel Water Main	\$	(9,626,639)	\$ (9,626,639)
122011	Park-Merriman Water Main-Final Phase		(800,000)	(800,000)
122013	Lyon Township Transmission Main Extension Project		1,877,978	1,877,978
122016	Downriver Transmission Loop		523,965	523,965
132003	Isolation Gate Valves for Line Pumps for West Service Center Pumping Station		1,032,316	1,032,316
132006	Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chica		(115,862)	(115,862)
132012	Ypsilanti PS Improvements	\$	(74,510)	\$ (74,510)
132015	Newburgh BPS		442,245	442,245
170800	Reservoir Inspection, Design and Rehabilitation Program	(4,496,000)		(4,496,000)
170801	Reservoir Inspection, Design and Rehabilitation	4,496,000	17,500	4,513,500
170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement Program	(3,075,000)		(3,075,000)
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	3,075,000		3,075,000
171500	Roof Replacement - Var Water Facilities Program		(2,657,000)	(2,657,000)
171501	Roof Replacement - Var Water Facilities		2,948,089	2,948,089
341001	Security Infrastructure Improvements	\$	1,173,179	\$ 1,173,179
Grand Total		\$ -	\$ (14,375,974)	\$ (14,375,974)

WASTEWATER SYSTEM

Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2020-2024 and related CIP Plan for FY 2020 were based on anticipation of FY 2020 activity resulting in 75% of planned spend. The Water System spend for the period ending December 31, 2019 is 37.1% of the FY 2020 prorated board approved CIP, 38.2% of the FY 2020 prorated board approved CIP with project amendments, and 49.4% of the FY 2020 Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2020 Board Approved CIP was amended from \$161,480,000 to \$ 156,584,005 is provided in the subsequent Project Amendment Summary section of this report.

Wastewater System Projects		FY 2019 CIP	FY 2019 Activity	FY 2019 Percentage	FY 2020 CIP	FY 2020 Prorated (Six Months)	FY 2020 Activity (Unaudited)	FY 2020 Percentage
FY 2019 Board Approved CIP	\$	105,183,000	82,133,532	78.1%				
FY 2019 Board Approved CIP With Project Amendments		100,264,934	82,133,532	81.9%				
FY 2020 Board Approved CIP					\$ 161,480,000	80,740,000	29,924,759	37.1%
FY 2020 Board Approved CIP With Project Amendments					156,584,005	78,292,003	29,924,759	38.2%
FY 2020 Capital Spend Rate Assumption (SRA)					121,110,000	60,555,000	29,924,759	49.4%

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

As part of our project life cycle review the CA&FR team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service. Capitalization of project cost occurred in the FY 2020 2nd quarter for the following projects:

<u>Project</u>	<u>Contract</u>	<u>Description</u>
213005	CON-229	Complex I Incineration Heating
260606	1802791	Puritan Fenkell Roof Replacement
331002	1803227	Dewatering Complex II Roof Replacement

\$186.7 million is in CWIP as of December 31, 2019 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is in ascending order by CIP project number.

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Wastewater System
Construction Work-in-Progress Quarterly Report
As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
171501	Roof Replacement - Var Facilities Program	\$ -	\$ -	\$ -	\$ 83,000	\$ 83,000	\$ -	\$ 83,000	\$ 83,000	100%
211001	Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	54,858,000	45,368,717	7,982,000	7,982,000	5,645,273	-	51,013,990	51,013,990	93%
211002	Pump Station No. 2 Pumping Improvments	3,812,000	1,911,850	1,222,000	1,222,000	51,227	-	1,963,077	1,963,077	51%
211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	27,198,000	26,502,582	869,000	869,000	809,970	-	27,312,552	27,312,552	100%
211005	Pump Station No. 2 Improvements	21,599,000	1,002	-	-	(1,002)	-	0	0	0%
211006	Pump Station No. 1 Improvements	22,315,000	6,307	1,803,000	1,803,000	833,334	-	839,641	839,641	4%
211007	Replacement of Bar Racks and Grit Collection System at Pump Station No. 2	17,836,000	628	269,000	269,000	133	-	761	761	0%
211008	Rehabilitation of Ferric Chloride Feed systems at the Pump Station - 1 and Complex B Sludge Lines	10,566,000	200,048	2,950,000	3,950,000	876,828	-	1,076,877	1,076,877	10%
211009	Rehabilitation of the Circular Primary Clarifier Scum Removal System	11,394,000	30	-	-	-	-	30	30	0%
212002	Study, Design, & Construction, Management Services for Modified Detroit River Outfall No. 2 - WRRF	-	10,821,153	-	-	(1,853)	-	10,819,300	10,819,300	100%
212003	Aeration System Improvements	16,682,000	16,356,789	-	-	162,620	-	16,519,409	16,519,409	99%
212004	Project Chlorination/Dechlorination Process Equipment Improvements	5,045,000	192,917	2,345,000	2,903,000	87,859	-	280,776	280,776	6%
212006	PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	48,033,000	41,691,377	4,583,000	4,731,155	1,013,560	-	42,704,937	42,704,937	89%
212007	Rehabilitation of the Secondary Clarifiers	30,118,000	-	-	-	-	-	-	-	0%
212008	WRRF Rehabilitation of Intermediate Lift	20,833,000	-	229,000	229,000	-	-	-	-	0%
213002	Rehabilitation of Central Offload Facility	16,179,000	-	7,696,000	7,696,000	-	-	-	-	0%
213005	Complex I Incinerators Decommissioning and Reusability	4,452,000	369,648	-	-	22	369,671	-	369,671	8%

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Wastewater System
Construction Work-in-Progress Quarterly Report
As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
213006	Improvements to Sludge Feed Pumps at Dewatering Facilities	3,726,000	4,856	-	-	-	-	4,856	4,856	0%
213007	Construction of the Improved Sludge Conveyance and Lighting System at the WWTP	20,049,000	10,809,195	8,711,000	8,711,000	3,350,805	-	14,160,000	14,160,000	71%
213008	Rehabilitation of the Wet and Dry Ash Handling Systems	18,505,000	85	111,000	111,000	31,192	-	31,276	31,276	0%
213009	Phosphorous Recovery Facility at the WWRF	-	(99)	-	-	99	-	-	-	100%
214001	Relocation of Industrial Waste Division and Analytical Laboratory Operations	10,968,000	17,017	7,567,000	8,367,000	926,845	2,282,260	943,863	3,226,122	29%
216004	Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP	5,576,000	814,368	3,921,000	3,921,000	416,868	-	1,231,236	1,231,236	22%
216006	Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System	24,853,000	17,581	323,000	323,000	16,951	-	34,532	34,532	0%
216007	DTE Primary Electric 3rd Feed Supply Line to the WRRF	7,447,000	2,194,169	1,381,000	1,381,000	-	543,500	2,194,169	2,737,669	37%
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	24,948,000	-	1,091,000	1,091,000	-	-	-	-	0%
216009	Logistics & Material Facility	-	-	-	-	2,951	-	2,951	2,951	100%
222001	Intercommunity Relief Sewer Modifications in Detroit Oakwood District	38,031,000	-	-	-	-	-	-	-	0%
222002	Detroit River Interceptor Evaluation and Rehabilitation	49,071,000	10,611,644	10,000,000	4,049,445	5,997,970	-	16,609,614	16,609,614	34%
222003	North Interceptor East Arm (NIEA) Evaluation and Rehabilitation	30,000,000	-	15,000,000	15,000,000	-	-	-	-	0%
222004	Collection System Valve Remote Operation Structures Improvements	87,033,000	4,246	3,500,000	3,500,000	23,863	-	28,109	28,109	0%
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	30,442,000	3,475,448	18,000,000	16,265,405	1,943,244	-	5,418,692	5,418,692	18%
232002	Freud and Connor Creek Pump Station Improvements	162,429,000	5,573,334	17,029,000	17,229,000	318,622	57,734	5,891,956	5,949,691	4%
232003	Northeast Pump Station Improvements	31,500,000	-	7,000,000	7,000,000	-	-	-	-	0%
233002	Collection System In System Storage Devices(ISDs) Improvements	-	235	-	-	-	-	235	235	100%
251002	Wastewater System Wide Instrumentation & Controls Software and Hardware Upgrade	-	71	-	-	-	-	71	71	100%

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Wastewater System
Construction Work-in-Progress Quarterly Report
As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
260100	Water Resource Recovery Facility (WRRF), Lift Station & Wastewater Collection System Allowance	34,038,000	-	1,100,000	1,100,000	-	-	-	-	0%
260200	Sewer and Interceptor Evaluation and Rehabilitation Program	192,164,000	-	15,000,000	6,550,048	-	-	-	-	0%
260201	Conveyance System Interceptor Rehab	-	4,810,116	-	7,400,000	3,388,808	9,176,553	8,198,924	17,375,476	100%
260202	Conveyance System Interceptor Rehab	-	17,031	-	-	2,420	-	19,451	19,451	100%
260203	Conveyance System Interceptor Rehab	-	4,642,133	-	-	-	-	4,642,133	4,642,133	100%
260204	Energy Services for Rehabilitation of Conveyance Sewer System	-	133	-	1,049,952	144,555	-	144,688	144,688	100%
260500	CSO Outfall Rehab	89,188,000	-	15,102,000	10,302,925	-	-	-	-	0%
260503	Collection System Backwater Gates	-	760	-	-	-	-	760	760	100%
260504	Rehabilitation of Outfalls - Phase II	-	-	-	3,000,000	252,114	-	252,114	252,114	100%
260505	Rehabilitation of Outfalls - Phase IV	-	-	-	1,799,075	-	-	-	-	100%
260600	CSO Facilities Improvements	63,591,000	-	5,604,000	3,421,000	-	-	-	-	0%
260601	Oakwood Drain Valve Improvements	-	539,857	-	33,000	75,429	-	615,286	615,286	100%
260602	CSO Fire Alarm System Improvements	-	812,407	-	-	176,946	-	989,353	989,353	100%
260603	Conner Creek CSO Basin Rehab	-	4,404,704	-	775,000	1,299,834	-	5,704,538	5,704,538	100%
260605	CSO Facilities CA	-	16,914	-	-	(16,914)	-	-	-	100%
260606	Puritan Fenkell Roof Replacement	-	1,944	-	-	344,596	346,540	-	346,540	100%
260607	Lieb SDF Electrical Improvements	-	241,513	-	450,000	753,668	-	995,181	995,181	100%
260608	Seven Mile RTB - Roof Replacement	-	12,451	-	300,000	375,548	-	387,999	387,999	100%
260609	Seven Mile RTB - Parking Lot / Sitework	-	23,197	-	400,000	15,554	-	38,751	38,751	100%
260610	Baby Creek MAU Replacement	-	1,773	-	-	245,699	-	247,473	247,473	100%
260611	HVAC Improvements At Lieb SDF	-	5,283	-	225,000	13,381	-	18,665	18,665	100%
260613	Baby Creek HVAC Improvements	-	76	-	-	403	-	479	479	100%
260614	CSO Facilities Structural Improvements	-	335,143	-	-	(109,570)	-	225,573	225,573	100%
260615	PF & Lieb CSO Facilities Site & Drainage Improvements	-	-	-	-	1,520	-	1,520	1,520	100%
260617	St. Aubin Chemical Disinfection Improvements	-	-	-	-	49,800	-	49,800	49,800	100%

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31, 2019

Wastewater System
Construction Work-in-Progress Quarterly Report
As of December 31, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP	FY 2020 Board Approved CIP With Project Amendments	FY 2020 Activity through December 31, 2019	Life to Date Capitalization Through December 31, 2019	CWIP Balance December 31, 2019	Life to Date Activity through December 31, 2019	Life to Date Activity / Total Project Plan
331002	Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	9,709,000	802,470	1,092,000	1,092,000	320,586	1,123,056	-	1,123,056	12%
341001	Security Infrastructure Improvements	-	102,924	-	-	-	-	102,924	102,924	100%
380600	General Engineering Services Allowance	1,000	-	-	-	-	-	-	-	0%
380601	General Engineering Services Allowance	-	632	-	-	-	-	632	632	100%
381000	Energy Management: Electric Metering Improvement Program	2,500,000	-	-	-	-	-	-	-	0%
Grand Total		\$ 1,246,689,000	\$ 193,716,659	\$ 161,480,000	\$ 156,584,005	\$ 29,924,759	\$ 190,362,461	\$ 221,802,152	\$ 412,164,613	33%
		Project Amendments				\$ (4,895,995)				

FY 2020 Project Amendment Summary

The purpose of the Project Amendment Summary is to illustrate the amendments to the current fiscal year board approved CIP for each project with an amendment resulting from the use of allowance and program funding for a specific amount necessitated by contract award.

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, project amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the current fiscal year board approved Capital Improvement Plan accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the project amendments prepared for the Capital Reserve, project amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded and other project information becomes available additional project amendments to and from the Capital Reserve will be prepared to amend the board approved FY 2020 Capital Improvement Plan.

\$4.9 million of Capital Reserve project amendments have been prepared as of December 31, 2019 as shown in the table on the next page along with project amendments detailing the assignment of funding within Program and Allowance accounts.

The order of the report on the subsequent page is in ascending order by CIP project number.

Wastewater System Construction Work-in-Progress Quarterly Report

As of December 31, 2019

Great Lakes Water Authority Wastewater System Project Amendment Summary Unaudited Activity For the Fiscal Year Ended December 31, 2019

Project	Project	Program / Allowance	Capital Reserve	Grand Total
171501	Roof Replacement - Var Water Facilities		83,000	83,000
211008	Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines		1,000,000	1,000,000
212004	Chlorination/Dechlorination Process Equipment Improvements		558,000	558,000
212006	PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	\$	148,155	\$ 148,155
214001	Relocation of Industrial Waste Division and Analytical Laboratory Operations	\$	800,000	\$ 800,000
222002	Detroit River Interceptor Evaluation and Rehabilitation	\$	(5,950,555)	\$ (5,950,555)
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	\$	(1,734,595)	\$ (1,734,595)
232002	Freud and Connor Creek Pump Station Improvements	\$	200,000	\$ 200,000
260200	Sewer and Interceptor Evaluation and Rehabilitation Program	(8,449,952)		(8,449,952)
260201	Conveyance System Interceptor Rehab	7,400,000		7,400,000
260204	Energy Services for Rehabilitation of Conveyance Sewer System	1,049,952		1,049,952
260500	CSO Outfall Rehab	(4,799,075)		(4,799,075)
260504	Rehabilitation of Outfalls - Phase II	3,000,000		3,000,000
260505	Rehabilitation of Outfalls - Phase IV	\$ 1,799,075		\$ 1,799,075
260600	CSO Facilities Improvements	\$ (2,183,000)		\$ (2,183,000)
260601	Oakwood Drain Valve Improvements	\$ 33,000		\$ 33,000
260603	Conner Creek CSO Basin Rehab	\$ 775,000		\$ 775,000
260607	Lieb SDF Electrical Improvements	\$ 450,000		\$ 450,000
260608	Seven Mile RTB - Roof Replacement	\$ 300,000		\$ 300,000
260609	Seven Mile RTB - Parking Lot / Sitework	\$ 400,000		\$ 400,000
260611	HVAC Improvements At Lieb SDF	\$ 225,000		\$ 225,000
Grand Total		\$ -	\$ (4,895,995)	\$ (4,895,995)