



Audit Committee

Friday, February 21, 2020 at 8:00 a.m.

5th Floor Board Room, Water Board Building
735 Randolph Street, Detroit, Michigan 48226
GLWater.org

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
 - A. January 27, 2020 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds (Page 6)
 - B. Proposed Water Residential Assistance Program Changes for FY 2021 (Page 40)
 - C. Industrial Pretreatment Program Financial Analysis & Charges Update (Page 88)
 - D. Continued Review – Proposed FY 2021 & FY 2022 Biennial Budget & Five-Year Financial Plan (Page 154)
7. NEW BUSINESS
 - A. Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds (Page 175)
 - B. Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds (Page 182)
 - C. Water Residential Assistance Program Contract CS-010 Update (Page 190)
8. REPORTS
 - A. Monthly Financial Report for November 2019 (Page 192)
 - B. Quarterly Investment Report (Page 193)
 - C. Quarterly Construction Work in Progress Report (Page 224)
9. COMMUNICATIONS
 - A. *The Procurement Pipeline* for February 2020 (Page 251)
 - B. Government Finance Officers Association Budget Award (Page 253)
10. LOOK AHEAD
 - Next Audit Committee Meetings
 - A. Regular Meeting March 20, 2020 at 8:00 a.m.
11. OTHER MATTERS
12. ADJOURNMENT

Note: Binders 1 & 2 have been combined in agenda order and document was renumbered.



Great Lakes Water Authority

735 Randolph Street
 Detroit, Michigan 48226
 glwater.legistar.com

Meeting Minutes - Draft

Audit Committee

Monday, January 27, 2020

8:30 AM

Water Board Building 5th Floor

1. Call To Order

Director Brown (Acting Chairperson) called the Meeting to order at 8:30 a.m., and adjourned the meeting to the call of the Chair until Director Baker and Nicolette Bateson, Chief Financial Officer/Treasurer, arrive.

Note: The 2020 Audit Committee Chairperson will be nominated once all members of the Committee are present.

Director Baker arrived at 8:31 a.m.

Director Brown nominated Director Baker to serve as the Chairperson of the Audit Committee, supported by Director Munfakh. The nomination carried by a unanimous vote.

Chairperson Baker called the meeting back to order at 8:35 a.m.

2. Quorum Call

Present: 3 - Chairperson Brian Baker, Director Gary Brown, and Director Abe Munfakh

3. Approval of Agenda

Chairperson Baker requested a Motion to approve the Agenda.

Motion By: Gary Brown

Support: Abe Munfakh

Action: Approved

The motion carried unanimously.

4. Approval of Minutes

A. Approval of Minutes of December 19, 2019

Chairperson Baker requested a Motion to approve the December 19, 2019 Audit Committee Meeting Minutes.

Motion By: Abe Munfakh

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

6. Old Business

- A. [2020-026](#) Update: Oakland Macomb Interceptor Drain Drainage District Wastewater Disposal Services Contract Amendment Implementation

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6A1 OMID Contract Amendment Update.pdf](#)

Motion By: Abe Munfakh

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

7. New Business

- A. [2020-028](#) Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Bonds

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7A1 Approval of Series Ordinance- Water Revenue Bonds 1.17.20.pdf](#)

[7A2 2020 DWRF Series Ordinance- DWSD.pdf](#)

[7A3 Resolution Approving 2020 DWRF Series Ordinance.pdf](#)

Motion By: Abe Munfakh

Support By: Gary Brown

**Action: Recommended for Approval to the Board of Directors Workshop Meeting
Agenda of February 12, 2020**

The motion carried by a unanimous vote.

- B.** [2020-029](#) Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Bonds
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [7B1 Approval of Series Ordinance- Sewer Revenue Bonds 1.17.20.pdf](#)
[7B2 2020 SRF Series Ordinance- GLWA.pdf](#)
[7B3 Resolution Approving 2020 SRF Series Ordinance.pdf](#)
- Motion By:** Gary Brown
Support By: Abe Munfakh
Action: Recommended for Approval to the Board of Directors Workshop Meeting Agenda of February 12, 2020
The motion carried by a unanimous vote.
- C.** [2020-030](#) Quarterly Water Residential Assistance Program Report for October 2019
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [7C1 Quarterly WRAP Report as of 10.31.2019.pdf](#)
- Motion By:** Gary Brown
Support By: Abe Munfakh
Action: Received and Filed
The motion carried by a unanimous vote.
- D.** [2020-031](#) Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [7D1 FY 2019 WRAP Reallocation Request.pdf](#)
[7D2 Wayne Metro Reallocation Req. Letter 1.10.2020v2.pdf](#)
[7D3 Wayne Metro Presentation WRAP Reallocation Req for 1.17.19 AC.pdf](#)
- Motion By:** Gary Brown
Support By: Abe Munfakh
Action: Received and Filed
The motion carried by a unanimous vote.

6B. [2020-027](#) Continued Review - Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6B01 Continued Review - Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan.pdf](#)
[6B02 Executive Summary Schedules - Biennial Budget & 5 yr plan.pdf](#)
[6B03 TFG1 Budget Questions 011420 TFG.pdf](#)
[6B04 DH1 PFM Earnings Projection Cover Memo.pdf](#)
[6B05 DH2 GLWA Investment Earnings Projection Memo from PFM.pdf](#)
[6B06 FY 2021 O and M Budget One pager 1.09.2020.pdf](#)
[6B08a Personnel Staffing and FTE count FY 2018 - 2025 Update 12-10-19-KI.pdf](#)
[6B08b Personnel Budget FY 2019-FY 2025 COMPILED -Headcount reporting.pdf](#)
[6B10 Capital Outlay Financial Plan.pdf](#)
[6B11 Process and Calendar FY 2021 and FY 2022 Biennial Budget v12.16.2019.pdf](#)
[6B12 Preliminary FY 2021 Charges 012020](#)
[6B13 BOD Presentation 012220](#)
[6B14 FY 2021 Budget Highlights Presentation](#)
[6B15 Capital Funding Sources Uses 1.27.2020](#)
[6B16 Capital Funding Sources Uses Amounts 1.27.2020](#)

Motion By: Abe Munfakh

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

8. Reports

A. [2020-032](#) Monthly Financial Report for October 2019

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8A GLWA Monthly Financial Report October 2019.pdf](#)

Motion By: Abe Munfakh

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

B. [2020-033](#) Quarterly Debt Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8B1 Quarterly Debt Report as of 9.30.2019.pdf](#)

Motion By: Abe Munfakh
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

9. Look Ahead

The next Audit Committee Meeting will be held on Friday, February 21, 2020 at 8:00 a.m.

10. Information

None

11. Other Matters

None

12. Adjournment

Motion By: Brian Baker
Support: Gary Brown
Action: Approved
The motion carried unanimously.

There being no further business, the meeting was adjourned at 11:00 a.m.



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds

Background: Included is the draft Great Lakes Water Authority (“GLWA”) Board letter for the February 26, 2020 Board meeting regarding Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds.

Key Takeaways

- Total amount of uncommitted FY 2019 WRAP Funds is \$2,013,916 (\$1,650,580 in uncommitted direct assistance and \$333,336 in uncommitted conservation)
- Proposed bill assistance and conservation reallocation of \$1,182,593 to Detroit and \$471,562 to Flint
- Proposed reallocation of \$359,761 to community outreach to increase participation in the suburban communities

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the Wayne Metro recommendation to:

1) approve the reallocation of the uncommitted FY 2019 assistance funds of \$1,680,580; \$690,100 to Detroit and \$371,562 to Flint for direct assistance, \$359,761 to Community Outreach to increase program participation in suburban communities and with the remaining \$259,157 transferred to conservation funding; and

2) approve the reallocation of the uncommitted FY 2019 conservation funds in the amount of \$333,336 together with the \$259,157 transferred funds from FY 2019 uncommitted assistance funds together totaling \$592,493 be reallocated to Detroit in the amount of \$492,493 and to Flint in the amount of \$100,000.

..Title

Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds

..Body

Agenda of: February 26, 2020

Item No.: **2020-066**

Amount: n/a

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: February 26, 2020

RE: Water Residential Assistance Program Reallocation Request for Uncommitted FY 2019 Funds

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), to

- 1) **approve the reallocation of the uncommitted FY 2019 assistance funds of \$1,680,580; \$690,100 to Detroit and \$371,562 to Flint for direct assistance, \$359,761 to Community Outreach to increase program participation in suburban communities and with the remaining \$259,157 transferred to conservation funding;**
and
- 2) **approve the reallocation of the uncommitted FY 2019 conservation funds in the amount of \$333,336 together with the \$259,157 transferred funds from FY 2019 uncommitted assistance funds together totaling \$592,493 be reallocated to Detroit in the amount of \$492,493 and to Flint in the amount of \$100,000; and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.**

BACKGROUND

After the completion of each fiscal year, Wayne Metro recommends a reallocation of uncommitted assistance and conservation funds to the GLWA Board of Directors. The objective is to provide resources that have not been utilized by other communities to those member partners that have fully committed their annual budgeted allocation and have further needs identified. Included in this memo is the recommended reallocation for the uncommitted FY 2019 for the Water Residential Assistance Program (WRAP).

JUSTIFICATION

On October 18, 2019, the quarterly WRAP report was presented to the GLWA Audit Committee. Included in that report was the budgeted WRAP assistance and conservation allocations to the City of Detroit and the counties served by GLWA for FY 2019 and the FY 2019 committed assistance and conservation funds. Based on the FY 2019 activity in Table 1 (*see attachment 1*), there was a total of \$2,013,916 in uncommitted WRAP funds.

Table 2 (*see attachment 2*) shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit as of June 30, 2019. From March 1, 2016 to June 30, 2019, \$16.8 million was budgeted for WRAP bill assistance and conservation assistance and \$13.1 million was utilized by WRAP participants during that time. As of June 30, 2019, the suburban counties still had uncommitted funds (combined assistance and conservation) of over \$2.5 million. The City of Detroit had uncommitted funds of \$794,400 million and the City of Flint had uncommitted funds of \$427,756 due to the reallocation of the uncommitted FY 2018 suburban assistance funds.

The GLWA Board has previously authorized the reallocation of uncommitted FY 2016 to FY 2018 WRAP funds to the City of Detroit and the City of Flint. To date, \$3,246,213 has been reallocated to Detroit and \$970,875 to the City of Flint from the other counties within GLWA. As shown in Table 3 (*see attachment 3*).

Wayne Metro Reallocation Recommendations

Based on the demonstrated usage of the WRAP funds since March 1, 2016 and the usage through the end of FY 2019, Wayne Metro is recommending reallocation of currently uncommitted FY 2019 suburban WRAP funds. Attached is Wayne Metro's letter (including referenced documents) dated January 10, 2020 which outlines their recommendations. Below is a summary of the recommendations:

1. Reallocation of Uncommitted FY 2019 Assistance Funds: WRAP utilization in FY 2019 for suburban Counties had uncommitted assistance dollars of \$1,680,580. Wayne Metro is recommending the \$1,680, 580 be reallocated to Detroit in the Amount of \$690, 100, to Flint in the Amount of \$371,562, to Community Outreach to increase program participation in suburban communities in the Amount of \$359, 761 with the remaining \$259,157 transferred to conservation funding
2. Reallocation of Uncommitted FY 2019 Conservation Funds: In addition to the uncommitted assistance funds, \$333,336 remain from the suburban Counties' allocation of the conservation funds from FY 2019. Wayne Metro is recommending combining the \$259,157 of repurposed FY 2019 assistance funds (noted above) and the \$333,336 of unspent FY 2019 suburban Counties' conservation funds for a total of \$592,493. From the \$592,493, Wayne Metro is recommending the transfer of \$492,493 to the City of Detroit and \$100,000 to the City of Flint as shown in Table 4 (*see attachment 4*).

BUDGET IMPACT

None.

COMMITTEE REVIEW

The GLWA Audit Committee reviewed this item at its February 21, 2020 meeting and recommends that the Great Lakes Water Authority Board _____ open _____.

Table 1 – WRAP Activity for FY 2019

County/City	FY 2019 WRAP Spending						
	Direct Assistance			Conservation			Total
	Allocated Direct Assistance	Committed Direct Assistance	Uncommitted Direct Assistance	Allocated Conservation	Committed Conservation	Uncommitted Conservation	Total Uncommitted
Wayne County							
City of Detroit	1,405,432	1,405,432	-	327,530	327,530	-	-
Out Wayne	818,952	416,340	402,612	190,853	72,719	118,134	520,746
Total Wayne County	2,224,384	1,821,772	402,612	518,383	400,249	118,134	520,746
Oakland County	866,319	46,996	819,323	201,892	41,438	160,454	979,777
Macomb County	452,003	43,129	408,874	105,337	57,531	47,806	456,680
Genesee County	-	-	-	-	-	-	-
City of Flint	17,202	17,202	-	4,009	4,009	-	-
Washtenaw County	39,783	10,397	29,386	9,271	7,080	2,191	31,578
Lapeer County	11,131	-	11,131	2,594		2,594	13,725
Monroe County	6,392	-	6,392	1,490		1,490	7,882
St. Clair County	2,862	-	2,862	667		667	3,529
Total	3,620,076	1,939,496	1,680,580	843,643	510,307	333,336	2,013,916

Table 2

TOTAL Activity March 1, 2016 to June 30, 2019

Row	Sources (Net Revenues)	Detroit	Out-Wayne County	Oakland County	Macomb County	Washtenaw County	St. Clair County	Lapeer County	Monroe County	Genesee County	City of Flint	Total
1	FY 2016 Assistance Budget Allocation	\$ 1,238,736	\$ 748,629	\$ 740,155	\$ 379,764	\$ 35,419	\$ 3,051	\$ 10,080	\$ 5,093	\$ 63,842	\$ -	\$ 3,224,769
2	Bill and Arrearage Assistance	288,022	174,066	172,096	88,300	8,235	709	2,344	1,184	14,500	-	749,457
3	Home Audit and Repairs	\$ 1,526,759	\$ 922,695	\$ 912,250	\$ 468,064	\$ 43,654	\$ 3,760	\$ 12,424	\$ 6,277	\$ 78,342	\$ -	\$ 3,974,226
4	Total FY 2016 Assistance Budget Allocation											
5	FY 2017 Assistance Budget Allocation	\$ 1,278,103	\$ 806,833	\$ 774,825	\$ 400,804	\$ 37,998	\$ 2,431	\$ 10,059	\$ 5,561	\$ -	\$ -	\$ 3,316,615
6	Bill and Arrearage Assistance	297,856	188,029	180,570	93,406	8,855	578	2,344	1,296	-	-	772,934
7	Home Audit and Repairs	\$ 1,575,960	\$ 994,862	\$ 955,395	\$ 494,209	\$ 46,853	\$ 3,009	\$ 12,403	\$ 6,858	\$ -	\$ -	\$ 4,089,549
8	Total FY 2017 Assistance Budget Allocation											
9	FY 2018 Assistance Budget Allocation	\$ 1,303,229	\$ 848,677	\$ 827,662	\$ 429,388	\$ 40,961	\$ 2,604	\$ 9,970	\$ 5,908	\$ 28,679	\$ -	\$ 3,497,078
10	Bill and Arrearage Assistance	303,712	197,780	192,883	100,067	9,546	607	2,323	1,377	6,684	-	814,979
11	Home Audit and Repairs	\$ 1,606,941	\$ 1,046,457	\$ 1,020,545	\$ 529,455	\$ 50,507	\$ 3,211	\$ 12,294	\$ 7,285	\$ 35,363	\$ -	\$ 4,312,057
12	Total FY 2018 Assistance Budget Allocation											
13	FY 2019 Assistance Budget Allocation	\$ 1,405,432	\$ 818,952	\$ 866,319	\$ 452,003	\$ 39,783	\$ 2,862	\$ 11,131	\$ 6,392	\$ -	\$ 17,202	\$ 3,620,075
14	Bill and Arrearage Assistance	327,530	190,853	201,892	105,337	9,771	667	2,594	1,490	-	4,009	843,643
15	Home Audit and Repairs	\$ 1,732,962	\$ 1,009,805	\$ 1,068,211	\$ 557,340	\$ 49,054	\$ 3,529	\$ 13,725	\$ 7,882	\$ -	\$ 21,211	\$ 4,463,718
16	Total FY 2019 Assistance Budget Allocation											
17	NET FY 2016-2019 Assistance Available	\$ 6,442,621	\$ 3,973,819	\$ 3,956,402	\$ 2,049,068	\$ 190,069	\$ 13,509	\$ 50,846	\$ 28,301	\$ 113,705	\$ 21,211	\$ 16,839,550
18	Reallocation of Uncommitted Funds											
19	Reallocation of Uncommitted Funds from FY 2016 (1)	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Bill and Arrearage Assistance Reallocated to Detroit											
21	Uncommitted FY 2016 Conservation Funds											
22	Bill and Arrearage Assistance Reallocated to Flint											
23	Total Reallocation of Uncommitted Funds from FY 2016	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ (35,419)	\$ (3,051)	\$ (10,080)	\$ (5,093)	\$ (63,842)	\$ 117,485	\$ -
24	Reallocation of Uncommitted Funds from FY 2017 (2)	\$ 549,784	\$ (486,355)	\$ (268,078)	\$ (262,634)	\$ (28,401)	\$ (2,431)	\$ (10,059)	\$ (5,561)	\$ -	\$ -	\$ (206,200)
25	FY 2017 Reallocation of Assistance Funds	237,197	(71,911)	(62,120)	(6,248)	(5,866)	(405)	(1,641)	(907)	-	-	206,200
26	FY 2017 Reallocation of Conservation Funds	\$ 786,981	\$ (558,266)	\$ (330,198)	\$ (268,882)	\$ (34,267)	\$ (2,836)	\$ (11,700)	\$ (6,468)	\$ -	\$ -	\$ -
27	Total Reallocation of Uncommitted Funds from FY 2017											
28	Reallocation of Uncommitted Funds from FY 2018 (3)	\$ 438,750	\$ (298,775)	\$ (313,067)	\$ (241,763)	\$ (28,966)	\$ (2,604)	\$ (9,970)	\$ (5,908)	\$ (28,679)	\$ 236,250	\$ (254,732)
29	FY 2018 Reallocation of Assistance Funds	355,650	(96,982)	(116,197)	(59,108)	(9,145)	(607)	(2,323)	(1,377)	(6,684)	191,505	254,732
30	FY 2018 Reallocation of Conservation Funds	\$ 794,400	\$ (395,757)	\$ (429,264)	\$ (300,871)	\$ (38,111)	\$ (3,211)	\$ (12,293)	\$ (7,285)	\$ (35,363)	\$ 427,755	\$ -
31	Total Reallocation of Uncommitted Funds from FY 2018											
32	Total Reallocation of Uncommitted Funds	\$ 3,246,213	\$ (1,672,375)	\$ (1,350,625)	\$ (925,069)	\$ (107,797)	\$ (9,097)	\$ (34,073)	\$ (18,846)	\$ (99,205)	\$ 970,875	\$ -
33	NET FY 2016-2019 Assistance Available	\$ 9,688,834	\$ 2,301,444	\$ 2,605,777	\$ 1,123,999	\$ 82,272	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 992,086	\$ 16,839,550
34	Uses 3/01/2016 to 6/30/2019											
35	Home Audits and Repair Paid to Date	1,454,318	259,759	221,369	159,776	3,067	-	-	-	-	122,109	2,220,398
36	Bill Assistance and Arreages Paid to Date	4,247,810	698,962	970,804	311,922	19,735	-	-	-	-	153,083	6,402,318
37	Total Uses 3/01/2016 to 6/30/2019	\$ 5,702,128	\$ 958,721	\$ 1,192,173	\$ 471,698	\$ 22,803	\$ -	\$ -	\$ -	\$ -	\$ 275,192	\$ 8,622,716
38	Less: Committed Funds 3/01/2016 to 6/30/2019											
39	Future Bill Assistance	\$ 1,176,727	\$ 134,477	\$ 36,696	\$ 40,212	\$ 3,006	\$ -	\$ -	\$ -	\$ -	\$ 106,399	\$ 1,497,516
40	Future Arrearage Assistance	2,015,579	484,900	209,878	70,043	14,136	-	-	-	-	182,740	2,977,276
41	Total Committed Funds 3/01/2016 to 6/30/2019	\$ 3,192,306	\$ 619,377	\$ 246,574	\$ 110,255	\$ 17,142	\$ -	\$ -	\$ -	\$ -	\$ 289,138	\$ 4,474,792
42	Total Expenditures/Committed Funds	\$ 8,894,435	\$ 1,578,098	\$ 1,438,747	\$ 581,953	\$ 39,945	\$ -	\$ -	\$ -	\$ -	\$ 564,331	\$ 13,097,508
43	Uncommitted Funds as of 6/30/2019 (line 31 - line 40)	\$ 794,400	\$ 723,345	\$ 1,167,029	\$ 542,046	\$ 42,327	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 427,756	\$ 3,742,042
44	Summary of Uncommitted Funds 6/30/2019											
45	Uncommitted Conservation	\$ 355,650	\$ 322,077	\$ 347,754	\$ 161,978	\$ 17,829	\$ 1,549	\$ 5,641	\$ 3,063	\$ 14,500	\$ 191,505	\$ 1,421,547
46	Uncommitted Assistance	438,750	401,268	819,275	380,068	24,498	2,862	11,131	6,392	-	236,251	2,320,495
47	Total Uncommitted Funds as of 6/30/2019	\$ 794,400	\$ 723,345	\$ 1,167,029	\$ 542,046	\$ 42,327	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 427,756	\$ 3,742,042

(1) Based on April 26, 2017 Board of Directors action
 (2) Based on August 22, 2018 Board of Directors action
 (3) Based on June 26, 2019 Board of Directors action

Table 3 – Total WRAP Reallocation of Uncommitted Funds FY 2016-2018

Reallocated Funds	Detroit	Flint	Total
FY 2016	\$1,664,833	\$117,485	\$1,782,318
FY 2017	786,981	425,635	1,212,616
FY 2018	794,400	427,755	1,222,155
Total Reallocation	\$3,246,214	\$970,875	\$4,217,089

Table 4 – Proposed WRAP Reallocation

County/City	Uncommitted	PROPOSED FY 2019 Reallocation			
	Total Uncommitted	Direct Assistance	Conservation	Outreach	Total Reallocation
Wayne County					
City of Detroit	-	690,100	492,493	-	1,182,593
Out Wayne	520,746	-	-	60,961	60,961
Total Wayne County	520,746	690,100	492,493	60,961	1,243,554
Oakland County	979,777	-	-	172,328	172,328
Macomb County	456,680	-	-	98,642	98,642
Genesee County	-	-	-	-	-
City of Flint	-	371,562	100,000	21,749	493,311
Washtenaw County	31,578	-	-	3,947	3,947
Lapeer County	13,725	-	-	1,220	1,220
Monroe County	7,882	-	-	625	625
St. Clair County	3,529	-	-	289	289
Total	2,013,916	1,061,662	592,493	359,761	2,013,916



Wayne Metropolitan
Community Action Agency
Established 1971



LHSA
A Community Action Agency



January 10, 2020

Great Lakes Water Authority & Chief Executive Officer
735 Randolph, 19th Floor
Detroit, MI 48202

RE: Water Residential Assistance Program Reallocation of Uncommitted FY18-19 Funds

Dear GLWA Board of Directors and Sue McCormick,

Community Action Agencies, America’s anti-poverty network, carry out a shared promise to empower people and communities to be strong, healthy, and thriving. The Community Action Alliance for Southeast Michigan, through our role in WRAP, has made water assistance, conservation, and consumer education a leading priority in our community-based poverty fighting efforts.

Together we have enrolled more than 19,000 GLWA resident customers into WRAP assisting in the prevention of thousands of water service shut offs. With 76 of the eligible GLWA communities now offering WRAP services to residents and three (3) additional in process, the reach and impact of WRAP continues to grow. **Even with an increase in community participation, an unspent balance of \$1,680,580 in uncommitted funds remain in Direct Assistance and \$333,336 in Conservation.**

The greatest need for WRAP services is from Detroit and Flint customers. 71 percent of all WRAP enrollments are Detroit and Flint residents. All available GLWA Detroit WRAP funding has been committed to service first year enrollments, second year re enrollments, home repairs, and conservation measures.

We respectfully request that GLWA Board of Directors:

1. **Approve a WRAP funding reallocation as follows:**
 - a. **Direct Assistance (\$1,680,580)**
 - i. **City of Detroit New Enrollments: \$690,100**
 - ii. **Genesee County (Flint) New Enrollments: \$ 371,562**
 - iii. **Outreach – Oakland, Macomb & Others: \$359,761**
 - iv. **Conservation: \$259,157**
 - b. **Conservation- (Including Reallocated Direct Assistance of \$259,157) (\$592,493):**
 - i. **City of Detroit: Conservation: \$ 492,493**

ii. Genesee county (Flint): Conservation: \$100,000

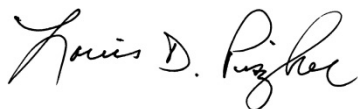
In advocating for this reallocation, it is worth noting:

- All allocated GLWA funding and additional funding raised for Detroit has been committed.
- All allocated GLWA funding for Flint has been committed and \$17,000 are allocated for FY 19-20.
- This request is consistent with the reallocation request made by the CAA Alliance in 2018.
- An additional \$4,138,000 has been raised and committed for WRAP Detroit - Wayne Metro contributing \$1M in Federal dollars and DWSD an additional \$3M for Departmental sources.
- \$3.2M has been leveraged to expand and advance WRAP services through technology, facilities, and increased staffing.
- \$400,000 of discretionary funding has been raised through events, grants, and donations to provide one-time assistance to individuals and communities ineligible for WRAP.

Please find attached:

1. A funding allocation request table

Sincerely,



Louis D. Piszker, CEO
Wayne Metro CAA



*WRAP Program Update &
Request for Reallocation
February 21, 2020*



Mission & Vision

WRAP's mission is to administer the distribution of WRAP funding to eligible, low-income households in the GLWA service areas with a vision to create a **transformative** water utility assistance program focusing on the **core values of self-sustainability, social responsibility and affordability.**



Enrollments & Participation

- 19,000 enrolled and 12,000+ are Detroiters
- Achieved 74% community participation rate
 - 76 of 104 eligible municipalities are opted in
 - ✓ 10 opted out
 - ✓ 3 Pending
- **\$ 18.7M total funding has been committed**
 - \$14.2M GLWA Funding
 - \$4.5M Supplemental Funding



Program Updates



WRAP Program Design Change Updates

Direct Assistance

- 300 Seniors and/or disabled households received extended bill credit assistance.
- Total arrearages have been reduced by an average of 50% for program participants at the first month of enrollment.



WRAP Program Design Change Updates

Program Supplies

- 1800+ households received
 - ✓ LiveSmart workshops & Conservation Supplies

Outreach

- Community Engagement and Outreach team(s)
 - ✓ 310 events throughout the GLWA service area
- Promotional Materials dispersed
 - ✓ DHHS Offices & Municipalities
- Monthly strategy meetings with CAA partners



WRAP Program Overview

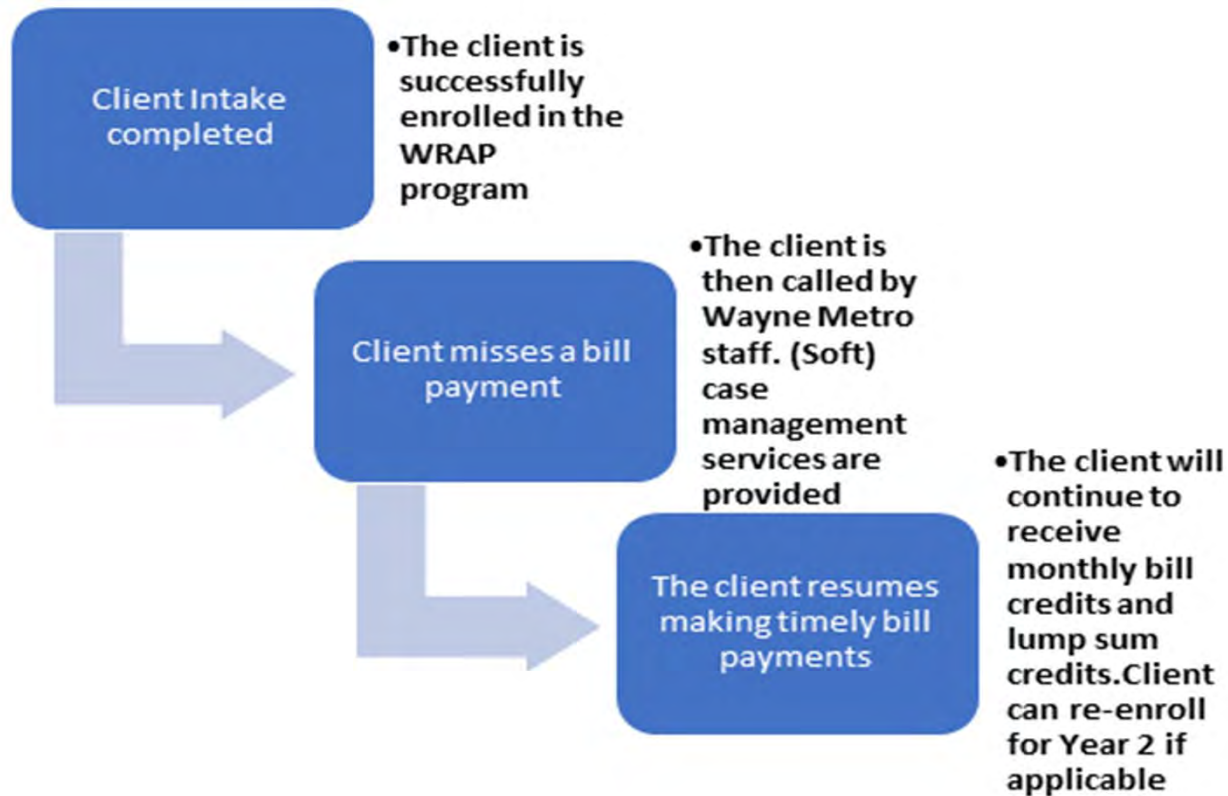
WRAP Program Overview

- **Direct Assistance**
 - Residency & Income
 - Have income at or below 150% of poverty threshold
 - Provide proof of residency, water bill payment responsibility & income
 - Remain current on monthly bill payment
- **Conservation**
 - Usage at or above 120%
 - Home-owner

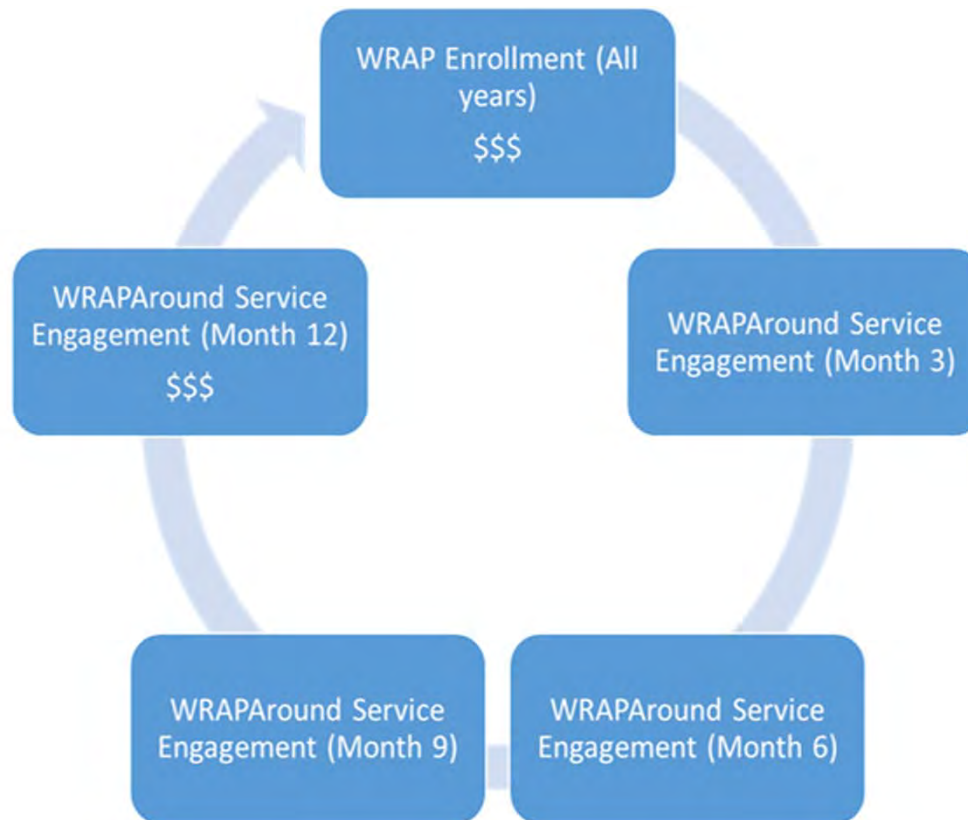
PROGRAM BENEFITS

- Assistance up to **\$300** per household (**\$25 per month x 12 months**)
- Home water audit & minor plumbing repairs **up to \$1,000** for homeowners **above 120%** of average usage
- Water savings kits and consumer training
- Supportive wrap around services

WRAP Participant Workflow



WRAP Touchpoints



WRAP Program Updates

Access to Services

- Soft launch
 - ✓ 194 applications
 - ✓ 142 Enrolled
- Full implementation
 - ✓ February 2020



FY 2019 Reallocation Request



Previously Reallocated Funds

FY 2016 to FY 2018

Reallocated Funds	Detroit	Flint	Total
FY 2016	\$1,664,833	\$117,485	\$1,782,318
FY 2017	786,981	425,635	1,212,616
FY 2018	794,400	427,755	1,222,155
Total Reallocation	\$3,246,214	\$970,875	\$4,217,089



FY 2019 WRAP Commitments

July 1, 2018 to June 30, 2019

County/City	July 1, 2018 - June 30, 2019				
	Allocated Assistance and Conservation	Committed Assistance and Conservation	Reallocated Assistance and Conservation	Committed Reallocated Assistance and	Remaining Balance
Wayne County					
City of Detroit	1,732,962	1,732,962	-	-	-
Out Wayne	1,009,805	489,059	-	-	520,746
Total Wayne County	2,742,767	2,222,021	-	-	520,746
Oakland County	1,068,211	88,434	-	-	979,777
Macomb County	557,340	100,660	-	-	456,680
Genesee County	-	-	-	-	-
City of Flint	21,211	21,211	-	-	-
Washtenaw County	49,054	17,477	-	-	31,577
Lapeer County	13,725	-	-	-	13,725
Monroe County	7,882	-	-	-	7,882
St. Clair County	3,529	-	-	-	3,529
Total	4,463,719	2,449,803	-	-	2,013,916

FY 2020 WRAP Commitments

As of October 31, 2019

County/City	FY20 Funds Committed through 10.31.19					
	Budgeted Direct Assistance	Committed Direct Assistance	Balance Remaining	Budgeted Conservation	Committed Conservation	Balance Remaining
Wayne County						
City of Detroit	1,405,874	542,134	863,740	351,469	168,126	183,343
Out Wayne	685,847	119,660	566,187	171,462	600	170,862
Total Wayne County	2,091,721	661,794	1,429,927	522,931	168,726	354,205
Oakland County	825,138	99,947	725,191	206,285	-	206,285
Macomb County	533,093	90,691	442,402	133,273	658	132,615
Genesee County	-	-	-	-	-	-
City of Flint	17,528	17,528	-	4,382	-	4,382
Washtenaw County	39,556	3,383	36,173	9,889	475	9,414
Lapeer County	12,225	-	12,225	3,056	-	3,056
Monroe County	6,262	-	6,262	1,565	-	1,565
St. Clair County	2,897	-	2,897	724	-	724
Total	3,528,420	873,343	2,655,077	882,105	169,859	712,246

Reallocation Request

Approve a WRAP funding reallocation of uncommitted FY 2019 Funds to assist GLWA residential customers with the greatest need, lowest income, and highest utility burden.

Direct Assistance	-	\$1,061,662
Conservation	-	\$ 592,493
Out-Reach	-	\$ 359,761

TOTAL: \$2,013,916



FY 2019 WRAP Reallocation Request

County/City	PROPOSED FY19 Reallocation			
	Direct Assistance	Conservation	Outreach	Total Reallocation
Wayne County				
City of Detroit	690,100	492,493		1,182,593
Out Wayne	-	-	60,961	60,961
Total Wayne County	690,100	492,493	60,961	1,243,554
Oakland County	-	-	172,328	172,328
Macomb County	-	-	98,642	98,642
Genesee County	-	-	-	-
City of Flint	371,562	100,000	21,749	493,311
Washtenaw County	-	-	3,947	3,947
Lapeer County	-	-	1,220	1,220
Monroe County	-	-	625	625
St. Clair County	-	-	289	289
Total	1,061,662	592,493	359,761	2,013,916

Enhanced Out-Reach Strategy

- Imbedded Staff
- Outreach events
- School Engagement/DHHS Offices
- Faith based service provider network
- Social Media & Media pitching



Recommendations for Program Design Changes



Recommended Program Changes

1. Increase funding allocation from 0.5% to 1.0%
 - Based on proposed FY 2021 would increase WRAP funding from \$5.1 million to \$10.2 million;
2. Expand the program eligibility criteria to include the following:
 - Increase eligibility to 200% or less of federal poverty level;
 - Increase conservation and plumbing repairs spending per household from \$1,000 to an average of \$1,500; and
 - Allow renters to be eligible for conservation and plumbing repairs to reduce their water consumption, upon landlord executing an agreement not to raise rents for 1 year

Increase Eligibility Requirement from 150% FPL to 200% FPL- Estimated Additional Households Served

County/City	Annual Clients Served at 150% FPL	Est. Annual Clients to Serve at 200% FPL
City of Detroit	4,832	9,732
Out-Wayne County	1,031	2,076
Oakland County	414	739
Macomb County	439	659
Genesee County	0	0
Washtenaw County	29	44
Lapeer County	0	0
Monroe County	0	0
St. Clair County	0	0
City of Flint	568	1,405
Total	7,313	14,655

Increase Conservation spending from \$1,000 to \$1,500- Estimated Additional Clients Served

County/City	Est. Annual Additional Clients to Serve at \$1500
City of Detroit	267
Out-Wayne County	12
Oakland County	4
Macomb County	4
Genesee County	0
Washtenaw County	0
Lapeer County	0
Monroe County	0
St. Clair County	0
City of Flint	39
Total	326

Allow Renters to be Eligible for Conservation and Repairs- Estimated Renters to be Served

County/City	Est. Annual Renters to Serve at 150% FPL	Est. Annual Renters to Serve at 200% FPL
City of Detroit	1,194	2,405
Out-Wayne County	226	455
Oakland County	47	84
Macomb County	52	78
Genesee County	0	0
Washtenaw County	15	23
Lapeer County	0	0
Monroe County	0	0
St. Clair County	0	0
City of Flint	93	230
Total	1,627	3,274

Winning WRAP Team



Temeko Manica
Direct Service Specialist



Taneka Hicks
Community Resource Navigator

Questions?





Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Proposed Water Residential Assistance Program Changes for FY 2021

Background: The Water Residential Assistance Program (“WRAP”) provides sustainable funding for qualifying low-income residents served by the Great Lakes Water Authority’s (“GLWA”) customers. The program is currently funded by GLWA at an amount equal to 0.5 percent of budgeted revenues with the budgeted FY 2020 funding level of \$5 million combined for water and sewer services.

The scope of funding uses includes payment assistance and water audit and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut off can receive assistance with paying down arrears in an amount not to exceed \$700 per year and receive \$25 toward monthly bill payment assistance annually up to \$300. High volume water users can receive a one-time home audit and home water conservation services up to \$1,000.

To participate in WRAP, an applicant must have household gross incomes at or below 150% of the federal poverty income thresholds. Customers with water usage at or above 120% of the average residential usage are eligible to participate in a water audit and install water conservation measures. WRAP participants are also encouraged to participate in both financial coaching and water conservation workshops as well as other support services. The program is administered by Wayne Metro Community Action Agency (“Wayne Metro”), a nonprofit agency.

The WRAP began providing assistance to residents in the GLWA service area on March 1, 2016 and as of October 31, 2019 has committed over \$14.2 million in assistance and conservation funds to over 19,000 qualified WRAP participants. WRAP has the potential to serve over 100 communities within the GLWA service area, but in order to assist qualified households, each community must opt into the program and sign a Memorandum of Agreement (MOA) with Wayne Metro. To date, 76 communities have opted into WRAP.

Justification: At the GLWA Board of Directors meeting on January 22, 2020, Director Brown introduced Resolution 2020-037 *“Resolution to Increase Water Residential Assistance*

Program Funding and Expand Program Eligibility Criteria.” The resolution was further discussed at the Board’s meeting on February 12, 2020. The resolution included the following proposed changes to the WRAP Program Design:

- 1) Increase the amounts deposited in the WRAP Fund from 0.5% to 1.0% of base budgeted operating Revenues in each Fiscal Year, starting with Fiscal Year 2021.
 - a. This proposed change would require amendments to the Water and Sewer Leases and the Water and Sewer Services Agreement.
- 2) Increase eligibility for residential customers from 150% to 200% or less of federal poverty level;
- 3) Increase conservation and plumbing repairs spending per household from \$1,000 to an average of \$1,500 for eligible residential customers;
- 4) Allow eligible residential customers that are renters to take advantage of conservation and plumbing repairs to reduce their water consumption, upon landlord executing an agreement not to raise rents for one year;
- 5) Provide eligible residential customers with a \$25 credit on water bills, without an expiration date, for eligible senior citizens and disabled persons enrolled in WRAP, and
- 6) Provide eligible residential customers with supplemental conservation and plumbing services, financial education services, and other related wraparound services.

The Board requested that Wayne Metro prepare analysis on the proposed changes and to present its recommendations to the Board at a subsequent Board meeting. Today’s presentation by Wayne Metro is the requested response and recommendations for the proposed program changes by the Audit Committee at its previous meeting. Also included is the recommendation letter from Wayne Metro dated February 12, 2020.

Budget Impact: The dollar impact of the proposed WRAP funding change from 0.5% to 1.0% of base budgeted revenues would increase the WRAP funding from \$5.1 million to \$10.2 million.

Proposed Action: Audit Committee receive and file the Wayne Metro recommendation letter dated February 12, 2020 and presentation dated February 21, 2020.



Wayne Metropolitan
Community Action Agency
Established 1971



OLHSA
A Community Action Agency



February 12, 2020

Great Lakes Water Authority & Chief Executive Officer
735 Randolph, 19th Floor
Detroit, MI 48202

RE: Recommended WRAP Program Design Changes

Dear GLWA Board of Directors and Sue McCormick:

Community Action Agencies, America’s anti-poverty network, carry out a shared promise to empower people and communities to be strong, healthy, and thriving. The Community Action Alliance for Southeast Michigan, through our role in WRAP, has made water assistance, conservation, and consumer education a top priority.

Together we have enrolled more than 19,000 GLWA resident customers into WRAP, assisting in the prevention of thousands of water service shut offs. With 76 of eligible communities offering WRAP services to residents and three (3) additional in process, the positive impacts of WRAP continue to grow.

United Way’s across the country have conducted research on financial need in several states, including Michigan. This nonpartisan work, is called the ALICE (Asset Limited, Income Constrained, Employed) report. According to United Way data, the ALICE population is the working poor, struggling to make a living, but still unable to make ends meet. The ALICE threshold is up to 200% of the Federal Poverty Level (FPL), is considered to be the amount of income required for a family to meet its basic needs. Income for a family of two could not exceed \$34,480 and a family of four \$52,400.

Wayne Metro recommends an increase in the funding allocation for WRAP from 0.5% to 1.0%. This increase widens the safety net and provides more households across the GLWA service area access to WRAP services. Wayne Metro respectfully requests that GLWA Board of Directors:

1. **Increase the WRAP funding allocation from 0.5% to 1.0%. Based on the proposed FY 2021 GLWA Budget, this would increase funding from \$5.1 million to \$10.2 million per year.**
2. **Expand the program eligibility criteria to include the following:**
 - a. Increase the eligibility requirements to 200% or less of the federal poverty level. This would provide access to an estimated 7,300 additional households per year, with the additional funding request;

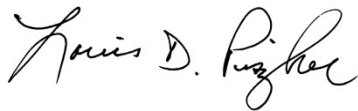
- b. Increase the conservation and plumbing repair spending per household amount from \$1,000 to an average of \$1,500. This would help an estimated 326 additional households; and
- c. Allow renters to be eligible for conservation and plumbing repairs to reduce their water consumption, upon landlord executing an agreement not to raise rents for 1 year. This would open up the conservation assistance to over 3,000 renters in the GLWA service area.

In advocating for these program changes, it is worth noting that without a funding increase, increasing the eligibility requirement from 150% to 200% of FPL would be detrimental and therefore would not be recommended. While the changes would increase participation in the suburban communities, they would negatively both Detroit and Flint, our most vulnerable. However, the proposed change to increase conservation and plumbing repairs from \$1,000 to an average of \$1,500 would be beneficial to all communities and still would be recommended by Wayne Metro.

Please find attached:

1. ALICE in Southeast Michigan

Sincerely,



Louis D. Piszker, CEO
Wayne Metro CAA



Legislation Details (With Text)

File #: 2020-037 **Version:** 1 **Name:**
Type: Resolution **Status:** Filed
File created: 1/24/2020 **In control:** Audit Committee
On agenda: 1/22/2020 **Final action:**
Title: Resolution 2020-037 to Increase Water Residential Assistance Program Funding and Expand Program Eligibility Criteria

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
2/12/2020	1	Board of Directors Workshop Meeting		
1/22/2020	1	Board of Directors		

Resolution 2020-037 to Increase Water Residential Assistance Program Funding and Expand Program Eligibility Criteria

GREAT LAKES WATER AUTHORITY

RESOLUTION 2020-037

TO INCREASE WATER RESIDENTIAL ASSISTANCE PROGRAM

FUNDING AND EXPAND PROGRAM ELGIBILITY CRITERIA

By: Member: Brown

WHEREAS, the Great Lakes Water Authority (GLWA) is dedicated to providing the nation's best water and wastewater services to all citizens in the southeast Michigan region; and

WHEREAS, the GLWA Board of Directors (Board) approves rates, fees and charges and rate-setting protocols for the GLWA; and

WHEREAS, the Board recognizes that for many customers the cost of water and wastewater services presents a burden that they may not be able to afford, and

WHEREAS, the Board recognizes that discontinuation of service due a retail customer's inability to pay may threaten human health and well-being and impede the GLWA's responsibility for the protection of public health; and

WHEREAS, the Board seeks, to reduce the number of customers who may be subject to service interruption due to an inability to pay for services end to prevent service interruptions; and

WHEREAS, the Board recognizes that its customers will benefit from regional programs to reduce retail service disconnections, accrued billing arrearages, bad debt expense, and incurrence of extraordinary billing and collection expenses; and

WHEREAS, the Board recognizes that such programs will render its customers public health and other non-monetary benefits, and yield positive effects on total water service revenue requirements for wholesale and retail customers; and

WHEREAS, the GLWA's common-to-all cost allocations shall include an amount equal to .5% of base budgeted operating revenues per year, for deposit to an independently administered Water Residential Assistance Program (WRAP) fund to provide assistance to indigent residential customers throughout [the Systems who agree to take appropriate actions to reduce consumption; and

WHEREAS, since its inception, WRAP has assisted almost 19,000 residents in the region with payment assistance, water conservation and plumbing repairs, and wraparound services, thereby preventing service interruptions and bringing stability to participating residential households; and

WHEREAS, Wayne Metropolitan Community Action Agency, the WRAP administrator, as well as its partners throughout the GLWA service area including Wayne, Oakland County (OLHSA), Genesee County (GCARD), Macomb County (MCA), and Monroe County (MCOP), determined there is a substantial population in the region that is underserved by the WRAP, especially the "working poor," and

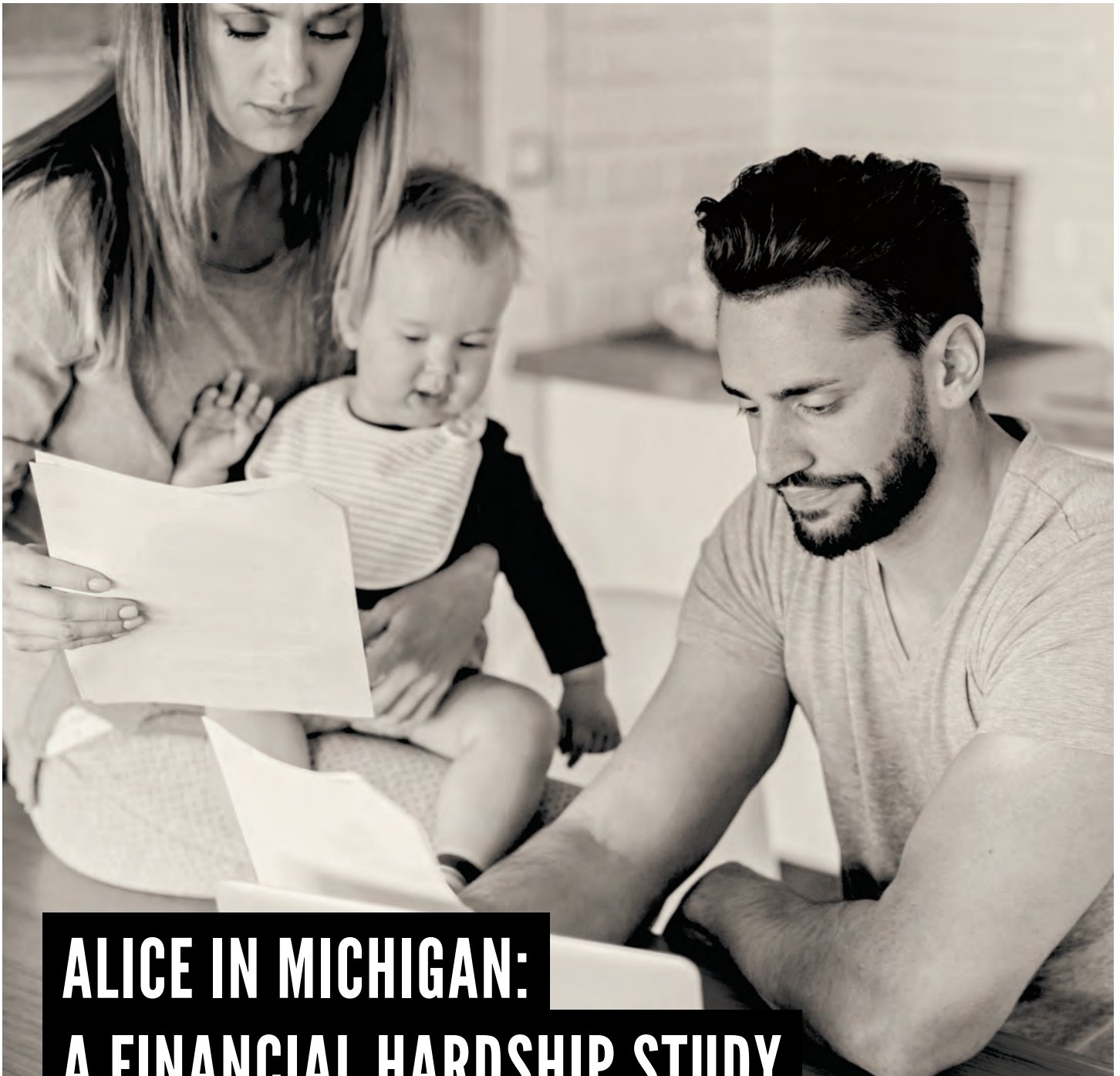
WHEREAS expansion of the WRAP program funding and program eligibility criteria would enable WRAP to reach more citizens in the region who are struggling to pay for water and wastewater services; and

WHEREAS, an increase of WRAP funding from .5% to 1.0% is not prohibited by the Memorandum of Understanding Regarding the Formation of the Great Lakes Water Authority or any court orders related to the formation of the GLWA; NOW THEREFORE,

BE IT RESOLVED THAT the GLWA Board hereby approves an increase in the WRAP funding from .5% to 1.0% of base budgeted Operating revenues per year, and an expansion of the program eligibility criteria to include the following:

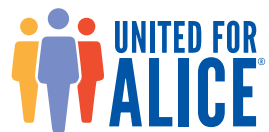
- Increase eligibility to 200% or less of federal Poverty level;
- Increase conservation and plumbing repairs spending per household from \$1,000 to \$1,500; and
- Allow renters to take advantage of conservation and plumbing repairs to reduce their water consumption, upon landlord executing an agreement not to raise rents for one year;

to supplement WRAP's conservation and plumbing repair program for homeowners; \$25 credit on water bills, without an expiration date, for income-eligible senior citizens and disabled persons; and wrap around services and financial education programs for all participants.



ALICE IN MICHIGAN: A FINANCIAL HARDSHIP STUDY

LIVE UNITED®



Michigan Association of
United Ways

THE UNITED WAYS OF MICHIGAN

Albion-Homer United Way
Allegan County United Way
Barry County United Way
Branch County United Way
Capital Area United Way
Char-Em United Way
Cheboygan County United Way
Chelsea United Way
Copper Country United Way
Crawford County United Way
Gogebic Range United Way
Greater Huron County United Way
Greater Ottawa County United Way
Heart of West Michigan United Way
Livingston County United Way
Marshall United Way
Mecosta-Osceola United Way
Ogemaw County United Way
Oscoda Area United Way
Otsego County United Way
Plymouth Community United Way
Roscommon County United Way
St. Joseph County United Way
Tri-City Area United Way
United Way for Southeastern Michigan
United Way Montcalm-Ionia Counties

United Way of Bay County
United Way of Clare & Gladwin Counties
United Way of Delta County
United Way of Dickinson County
United Way of Genesee County (Shiawassee)
United Way of Gratiot & Isabella Counties
United Way of Jackson County
United Way of Lapeer County
United Way of Manistee County
United Way of Marquette County
United Way of Mason County
United Way of Midland County
United Way of Monroe/Lenawee Counties
United Way of Northeast Michigan
United Way of Northwest Michigan
United Way of Saginaw County
United Way of Sanilac County
United Way of Southwest Michigan
United Way of St. Clair County
United Way of the Battle Creek and Kalamazoo Region
United Way of the Eastern Upper Peninsula
United Way of the Lakeshore
United Way of Tuscola County
United Way of Washtenaw County
United Way of Wexford-Missaukee Counties

Learn more here: <https://www.uwmich.org/alice/>

Thanks to Consumers Energy Foundation,
Michigan's funding partner



NATIONAL ALICE ADVISORY COUNCIL

The following companies are major funders and supporters of the United Way *ALICE Project*.

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Johnson & Johnson ■ KeyBank ■ Novartis Pharmaceuticals Corporation ■ OneMain Financial
RWJBarnabas Health ■ Thrivent Financial Foundation ■ Union Bank & Trust ■ UPS ■ U.S. Venture**

Note: In addition to the corporate sponsorships, this Report was made possible by the United Ways noted above in bold.

LETTER TO THE COMMUNITY



Dear Michiganders,

Asset Limited, Income Constrained, Employed — it's a complex term for a population we know all too well. **ALICE** is the person who works hard to make a living, but still can't seem to make ends meet. ALICE has an income above the Federal Poverty Level (FPL), but struggles to afford basic household necessities.

ALICE is a mother, struggling to raise her children while also caring for an aging parent; a college student, attending classes by day and waiting tables by night; a senior citizen, choosing between prescription medications and groceries.

In the five years since the Michigan Association of United Ways released its first ALICE Report, Michigan residents have started to get a clearer picture of their neighbors, loved ones, friends, and acquaintances than ever before.

Through the ALICE Report, Michigan policymakers, journalists, business leaders, and charitable organizations have begun to put a finger on the pulse of the needs of Michiganders. We've identified the disparity on the balance sheet of Michigan households and have a strong indication of the issues that plague many hardworking Michigan families.

But there is more work to do. As you will read in the pages to follow, low wages, reduced work hours, and depleted savings, combined with increased costs of living, have made for uneven economic recovery in Michigan.

In releasing our third ALICE Report, the Michigan Association of United Ways aims to continue to inform the conversation about the real and present needs of our residents — the people that local United Ways and our volunteers serve every day.

We remain committed to serving ALICE, and all those in need, through programs that strive to improve the health, education, and financial security of all Michigan residents. At the same time, we call on our state's policymakers and business leaders to use the information in the pages to follow to work toward a Michigan we can all be proud to call home.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Larson". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mike Larson, *President and CEO, Michigan Association of United Ways*

ALICE: A GRASSROOTS MOVEMENT

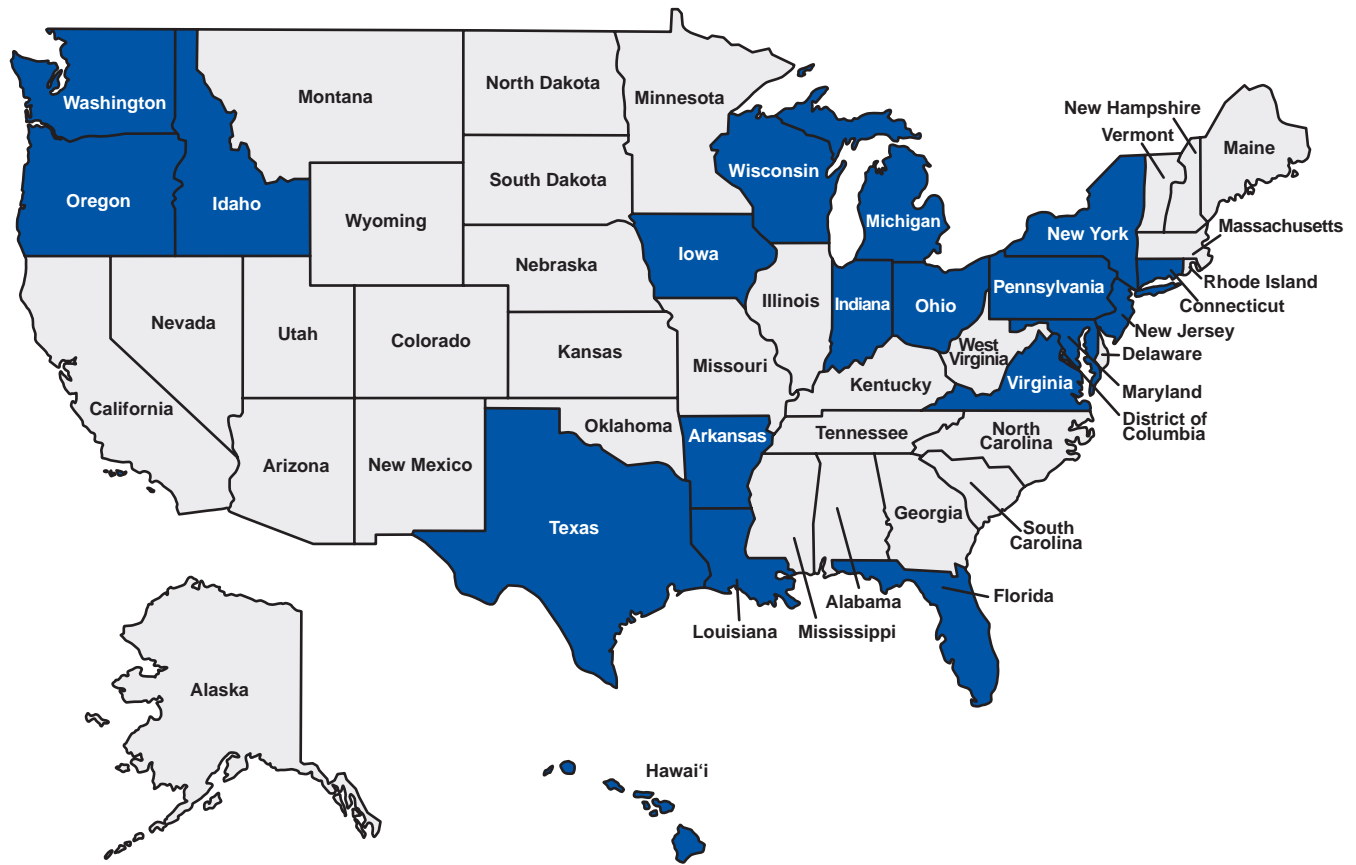
This body of research provides a framework, language, and tools to measure and understand the struggles of a population called **ALICE** — an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. ALICE represents the growing number of households in our communities that do not earn enough to afford basic necessities. This research initiative partners with United Ways, foundations, academic institutions, corporations, and other state organizations to present data that can stimulate meaningful discussion, attract new partners, and ultimately inform strategies for positive change.

Based on the overwhelming success of this research in identifying and articulating the needs of this vulnerable population, this work has grown from a pilot in Morris County, New Jersey in 2009, to the entire state of New Jersey in 2012, and now to 19 states. United Ways of Michigan are proud to join the more than 600 United Ways in these states that are working to better understand ALICE's struggles.

Together, United Ways, government agencies, nonprofits, and corporations have the opportunity to evaluate current initiatives and discover innovative approaches that give ALICE a voice, and create changes that improve life for ALICE and the wider community.

To access reports from all states, visit UnitedForALICE.org

States With ALICE Reports



THE ALICE RESEARCH TEAM

ALICE Reports provide high-quality, research-based information to foster a better understanding of who is struggling in our communities. To produce the ALICE Report for Michigan, a team of researchers collaborated with a Research Advisory Committee, composed of 11 representatives from across Michigan, who advised and contributed to the report. This collaborative model, practiced in each state, ensures each report presents unbiased data that is replicable, easily updated on a regular basis, and sensitive to local context. Working closely with United Ways, this research initiative seeks to equip communities with information to create innovative solutions.

Lead Researcher

Stephanie Hoopes, Ph.D., is the lead researcher, director, and author of the ALICE Reports. Dr. Hoopes began this effort with a pilot study of a more accurate way to measure financial hardship in Morris County, New Jersey in 2009. Since then, she has overseen its expansion into a broad-based, state-by-state research initiative now spanning 19 states across the country. Her research on the ALICE population has garnered both state and national media attention.

Before joining United Way full time in 2015, Dr. Hoopes taught at Rutgers University and Columbia University. Dr. Hoopes has a doctorate from the London School of Economics, a master's degree from the University of North Carolina at Chapel Hill, and a bachelor's degree from Wellesley College.

Dr. Hoopes is on the board of directors of the McGraw-Hill Federal Credit Union, and she received a resolution from the New Jersey General Assembly for her work on ALICE in 2016.

Research Support Team

Andrew Abrahamson

Ashley Anglin, Ph.D.

Max Holdsworth, M.A.

Dan Treglia, Ph.D.

ALICE Research Advisory Committee for Michigan

David Callejo Pérez, Ed.D.
Saginaw Valley State University

Neil Carlson, Ph.D.
Calvin College

David Clifford, Ph.D.
Eastern Michigan University

Huda Fadel, M.P.H., Ph.D.
Blue Cross Blue Shield of Michigan

Rex LaMore, Ph.D.
Michigan State University

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Data Driven Detroit

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University of Michigan

Bridget Flynn Timmeney, M.S.W.
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Employment Research*

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EXECUTIVE SUMMARY

In Michigan, 1,664,606 households — 43 percent — could not afford basic needs such as housing, child care, food, transportation, health care, and technology in 2017.

This update of the ALICE Report for Michigan provides the most comprehensive look at the population called **ALICE** — an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. ALICE households have incomes above the Federal Poverty Level (FPL) but struggle to afford basic household necessities.

The Report describes the cost of basic needs for each county in Michigan — **the ALICE Threshold** — as well as the number of households earning below this amount and focuses on how households have fared since the Great Recession ended in 2010.

Despite overall improvement in employment and gains in median income, the economic recovery in Michigan has been uneven. Many ALICE households continue to face challenges from low wages, reduced work hours, depleted savings, and increasing costs. For the many households that earned slightly above the ALICE Threshold in the past, increases in the cost of living and flat wages have pushed them below the Threshold and into financial hardship. The total number of Michigan households that cannot afford basic needs increased 6 percent from 2010 to 2017.

This Report focuses on trends that have moved more Michigan families below the ALICE Threshold. Key findings include:

- **Households continue to struggle:** Of Michigan's 3,935,132 households, 14 percent lived in poverty in 2017 and another 29 percent were ALICE. Combined, 43 percent (1,664,606 households) had income below the ALICE Threshold.
- **Basic cost of living still on the rise:** The cost of basic household expenses in the ALICE Household Survival Budget has increased steadily in Michigan, to \$61,272 for a family of four (two adults with one infant and one preschooler) and \$21,036 for a single adult. These bare-minimum budgets are significantly higher than the 2017 FPL of \$24,600 for a family of four and \$12,060 for a single adult. The cost of the average Michigan family budget increased by 27 percent from 2010 to 2017.
- **Changes in the workforce:** Although unemployment rates are falling, ALICE workers are still struggling. Low-wage jobs dominate the employment landscape, with 61 percent of all jobs in Michigan paying less than \$20 per hour. At the same time, an increase in contract and on-demand jobs is leading to less financial stability. Gaps in wages are growing wider and vary depending on the size and location of employers as well as the sex, gender, education, sexual orientation, and race/ethnicity of workers.
- **Emerging trends:** Several trends could impact the economic landscape for ALICE families:
 - *The Changing American Household* — Baby boomers are aging, millennials are making different lifestyle and work choices than previous generations, and patterns of domestic and foreign migration are shifting. These trends are changing both household composition and demands for goods and services.
 - *Market Instability* — A globally connected economy means that economic disruptions and natural disasters in one part of the world will increasingly have an impact on U.S. ALICE workers, contributing to employment instability, a shifting supply and demand, and a disruption in traditional modes of operation.

- *Health Inequality* — As health care costs rise, there will be increasing disparities in health according to income and other social determinants of health, such as access to health care, educational opportunities, and safe neighborhoods. Expensive medical advances that are out of reach of lower-income households will only further this divide.

The ALICE Report for Michigan offers an enhanced set of tools for stakeholders to measure the real challenges ALICE households face in trying to make ends meet. This information is presented to enable communities to move beyond stereotypes of “the poor” and an outdated FPL, and instead use this data to inform programmatic and policy solutions for ALICE households and their communities, now and in the future.

RESEARCH FRAMEWORK

GLOSSARY

ALICE is an acronym that stands for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mloyed, comprising households with income above the Federal Poverty Level but below the basic cost of living. A household consists of all the people who occupy a housing unit but does not include those living in group quarters such as a dorm, nursing home, or prison.

The Household Survival Budget calculates the actual costs of basic necessities (housing, child care, food, transportation, health care, a smartphone, and taxes) in Michigan, adjusted for different counties and household types.

The ALICE Threshold is the average income that a household needs to afford the basic necessities defined by the Household Survival Budget for each county in Michigan. Households earning below the ALICE Threshold include both ALICE and poverty-level households.

WHAT'S NEW

Every two years, a national Research Advisory Committee of external experts scrutinizes the ALICE methodology and sources. This rigorous process results in enhancements to the methodology that ensure the best local data is presented. While these changes impact specific calculations, the overall trends have remained the same.

For this Report, the following changes have been incorporated:

The Household Survival Budget includes technology: Technology has become a regular part of life, and smartphones in particular are an expectation for employment. The Household Survival Budget now includes the cost of a basic smartphone plan for each adult.

The source for state taxes has been updated: To provide greater consistency across states and to reduce the complexity of calculations while maintaining accuracy, the Report uses the Tax Foundation’s individual income tax rates and deductions for each state instead of state-level tax sources. Michigan’s *Individual Income Tax Forms and Instructions* are used to confirm state tax deductions and exemptions, such as the Personal Tax Credit. This change resulted in slight changes in tax amounts. To ensure consistency in change-over-time comparisons, the data for previous years — 2010, 2012, and 2015 — has been recalculated and is presented in this Report. For example, the 2017 Report stated that 1,531,650 households (40 percent) had income below the ALICE Threshold in 2015, and this Report presents that 1,582,810 (41 percent) had income below the ALICE Threshold in 2015.

Change over time ranges have shifted: The first ALICE Report measured change before and after the Great Recession, in 2007 and 2010. This Report focuses on the recovery, measuring change from the baseline of 2010, followed by 2012, 2015, and 2017.

Additional detail is available at the sub-county level: More ALICE data is available at the local level on the ALICE website including by: subcounty, place, zip code, Public Use Microdata Area, and congressional district. See UnitedForALICE.org/Michigan.

METHODOLOGY NOTES

This Report remains focused on the county level because state averages can mask significant differences between counties. For example, the percentage of households below the ALICE Threshold ranges from 30 percent in Eaton County to 61 percent in Lake County. The Report examines issues surrounding ALICE households from different angles to draw the clearest picture with the range of data available. Sources include the American Community Survey, the U.S. Department of Housing and Urban Development, the U.S. Department of Agriculture, the Bureau of Labor Statistics at the U.S. Department of Labor, the Internal Revenue Service, the Tax Foundation, and the Michigan Department of Education Office of Great Start. State, county, and municipal data is used to provide different lenses on ALICE households. These data points are estimates; some are geographic averages, others are one- or five-year averages, depending on population size.

Due to different rounding conventions in different data sources, total percentages may vary by +/-1 percentage point from 100 percent for a given group. Typically, we present rounded numbers to make the ALICE data as clear as possible to a general audience.

ALICE Reports follow the U.S. Census classifications for the largest non-White populations: Black, Asian, Hispanic, and American Indian/Alaska Native, as well as people identifying as two or more races. Because people of any race, including Whites, can also be of Hispanic ethnicity, the ALICE data looks at White, Black, Asian, and American Indian/Alaska Native categories “alone” (i.e., not also Hispanic), as well as at Hispanic populations.

In Michigan, ALICE data is only available for White, Black, Hispanic, and Asian populations; the American Community Survey does not provide income data on other race/ethnic categories due to the small sample size of these groups, so ALICE statistics are not available. In Michigan, less than 1 percent of households identify themselves as American Indian/Alaskan Native or “Some Other Race,” and 2 percent identify as being of “Two or More Races” (American Community Survey, 2017).

For a more detailed description of the methodology and sources, see the Methodology Overview at UnitedForALICE.org/methodology. For a breakdown of the data by county and municipality, see the County Pages and Data File on the Michigan page (UnitedForALICE.org/Michigan).

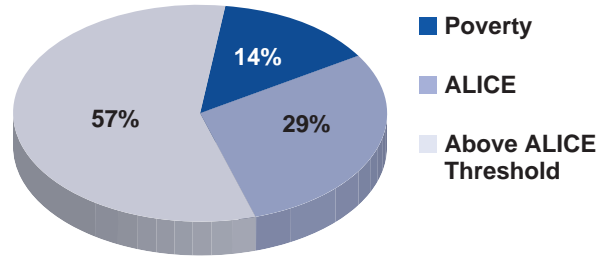
AT-A-GLANCE: MICHIGAN

2017 Point-in-Time Data

Population: 9,962,311 | Number of Counties: 83 | Number of Households: 3,935,132

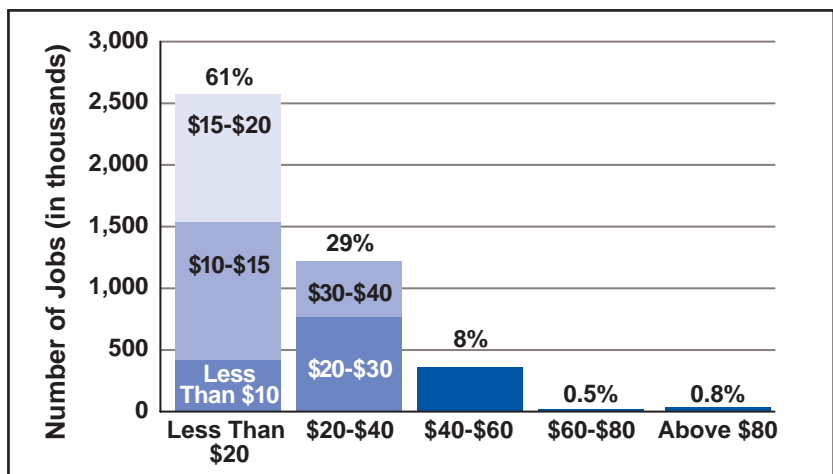
How many households are struggling?

ALICE, an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed, comprises households that earn more than the Federal Poverty Level but less than the basic cost of living for the state (the ALICE Threshold). Of Michigan's 3,935,132 households, 536,594 earn below the Federal Poverty Level (14 percent) and another 1,128,012 (29 percent) are ALICE.



How much does ALICE earn?

In Michigan, 61 percent of jobs pay less than \$20 per hour, with almost two-thirds of those jobs paying less than \$15 per hour. Another 29 percent of jobs pay from \$20 to \$40 per hour. Only 8 percent of jobs pay from \$40 to \$60 per hour.



What does it cost to afford the basic necessities?

Despite a low rate of inflation nationwide — 12 percent from 2010 to 2017 — the bare-minimum Household Survival Budget increased by 26 percent for a single adult and 27 percent for a family. Affording only a very modest living, this budget is still significantly more than the Federal Poverty Level of \$12,060 for a single adult and \$24,600 for a family of four.

Household Survival Budget, Michigan Average, 2017

	SINGLE ADULT	2 ADULTS, 1 INFANT, 1 PRESCHOOLER
Monthly Costs		
Housing	\$509	\$739
Child Care	\$-	\$1,122
Food	\$199	\$604
Transportation	\$347	\$693
Health Care	\$236	\$887
Technology*	\$55	\$75
Miscellaneous	\$159	\$464
Taxes	\$248	\$522
Monthly Total	\$1,753	\$5,106
ANNUAL TOTAL	\$21,036	\$61,272
Hourly Wage**	\$10.52	\$30.64

* New to budget in 2017

** Full-time wage needed to support this budget

AT-A-GLANCE: MICHIGAN

Michigan Counties, 2017		
COUNTY	TOTAL HOUSEHOLDS	% ALICE + % POVERTY
Alcona	4,979	43%
Alger	3,244	54%
Allegan	44,766	36%
Alpena	12,789	44%
Antrim	9,732	36%
Arenac	6,663	48%
Baraga	3,009	58%
Barry	23,539	37%
Bay	44,907	45%
Benzie	6,911	42%
Berrien	64,166	42%
Branch	16,415	47%
Calhoun	54,556	45%
Cass	20,686	40%
Charlevoix	11,234	37%
Cheboygan	11,348	42%
Chippewa	14,004	48%
Clare	12,726	55%
Clinton	29,959	34%
Crawford	6,025	48%
Delta	15,920	40%
Dickinson	11,269	46%
Eaton	44,329	30%
Emmet	14,496	42%
Genesee	165,719	46%
Gladwin	10,990	47%
Gogebic	6,660	51%
Grand Traverse	38,211	34%
Gratiot	14,736	51%
Hillsdale	17,896	45%
Houghton	13,157	50%
Huron	13,880	41%
Ingham	111,915	44%
Ionia	22,625	43%
Iosco	11,457	46%
Iron	5,315	49%
Isabella	25,000	51%
Jackson	62,220	42%
Kalamazoo	104,075	38%
Kalkaska	7,019	46%
Kent	240,678	37%
Keweenaw	1,013	41%
Lake	4,555	61%
Lapeer	34,271	39%
Leelanau	9,022	33%

Michigan Counties, 2017		
COUNTY	TOTAL HOUSEHOLDS	% ALICE + % POVERTY
Lenawee	38,559	37%
Livingston	72,726	31%
Luce	2,253	57%
Mackinac	5,132	39%
Macomb	346,457	39%
Manistee	9,810	49%
Marquette	25,725	46%
Mason	12,186	45%
Mecosta	15,641	51%
Menominee	10,593	41%
Midland	34,096	34%
Missaukee	5,941	48%
Monroe	59,528	36%
Montcalm	23,556	49%
Montmorency	4,074	52%
Muskegon	64,581	45%
Newaygo	18,772	45%
Oakland	504,944	32%
Oceana	10,176	47%
Ogemaw	9,325	47%
Ontonagon	2,945	48%
Osceola	9,010	51%
Oscoda	3,728	52%
Otsego	9,880	42%
Ottawa	104,281	31%
Presque Isle	5,929	43%
Roscommon	11,131	50%
Saginaw	80,958	44%
Sanilac	17,121	45%
Schoolcraft	3,282	54%
Shiawassee	27,277	39%
St. Clair	65,117	40%
St. Joseph	23,831	47%
Tuscola	21,624	43%
Van Buren	29,037	44%
Washtenaw	140,729	39%
Wayne	683,986	56%
Wexford	13,105	48%

Sources: **Point-in-Time Data:** American Community Survey, 2017. **ALICE Demographics:** American Community Survey; the ALICE Threshold, 2017. **Wages:** BLS, 2017 — Occupational Employment Statistics. **Budget:** BLS, 2017 — Consumer Expenditure Surveys; Consumer Reports, 2017; HUD, 2017 — Fair Market Rents; IRS, 2016 — Individual Income; IRS, 2017 — SOS Tax Stats; Michigan Department of Education Office of Great Start, 2018; Tax Foundation 2017, 2018; USDA, 2017 — Official USDA Food Plans.

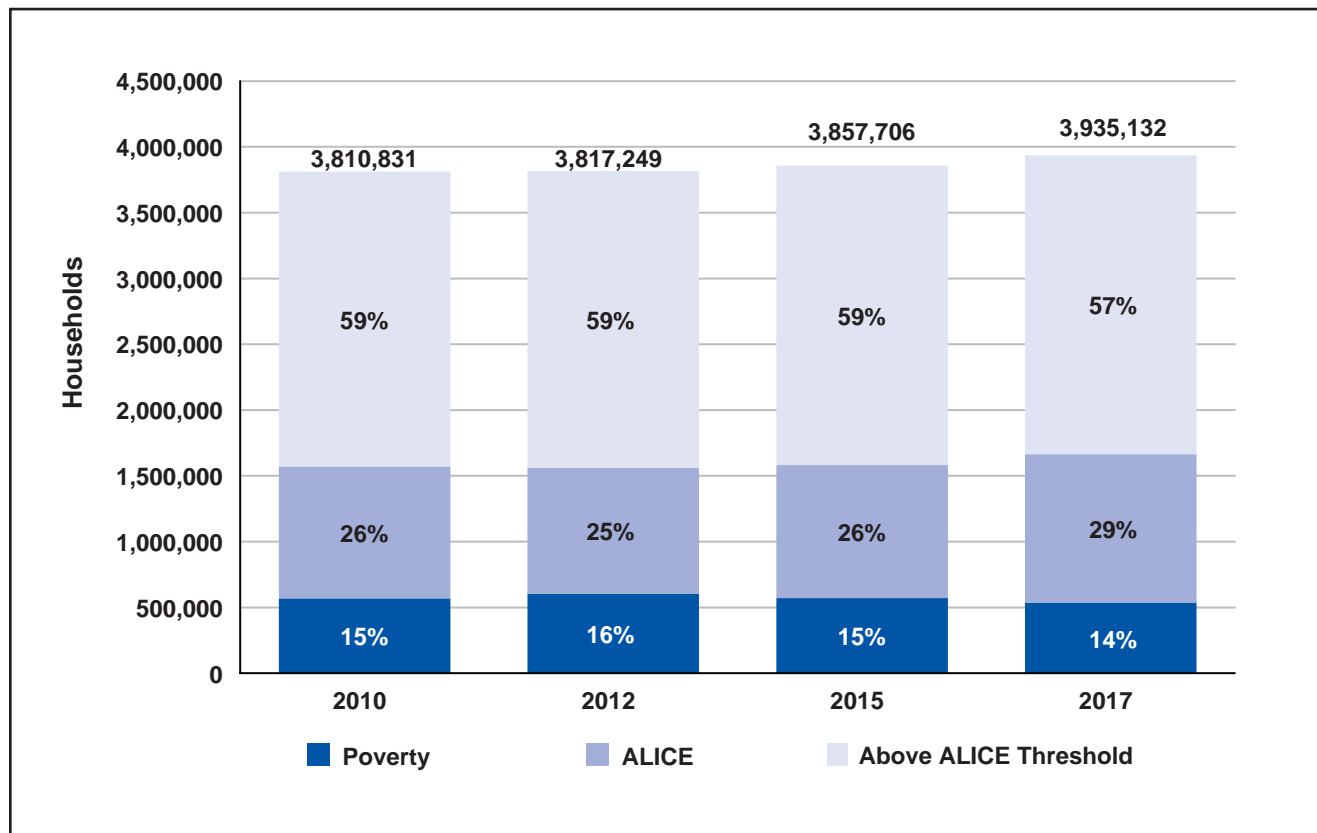
ALICE BY THE NUMBERS

In Michigan, ALICE households exist in all age groups, across all races and ethnicities, in single and two-parent families, and in households with or without children. They exist in all parts of the state, from urban Detroit to the suburbs of Grand Rapids, to rural communities across the northern regions of the state. This section drills down to reveal demographic characteristics of ALICE and poverty-level households by age, race/ethnicity, and household type over time. It also reports on important local variations that are often masked by state averages.

Overall population changes: In Michigan, the total number of households increased by 3 percent between 2010 and 2017, to 3,935,132. The number of ALICE and poverty-level households increased more, from 1,569,992 in 2010 to 1,664,606 in 2017, a 6 percent increase.

- **Poverty:** The number of households in poverty — defined in 2017 as those earning \$12,060 for a single adult and \$24,600 for a family of four — fell from 570,417 (15 percent of the total household population) in 2010 to 536,594 (14 percent of the total household population) in 2017, reflecting a 6 percent decrease.
- **ALICE:** The number of ALICE households grew from 999,575 in 2010 to 1,128,012 in 2017, a 13 percent increase. The proportion of all households that were ALICE rose from 26 percent to 29 percent during that period (Figure 1).

Figure 1.
Household Income, Michigan, 2010 to 2017



Sources: American Community Survey, 2010–2017; the ALICE Threshold, 2010–2017; for additional data and ALICE Methodology, see UnitedForALICE.org

HOUSEHOLDS BY AGE

Two major population bubbles are changing communities across Michigan. The baby boomers (born between 1946 and 1964) are the largest generation, and as they age, their needs and preferences change. The second largest group is the millennials (adults born between 1981 and 1996, according to the Pew Research Center), who are making different lifestyle and work choices than previous generations. Between the two population bubbles is the smaller Generation X, made up of adults born between 1964 and 1980. To analyze general trends, the ALICE data is presented by household in more precise Census age breaks: under-25, 25–44, 45–64, and 65 and older. Millennials are covered by the youngest two brackets and baby boomers by the oldest two (Colby & Ortman, 2014; Dimock, 2019).

Aging Population

The increase in the number of ALICE households in Michigan is driven by senior households (65 years and older). The number of senior households increased 20 percent, from 870,656 in 2010 to 1,045,272 in 2017 (Figure 2). The number of senior households with income below the ALICE Threshold grew by 17 percent between 2010 and 2017. By 2017, 41 percent of senior households had income below the ALICE Threshold.

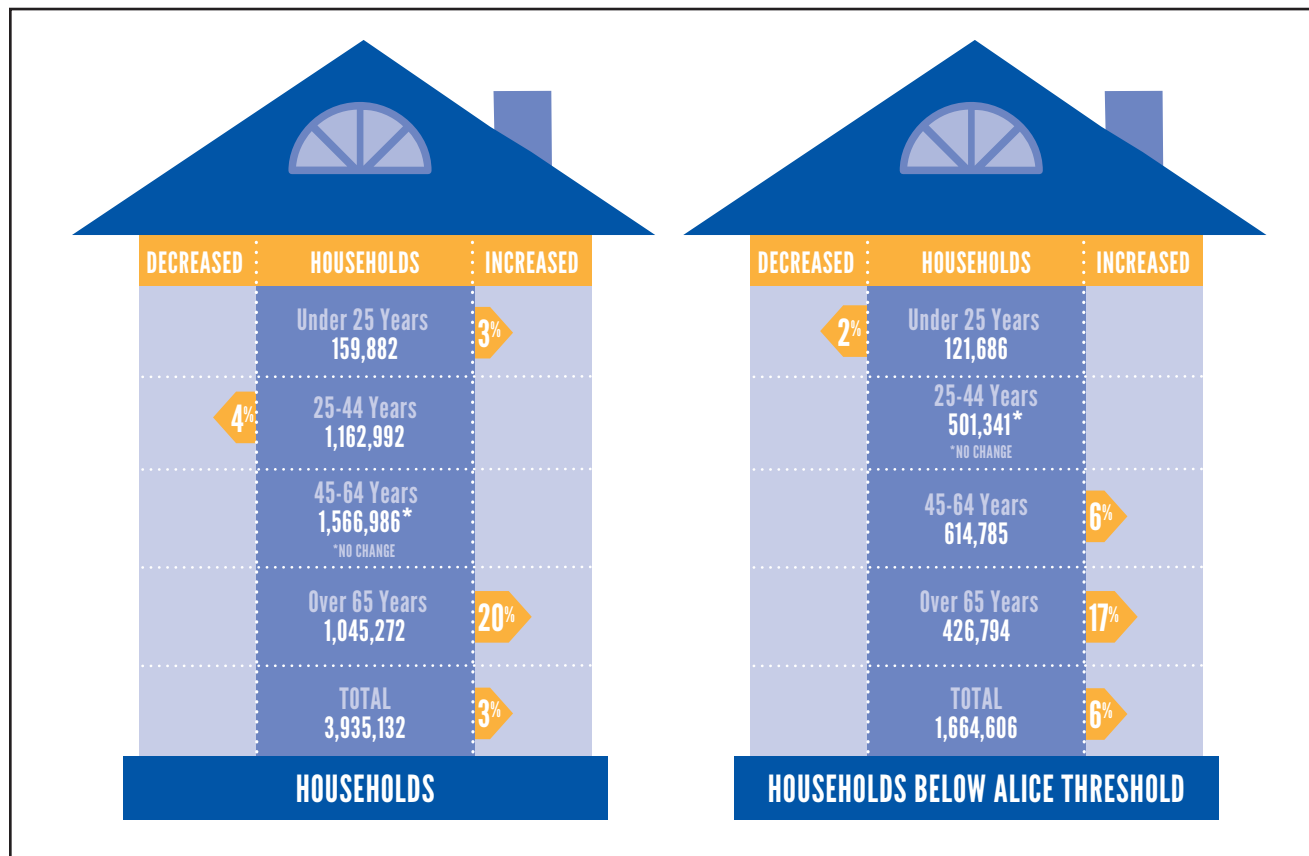
The next oldest age group, households headed by 45- to 64-year-olds, remained flat between 2010 and 2017, yet the number of these households with income below the ALICE Threshold increased by 6 percent — a surprising drop in income for those in their prime earning years (American Community Survey, 2010, 2017).

Younger Households

Even though the total population of millennials is increasing, the number of households headed by them is not growing at the same rate. The youngest segment of millennials, households headed by those under 25 years old, increased by 3 percent, from 154,879 households in 2010 to 159,882 in 2017, and the number with income below the ALICE Threshold fell by 2 percent during that time period. The older and larger segment of millennials, households headed by 25- to 44-year-olds, decreased by 4 percent overall, and the number with income below the ALICE Threshold remained nearly unchanged.

Unlike previous generations of young Americans, many millennials cannot afford to live on their own. Instead, they are more likely to live with their parents or with roommates. And for the first time in more than a century, they are less likely to be living with a romantic partner compared to previous generations. These patterns vary among some millennials from immigrant families. Yet overall, in Michigan, people under the age of 25 who are the head of their household (i.e., don't live with parents, older relatives, or older roommates/partners) are far less likely to be able to afford basic necessities, with 76 percent of them living below the ALICE Threshold in 2017 (American Community Survey, 2010, 2017; Cilluffo & Cohn, 2017; W. H. Frey, 2018).

Figure 2.
Household Income by Age of Head of Household, Michigan, 2010 to 2017



Sources: American Community Survey, 2017; the ALICE Threshold, 2017

HOUSEHOLDS BY RACE AND ETHNICITY

Statewide changes in financial stability are driven by changes in the income of White (non-Hispanic) households because they make up the largest racial group by far in Michigan, but these trends often mask important changes in other ethnic groups. For example, in Michigan, the number of Asian and Hispanic households grew faster than Black and White households from 2010 to 2017. Asian households increased by 28 percent to 95,899, and Hispanic households increased by 20 percent to 133,124. In comparison, the number of Black households increased by 3 percent to 527,029, while White households grew by only 1 percent to 3,086,693 (see the note on race/ethnicity in the Research Framework box in the Executive Summary).

A breakdown by race and age shows other important trends:

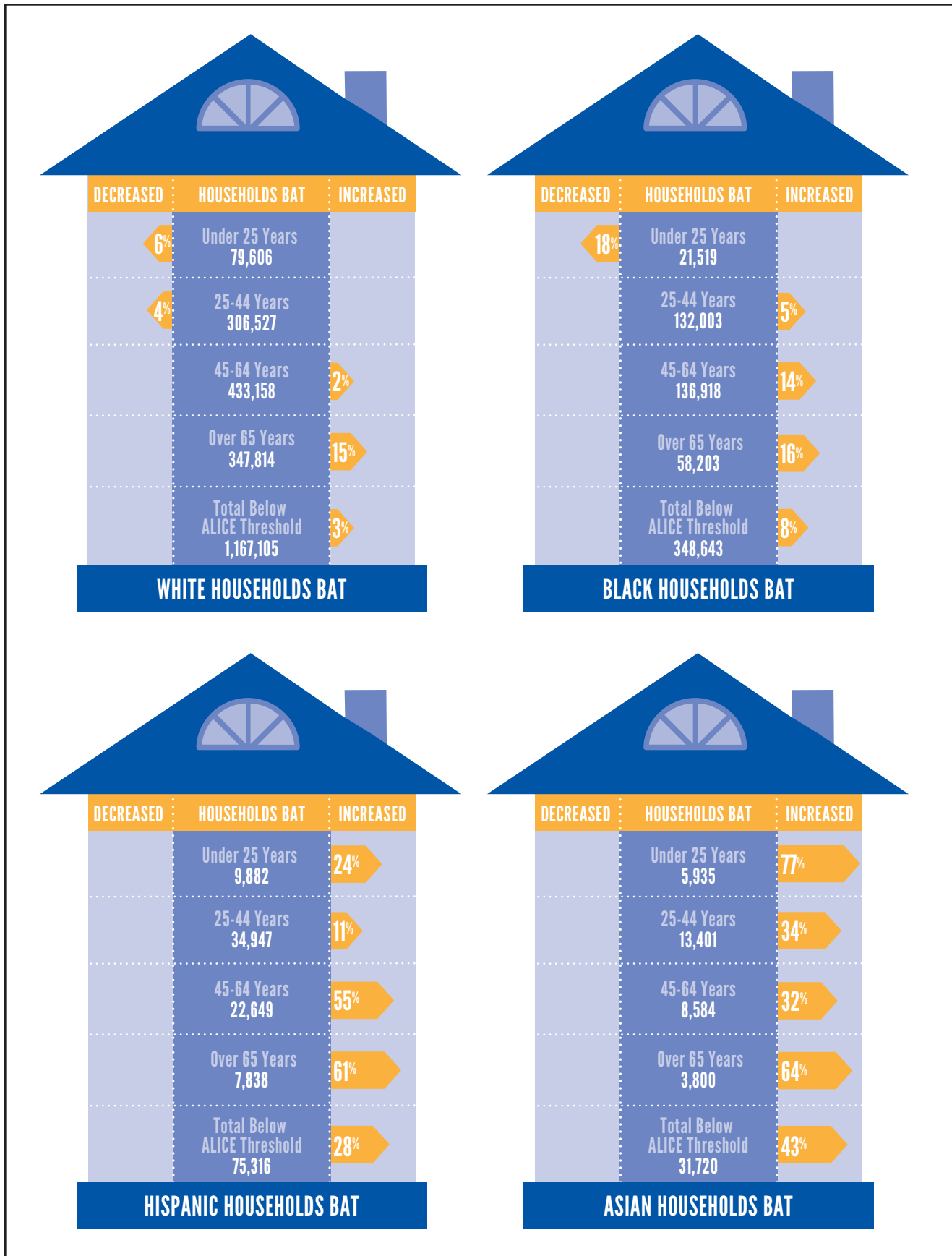
Among young households, population change varies by race/ethnicity: The number of White under-25-year-old households remained stable between 2010 to 2017. Black households in this age group saw a decline of 16 percent. However, this trend was reversed for under-25-year-old Asian and Hispanic households, which increased by 63 percent and 18 percent, respectively. Population change for households headed by the next oldest age group, 25- to 44-year-olds, also varied by race/ethnicity, with slight declines in Black and White households, and increases in Asian and Hispanic households.

Older households of all racial and ethnic groups are increasing: Due to the size of Michigan's White population, White senior households are driving the overall growth in the state's senior population. White senior households increased by 18 percent from 2010 to 2017. Other senior groups are experiencing significant growth as well: Asian senior households increased by 53 percent, Hispanic senior households by 50 percent, and Black senior households by 25 percent. Similarly, there was growth among households headed by 45- to 64-year-olds for most racial/ethnic groups (33 percent for Hispanic households, 31 percent for Asian households, and 4 percent for Black households). White 45- to 64-year-old households were the exception to this trend, decreasing by 3 percent during this time period.

Households below the ALICE Threshold increased across most groups (Figure 3): The number of households below the ALICE Threshold in Michigan increased in most age and racial/ethnic groups from 2010 to 2017, with a few notable exceptions. The number of Black and White under-25-year-old households below the ALICE Threshold decreased during this time period, by 18 and 6 percent, respectively. The number of White households below the ALICE Threshold headed by 25- to 44-year-olds also decreased, by 4 percent.

Among all other age and racial/ethnic groups, the number of households below the ALICE Threshold increased. The largest increase across all ages and racial/ethnic groups was among Asian households headed by under-25-year-olds (up 77 percent). Senior households also saw large increases in households below the ALICE Threshold, with Asian senior households experiencing the greatest increase, at 64 percent, followed by Hispanic senior households at 61 percent. Similarly, households headed by 45- to 64-year-olds also increased across all racial/ethnic groups, with Hispanic households in this age bracket seeing the largest increase, at 55 percent.

Figure 3.
Households Below ALICE Threshold (BAT), by Age and Race/Ethnicity, Michigan, 2010 to 2017



Sources: American Community Survey, 2010–2017; the ALICE Threshold, 2010–2017

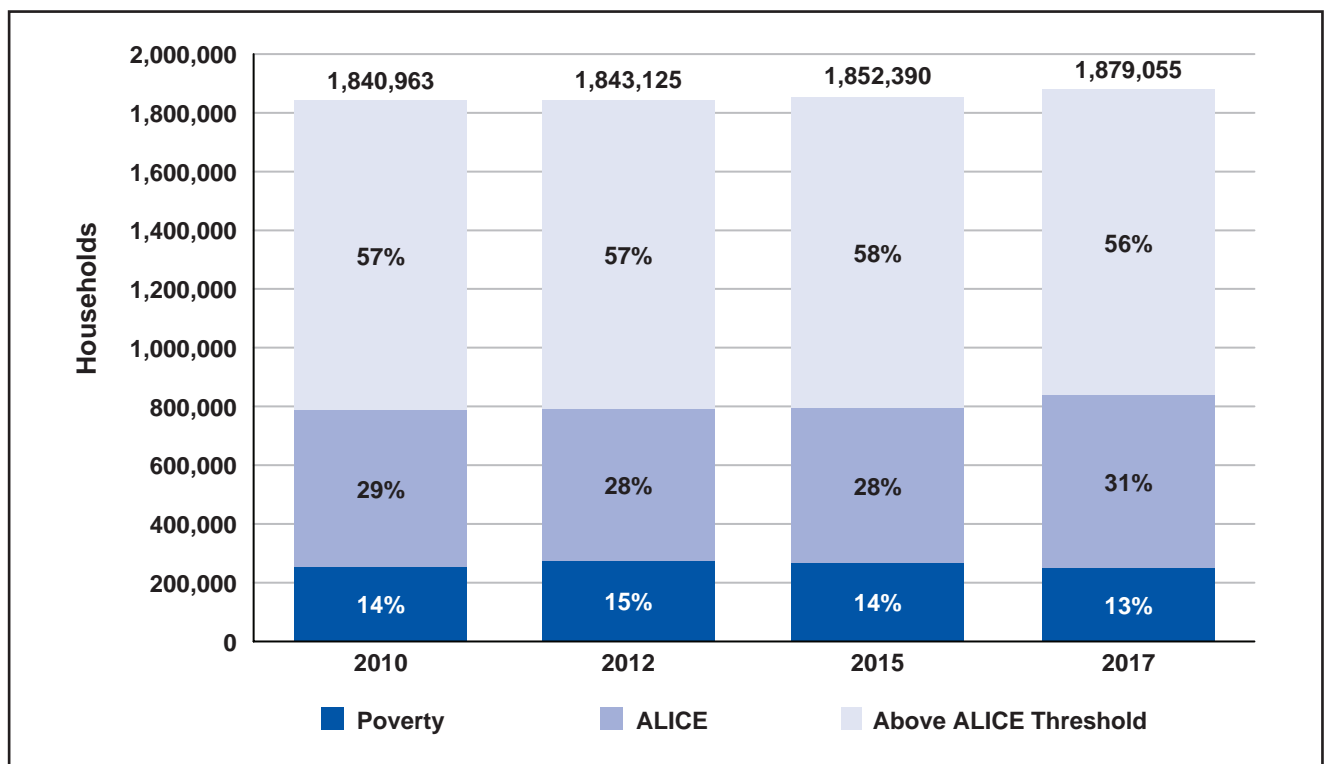
HOUSEHOLDS BY FAMILY TYPE

There are longstanding preconceptions about what types of families tend to be low-income — for example, homes headed by single mothers. Yet ALICE and poverty-level families exist in all configurations. There have been such dramatic changes in the living arrangements of Americans that it is important to re-evaluate these old stereotypes.

After decades of declining marriage rates along with rising levels of divorce, remarriage, and cohabitation, the household made up of a married couple with two children is no longer typical. Since the 1970s, American households have become smaller for a number of reasons: Fewer households have children, there are fewer married-couple households, and more people are living alone, especially at older ages. People are living in a wider variety of arrangements, including singles living alone or with roommates and grown children living with parents. The share of American adults who have never been married is at a historic high.

In Michigan in 2017, there were 1,879,055 households composed of single or cohabiting adults under the age of 65 with no children under 18 years old. They make up the largest household type in Michigan, accounting for 48 percent of all households, and have the largest number of households below the ALICE Threshold. In 2017, 44 percent of these households had income below the ALICE Threshold, increasing from 43 percent in 2010 (Figure 4).

Figure 4.
Single or Cohabiting (Under 65) Households, No Children Under 18, by Income, Michigan, 2010 to 2017



Sources: American Community Survey, 2010–2017; the ALICE Threshold, 2010–2017

Families With Children

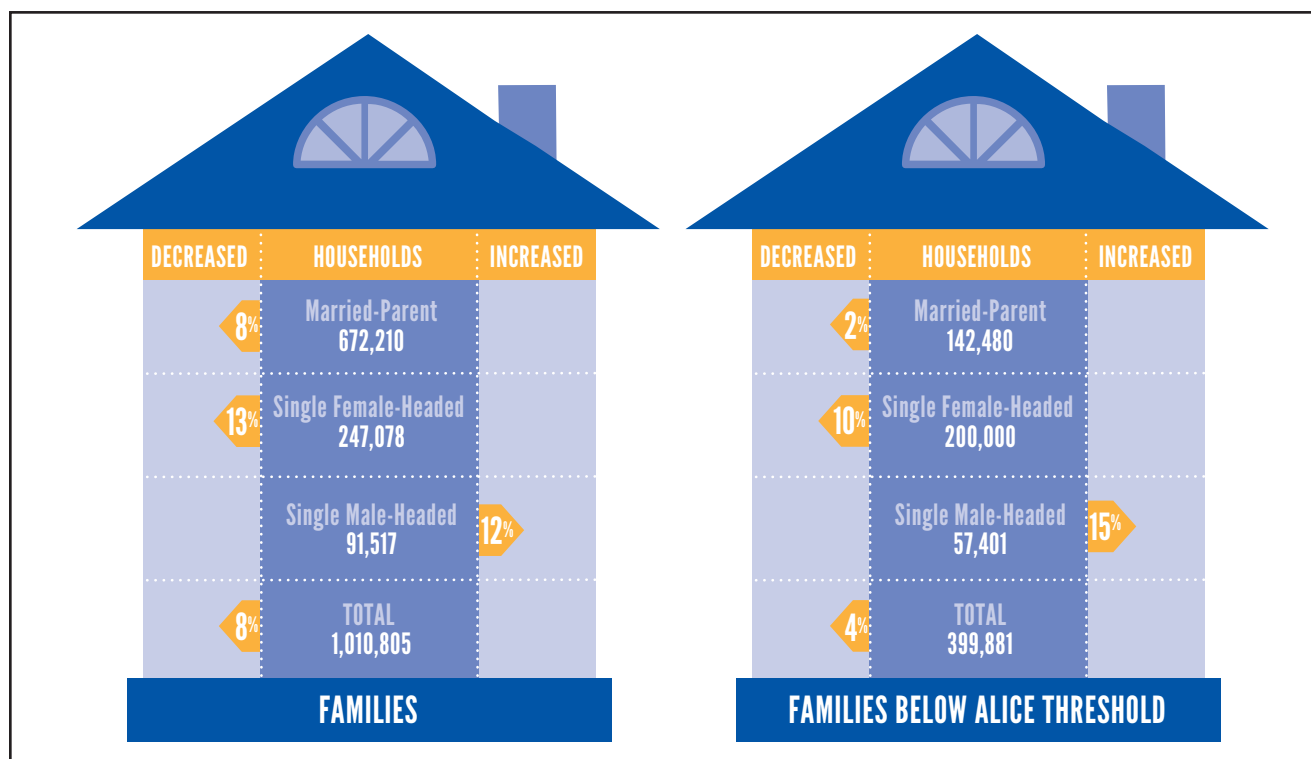
Families with children are also changing, with mothers doing more paid work outside the home than in previous years. Nationally in 2015, 42 percent of mothers were sole or primary breadwinners, bringing in 50 percent or more of family earnings, and another 22 percent were co-breadwinners, earning 25 to 49 percent of earnings. Gender roles are changing as well, with fathers doing more housework and child care. Over the last 30 years, the number of stay-at-home fathers has doubled to 2.2 million, and the amount of housework fathers report doing has also doubled to an average of nine hours a week (Cohn & Caumont, 2016; Glynn, 2016; Livingston, 2014; Parker & Livingston, 2018).

The composition of families with children is changing as well. There are increasing numbers of various types of families, including those with several cohabiting generations and those with lesbian, gay, bisexual, and transgender (LGBT) parents. More than a quarter of married LGBT couples are now raising children, and the number of same-sex marriages more than doubled nationally from 2010 to 2015. During that time, in 2013, the U.S. Supreme Court ruled that the federal government must recognize state-sanctioned same-sex marriages, and then in 2015, it ruled that all states must allow same-sex marriages. Households with combined children from parents' prior relationships are also on the rise. Almost one in six children under the age of 18 now lives in a family with parents and their children from previous relationships (Cohn & Caumont, 2016; Gates & Brown, 2015; Pew Research Center, 2015).

Of all Michigan families with children, there were 399,881, or 40 percent, with income below the ALICE Threshold in 2017, a decrease of 4 percent since 2010. Michigan families with children saw the following changes from 2010 to 2017 (Figure 5):

- **Married-parent families:** The number of married-parent families with children fell by 8 percent from 2010 to 2017 and the number below the ALICE Threshold decreased by 2 percent. In 2017, 36 percent of families living below the ALICE Threshold were married-parent households.
- **Single-female-headed families:** The number of single female-headed families with children decreased by 13 percent, and the number below the ALICE Threshold decreased at a similar rate of 10 percent. In 2017, 50 percent of families living below the ALICE Threshold were single-female-headed households.
- **Single-male-headed families:** This smallest share of family types was the only group to see an increase in both total families and families below the ALICE Threshold. Single-male-headed families increased by 12 percent overall; the number with income below the ALICE Threshold increased by 15 percent. In 2017, 14 percent of families living below the ALICE Threshold were single-male-headed households.

Figure 5.
Families With Children by Income, Michigan, 2010 to 2017

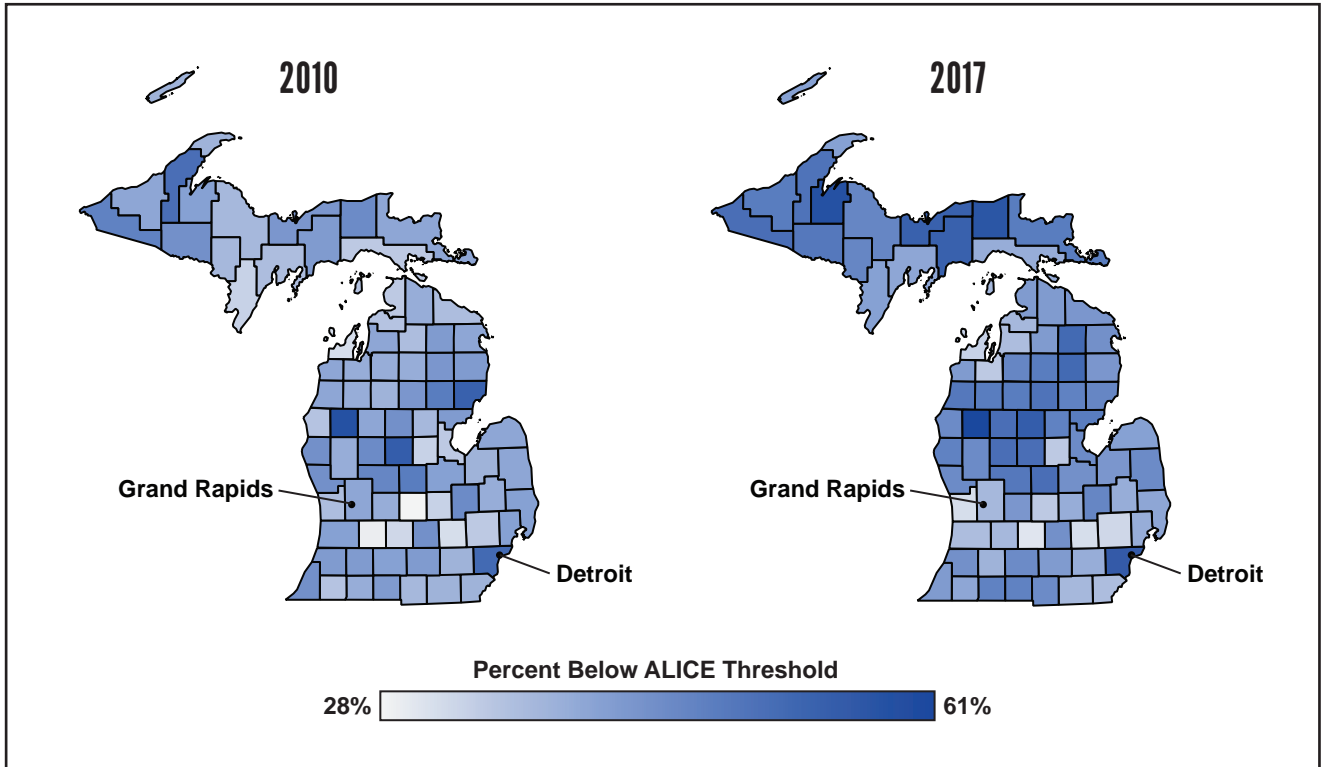


Sources: American Community Survey, 2010–2017; the ALICE Threshold, 2010–2017

ALICE BY COUNTY

ALICE households live in urban, suburban, and rural areas, and in every county in Michigan. Although the cost of living and wages differ across the state, the number of households with income below the ALICE Threshold increased across most counties from 2010 to 2017. But there is enormous variation among counties. The percentage of households below the ALICE Threshold ranges from 30 percent in Eaton County to 61 percent in Lake County (Figure 6).

Figure 6.
Percent of Households Below the ALICE Threshold by County, Michigan, 2010 and 2017



Sources: American Community Survey, 2010, 2017; the ALICE Threshold, 2010, 2017. Details on each county's household income and ALICE demographics, as well as further breakdown by municipality, are listed in the ALICE County Pages and Data File at UnitedForALICE.org/Michigan

THE HOUSEHOLD SURVIVAL BUDGET

The Household Survival Budget reflects the bare-minimum cost to live and work in the modern economy. In Michigan in 2017, the average Household Survival Budget was \$61,272 for a four-person family and \$21,036 for a single adult (Figure 7). The hourly wage necessary to support a family budget was \$30.64 for one parent working 40 hours per week for 50 weeks per year (or \$15.32 per hour each, if two parents work), and \$10.52 per hour, full time for a single adult. These costs continue to increase faster than the rate of inflation.

Figure 7.
Household Survival Budget, Michigan Average, 2017

Household Survival Budget, Michigan Average, 2017			Percent Change 2010–2017	
	SINGLE ADULT	2 ADULTS, 1 INFANT, 1 PRESCHOOLER	SINGLE ADULT	2 ADULTS, 1 INFANT, 1 PRESCHOOLER
Monthly Costs				
Housing	\$509	\$739	6%	14%
Child Care	\$-	\$1,122	N/A	2%
Food	\$199	\$604	10%	10%
Transportation	\$347	\$693	13%	13%
Health Care	\$236	\$887	111%	98%
Technology*	\$55	\$75	N/A	N/A
Miscellaneous	\$159	\$464	26%	27%
Taxes	\$248	\$522	36%	83%
Monthly Total	\$1,753	\$5,106	26%	27%
ANNUAL TOTAL	\$21,036	\$61,272	26%	27%
Hourly Wage**	\$10.52	\$30.64	26%	27%

* New to budget in 2017

** Full-time wage needed to support this budget

Sources: BLS, 2017 — Consumer Expenditure Surveys; Consumer Reports, 2017; HUD, 2017 — Fair Market Rents; IRS, 2016 — Individual Income; IRS, 2017 — SOS Tax Stats; Michigan Department of Education Office of Great Start, 2018; Tax Foundation 2017, 2018; USDA, 2017 — Official USDA Food Plans. For the Methodology Overview and additional data, see UnitedForALICE.org

The cost of household basics in the Household Survival Budget — housing, child care, food, transportation, health care, technology, and taxes — increased by 26 percent for a single adult and 27 percent for a family of four from 2010 to 2017. At the same time, median earnings only increased by 21 percent in Michigan and 16 percent nationwide, putting greater strain on families. It is important to note that the national rate of inflation — which covers many budget items that change at varying rates — was 12 percent during this time period, much lower than the increase in Michigan's Household Survival Budget.

The rise in the Household Survival Budget in Michigan between 2010 and 2017 was driven primarily by a 111 percent increase in health care costs for a single adult and a 98 percent increase for a family of four. These increases are due to an average 59 percent increase in out-of-pocket costs, as well as the addition of the Affordable Care Act shared responsibility penalty for not purchasing health insurance. Michigan expanded Medicaid coverage in April of 2014, which greatly increased the percentage of low-income Michiganders with

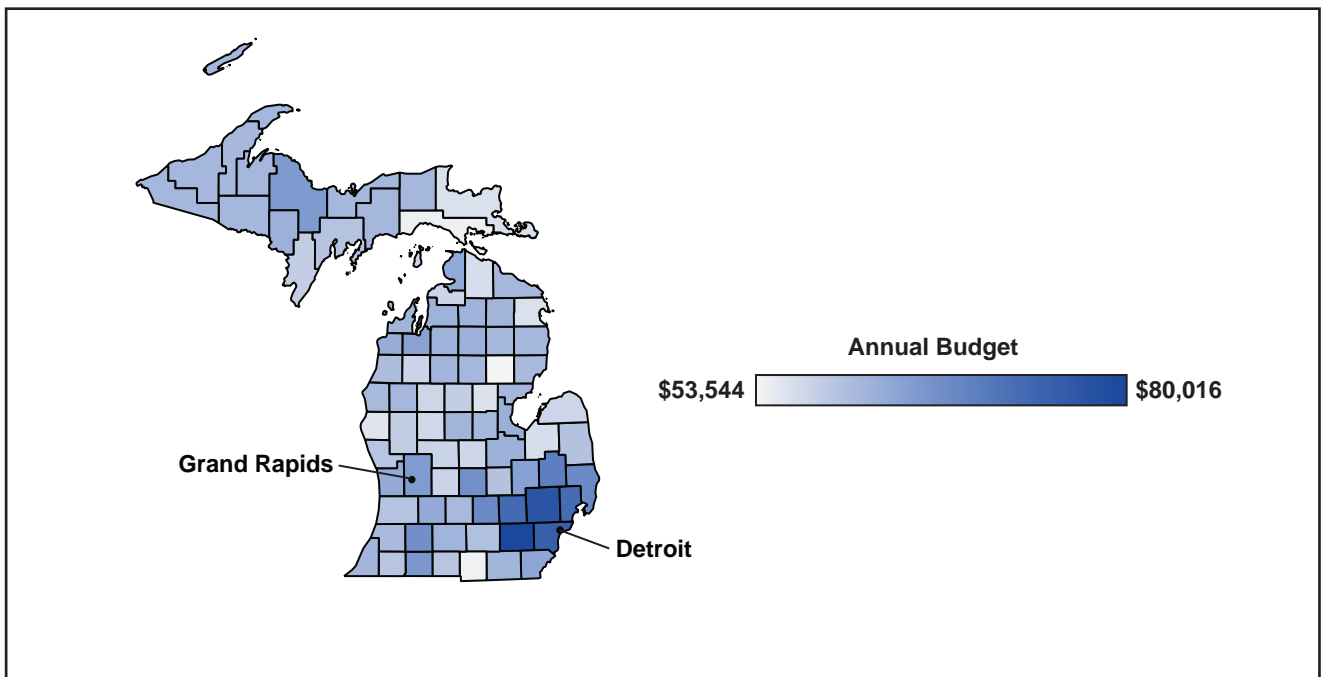
insurance and reduced costly out-of-pocket expenses for these households. However, because the Medicaid eligibility cutoff is 138 percent of the Federal Poverty Level (\$33,948 for a family of four), many ALICE families do not qualify (Kaiser Family Foundation, 2016).

Since the Household Survival Budget only includes the bare minimum for each item, the lowest-cost option in 2016 was not even the least expensive Bronze Marketplace plan, which carries premiums and deductibles, but rather the penalty families were required to pay for not having health insurance. While seniors have Medicare for health insurance, they have out-of-pocket expenses, which include services and items not covered by Medicare (such as vision and dental care). For more details on health care costs, see the Methodology Overview at UnitedForALICE.org/methodology.

The 2017 budget also includes the cost of a basic smartphone plan (technology), which is a necessity in the modern economy. The big increase in taxes can largely be explained by the increase in all other budget items. As the cost of these items increased, the earnings needed to cover the expenses increased, and higher earnings result in a larger tax bill. Changes in tax rates were minimal from 2010 to 2017. Both federal and Michigan tax rates were flat, on average, though tax brackets shifted (American Community Survey, 2010, 2017; Tax Foundation, 2017, 2018).

The cost of the Household Survival Budget varies across the state, with the highest-cost counties located around Detroit. The lowest costs are in the more rural counties (Figure 8).

Figure 8.
Household Survival Budget, Family of Four, Michigan Counties, 2017



Sources: American Community Survey, 2010–2017; the ALICE Threshold, 2010–2017

ALICE IN THE WORKFORCE

Overall economic conditions in Michigan continued to improve during the recovery: Unemployment was down from 12.2 percent in 2009 to 4.7 percent in 2017,* although rates varied across the state. Since 2010, Michigan has also led the Great Lakes Region in average growth in Gross Domestic Product (GDP). Heavily dependent on the manufacturing industry (19 percent of the state economy, compared to 12 percent nationally), the state's economy was boosted by the growth of new advanced manufacturing jobs — especially in the automobile industry. At the same time, the state has continued to diversify into professional and business services, with the finance, insurance, and real estate sectors becoming the largest contributors to Detroit's GDP. Michigan was also one of the top states for the creation of private-sector jobs overall (resulting, in part, from a resurgence in the agriculture, tourism, and manufacturing sectors).

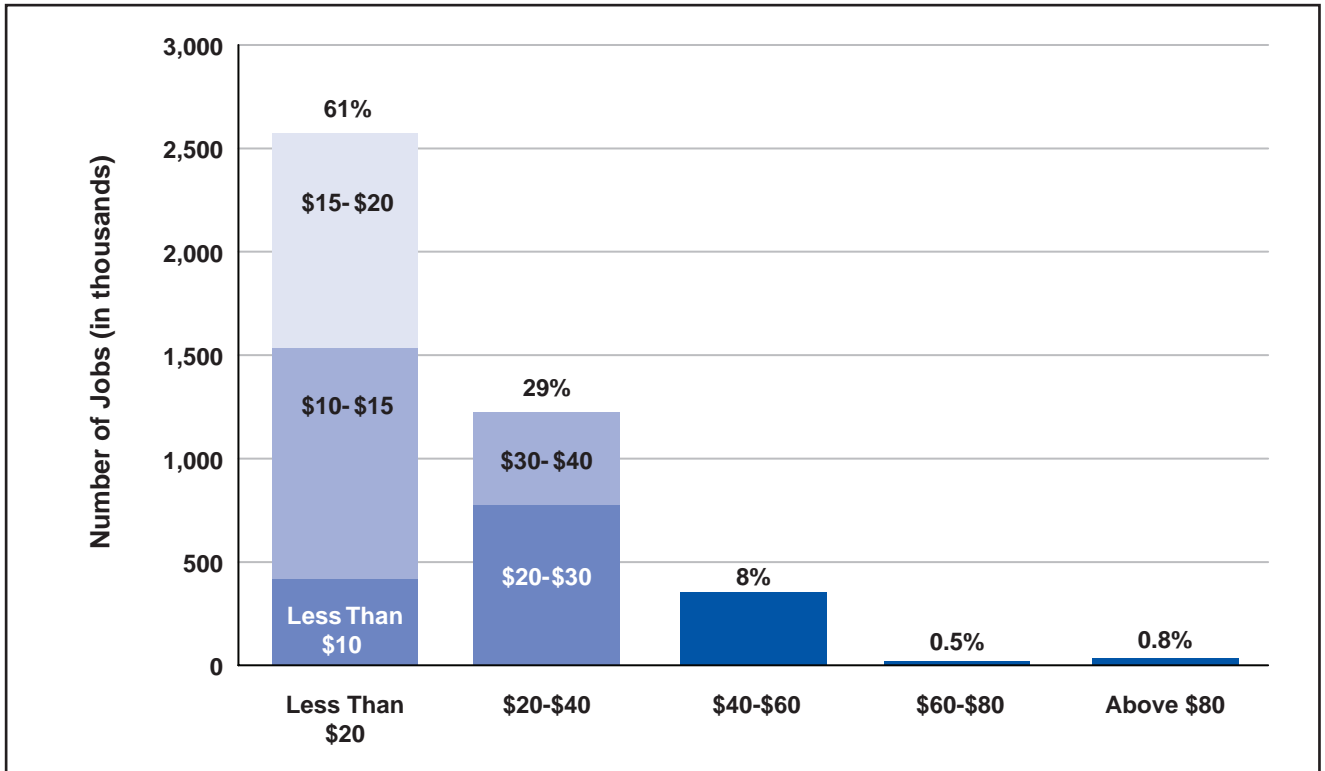
However, many of the new and transformed jobs in Michigan are low-wage jobs in the education, health care, and retail sectors, where workers don't earn enough to cover a basic household budget. For a range of reasons — including low wages; lack of full-time work; and income disparities by gender and sexual orientation, education, and race/ethnicity — ALICE households are not benefitting financially from seemingly positive economic trends (BLS, 2017 — Local Area Unemployment Statistics; Michigan Chamber Foundation, 2016; Senate Fiscal Agency, 2016; Wilkinson, 2018).

LOW-WAGE JOBS

Low-wage jobs continue to dominate the Michigan economy, making it more challenging for workers to find jobs with wages that can support even a basic household budget. With 4.2 million total jobs in Michigan recorded by the Bureau of Labor Statistics in 2017, the job market has shown improvement since 2010. But 61 percent of jobs in Michigan pay less than \$20 per hour, with nearly two-thirds of those jobs paying less than \$15 per hour (Figure 9). Job gains were greatest in occupations that paid between \$9.43 and \$15.91 per hour (Figure 10). A full-time job that pays \$15 per hour grosses \$30,000 per year, which is less than half of the Household Survival Budget for a family of four in Michigan (BLS, 2010 and 2017 — Occupational Employment Statistics).

** Michigan state average unemployment rate for 2010 and 2017 from the Bureau of Labor Statistics (BLS, 2017 — Local Area Unemployment Statistics). Note that the Michigan County Pages that accompany this Report use the 2017 Michigan state average unemployment rate from the American Community Survey, which was 5.9 percent, and the national average of 5.3 percent.*

Figure 9.
Number of Jobs by Hourly Wage, Michigan, 2017



Source: Bureau of Labor Statistics, 2017 — Occupational Employment Statistics

While the unemployment rate in Michigan was 4.7 percent in 2017, the *underemployment* rate was much higher, at 9.1 percent. During 2017, there was an average of 182,475 underemployed Michiganders who were working less than 35 hours per week despite wanting to work full time and being available to work. These individuals, often called involuntary part-time workers, cited economic reasons, such as a cutback in hours or an inability to find full-time work, as the reason for their underemployment. Nationally in 2017, 22 percent of part-time workers reported that they would prefer to be working full time (BLS, 2017 — Local Area Unemployment Statistics; BLS, 2018 — Employed Involuntary Part-Time).

To compensate for low wages, many workers take on a second job. Nationally, 29 percent of workers have a second job. This trend is expected to increase because millennials are more likely than other age groups to have a second job: About 39 percent of workers aged 18–24 and 44 percent of workers aged 25–34 reported taking on a second job to earn more money. And workers are taking on second jobs even in professional occupations traditionally seen as providing adequate wages. For example, the National Center for Education Statistics found that in 2016, 18 percent of full-time public school teachers reported working a second job to make ends meet (CareerBuilder, 2016; National Center for Education Statistics, 2018).

Many ALICE workers are employed in the service sector, but they also work in occupations that build and repair the nation’s infrastructure, as well as in jobs that educate and care for the workforce. Together, these workers were aptly described as “maintainers” by technology scholars Lee Vinsel and Andrew Russell. With much credit for economic growth given to “innovators” — disruptors and inventors — it is important to recognize that the majority of jobs are focused on ensuring a strong and functioning infrastructure and a healthy and educated workforce. These maintainer jobs are not only vital to a smoothly running economy but are the foundation for successful innovation. Yet despite how essential these workers are to the economy, improvements in employment and productivity still have not enabled many of them to earn enough to afford a basic household budget (Frey & Osborne, 2013; Vinsel & Russell, 2016).

The top 20 occupations employing the most people in Michigan are predominantly maintainer jobs, which are more likely to pay low wages. In 2017, only three of the top 20 occupations — registered nurses, general and operations managers, and mechanical engineers — paid enough to support the Household Survival Budget for a family, a minimum of \$30.64 per hour (Figure 10).

The most common occupation in Michigan, retail sales, pays a wage that is well below what is needed to make ends meet. The more than 142,000 retail salespeople make an average of \$10.55 per hour, or \$21,100 if working full time, year-round. These jobs fall short of meeting the family Household Survival Budget by approximately \$40,000 per year. Even if both parents worked full time at this wage, they would fall short of the Household Survival Budget by \$19,072 per year.

Figure 10.
Top 20 Occupations by Employment and Wage, Michigan, 2010 to 2017

OCCUPATION	2017		Percent Change 2010–2017	
	NUMBER OF JOBS	MEDIAN HOURLY WAGE	NUMBER OF JOBS	MEDIAN HOURLY WAGE
Retail Salespersons	142,870	\$10.55	12%	5%
Combined Food Preparation and Serving Workers, Including Fast Food	121,630	\$9.43	73%	9%
Assemblers and Fabricators, All Other, Including Team Assemblers	106,070	\$15.91	64%	-1%
Office Clerks, General	98,420	\$15.54	-9%	22%
Registered Nurses	94,090	\$32.87	9%	9%
Cashiers	92,210	\$9.59	-9%	9%
Customer Service Representatives	88,760	\$15.55	47%	4%
Waiters and Waitresses	81,030	\$9.41	12%	11%
Laborers and Freight, Stock, and Material Movers	70,090	\$13.30	15%	13%
Stock Clerks and Order Fillers	61,040	\$11.24	-1%	9%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	58,590	\$16.70	17%	9%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	58,480	\$11.39	-9%	1%
Heavy and Tractor-Trailer Truck Drivers	55,560	\$19.24	21%	7%
General and Operations Managers	55,480	\$49.15	51%	11%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	52,440	\$28.70	15%	13%
Nursing Assistants	50,070	\$13.91	1%	13%
Mechanical Engineers	44,680	\$42.47	48%	4%
Maintenance and Repair Workers	40,660	\$16.92	18%	7%
Personal Care Aides	38,950	\$10.61	243%	11%
Bookkeeping, Accounting, and Auditing Clerks	38,440	\$17.97	-11%	9%

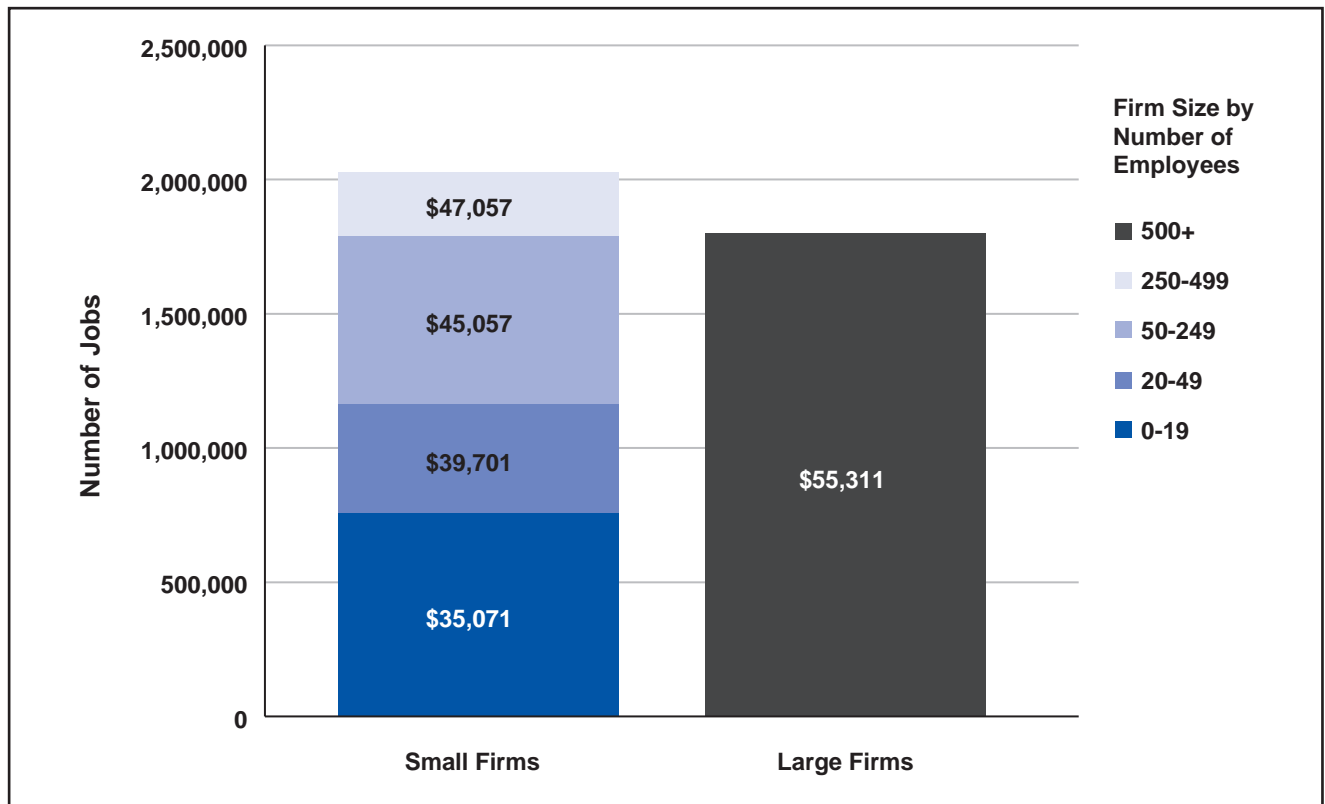
Source: Bureau of Labor Statistics, 2010, 2017 — Occupational Employment Statistics

SMALL BUSINESSES

One of the key determinants of ALICE workers' wages, benefits, and job stability is the size of their employer. Generally, large companies have greater resources to offer career-growth opportunities, continuous employment, and better benefits. Small businesses are defined by the Bureau of Labor Statistics as firms with fewer than 500 employees. These companies have been an important engine for growth in the U.S. and Michigan economies, driving job creation, innovation, and wealth, and they have traditionally grown to become medium or large employers. However, small businesses are more vulnerable to changes in demand, price of materials, and transportation costs, as well as to cyberattacks and natural disasters. As a result, their employees face more instability, reduced wages, and a greater risk of job loss. These past two decades have been particularly tough for small businesses, with entrepreneurial growth in the U.S. and Michigan largely down from the levels experienced in the 1980s and 1990s (Ewing Marion Kauffman Foundation, 2017; Haltiwanger, Jarmin, Kulick, & Miranda, 2017).

Despite these struggles, in 2017, small businesses employed just over half of the private-sector workforce in Michigan (Figure 11). The smallest firms — those with fewer than 20 people — accounted for the largest share of small-business employment. Yet small firms experience the greatest employee turnover of any size firm, and workers in small firms move in and out of employment more often, which can lead to periods of no wages (U.S. Census Bureau, 2017 — Quarterly Workforce Indicators).

Figure 11.
Private-Sector Employment by Firm Size, With Average Annual Wages, Michigan, 2017



Source: U.S. Census Bureau, 2017 — Quarterly Workforce Indicators

The wages of employees in the smallest firms are significantly lower than wages in larger firms (Figure 11). While average wages in Michigan have been increasing faster than the 12 percent national rate of inflation, for many employees, wages in the state have not kept pace with the 27 percent increase in the cost of the family

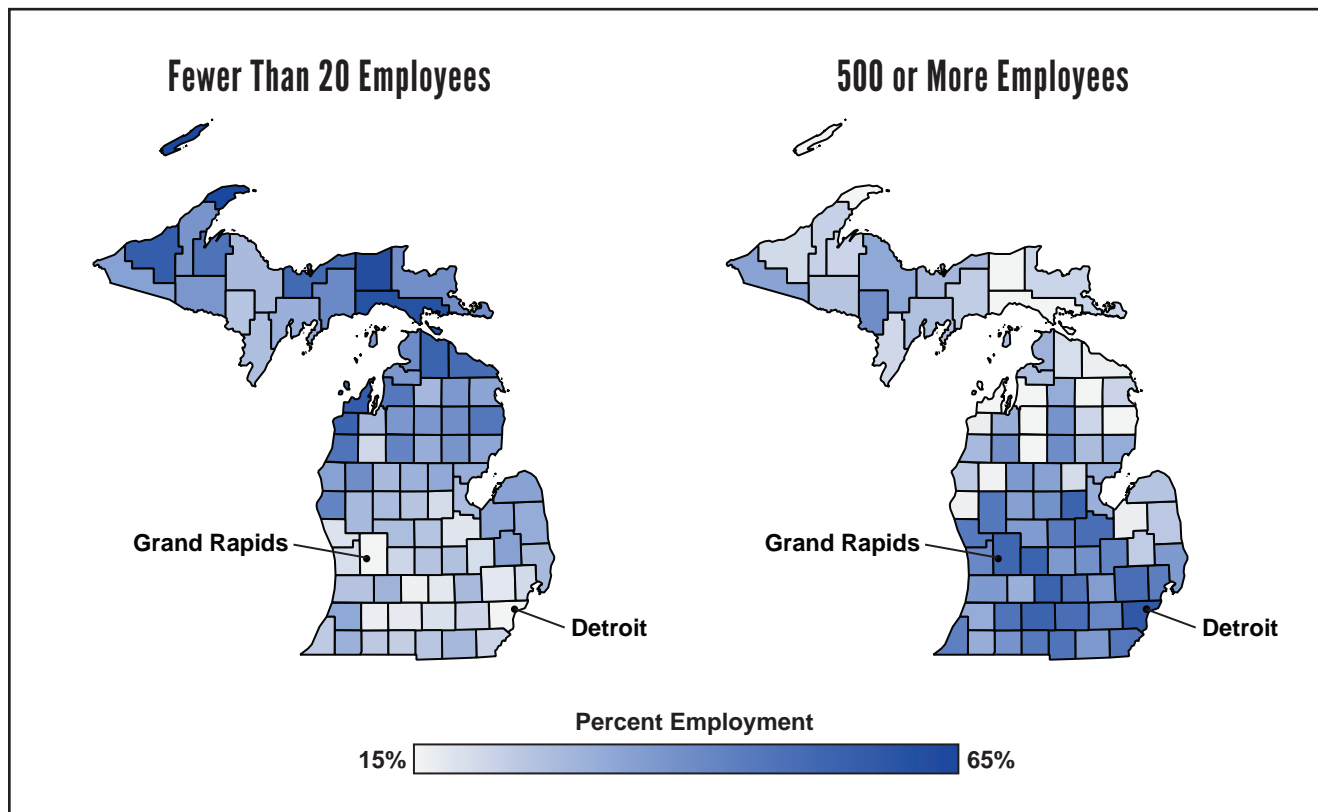
Household Survival Budget. From 2010 to 2017, workers in Michigan firms with fewer than 20 employees saw their wages rise by 16 percent to \$35,071 (if full time, year-round). Workers in companies with 20 to 49 employees saw their annual wages increase by 14 percent to \$39,701, and wages for workers in companies with 50 to 249 employees increased by 16 percent to \$45,057.

Employees in the largest firms started with higher wages and saw an increase in wages: Those working in firms with 250 to 499 employees saw their wages increase by 13 percent to \$47,057, and the wages of those working in firms with 500 or more employees increased by 19 percent to \$55,311.

Another measure reveals that new-hire wages are lower than wages of workers in stable employment (working more than one quarter). Since job instability is often a threat to an ALICE household’s stability, it’s important to note the difference between new wages and stable wages. For all firm sizes in Michigan, new-hire wages were at least 34 percent lower than stable wages, and as much as 47 percent less for those in firms with 20 to 49 employees (U.S. Census Bureau, 2017 — Quarterly Workforce Indicators).

Wages in Michigan also vary widely by location, with areas dominated by small companies having lower wages and less job stability. Figure 12 shows the percentage of employment in each county by the firms that are the smallest (fewer than 20 employees) and the largest (500 or more), with lighter areas on each map representing a lower percentage of firms and the darker areas representing a higher percentage. Rural counties, such as Ontonagon and Mackinac, have a higher concentration of employment in small firms, while companies with 500 or more employees are more concentrated in urban areas around Grand Rapids, Lansing, and Detroit. Large companies in rural areas are often large retail chains, which tend to have lower wages, explaining the lower median wage for firms with more than 500 employees in rural areas (U.S. Census Bureau, 2017 — Quarterly Workforce Indicators).

Figure 12.
Percent Employment by Firm Size, Michigan, 2017



Source: U.S. Census, 2017 — Quarterly Workforce Indicators

THE GIG ECONOMY

As the economy approached full employment (defined as an unemployment rate of less than 5 percent) in many areas of Michigan and across the country in 2017, ALICE workers were more likely to be employed. But their income still did not support the cost of living in most areas. In some cases, the problem is low wages. But workers are also having difficulty finding full-time, continuous work.

Over the last decade, there has been a shift away from traditional full-time, full-benefit jobs. In 2016, 15 to 33 percent of the workforce nationally was working as a consultant or contingent worker, temp, freelancer, or contractor (often referred to as the gig economy). According to a National Bureau of Economic Research report, as much as 94 percent of U.S. net employment growth in the last decade has come from alternative or contingent labor (Abraham, Haltiwanger, Sandusky, & Spletzer, 2016; Hathaway & Muro, 2016; Katz & Krueger, 2016).

Yet many gig-economy workers are struggling financially. Some evidence of this hardship comes from data on a subset of the gig economy called non-employer firms, defined in most cases as a self-employed individual operating a very small, unincorporated business with no paid employees. Nationally, non-employer firms are growing at a greater rate than firms with employees; there were 25 million businesses classified as “non-employers” in 2016. Average annual sales for these firms were \$46,978, and approximately 45 percent of non-employer firms had total revenue of less than \$25,000 per year (Economic Policy Institute, 2018; Federal Reserve Banks, 2015; U.S. Census Bureau, 2016 — Geographic Area Series).

Michigan had over 700,000 non-employer firms in 2016 (the latest data year), primarily concentrated in professional, scientific, and technical services (85,451 firms); real estate, rental, and leasing (78,528 firms); construction (77,549 firms); health care and social assistance (61,639 firms); and a large category (“other services”) that encompasses a range of other service occupations, such as equipment and machinery repair, grantmaking, advocacy, personal care, dry cleaning and laundry, and pet care (119,989 firms). In 2016, sales receipts from non-employer firms made a significant contribution to the Michigan economy, totaling more than \$30 billion. Yet the median income for self-employed individuals with an incorporated business was \$45,005; for those self-employed with an unincorporated firm, the median income was only \$20,580 (U.S. Census Bureau, 2016 — Geographic Area Series; U.S. Small Business Administration, 2018).

Although non-employer firms and contingent jobs contribute to job growth, many gig-economy workers are experiencing gaps in employment and less regular schedules, and they do not have retirement plans, employer-sponsored health insurance, and worker safety protections. In addition, these workers often have difficulty qualifying for loans or other financial products that require regular income, making it challenging to pay for monthly expenses during gaps in employment or during times of crisis (Economic Policy Institute, 2018; Federal Reserve Banks, 2015; Freelancers Union & Elance-oDesk, 2016; U.S. Government Accountability Office, 2015; Wald, 2014).

EMERGING TRENDS

While ALICE households differ in their composition, challenges, and level of need, three broad trends will impact the conditions they face and their opportunities to change their financial status in the next decade: the changing American household, increasing market instability, and growing inequality of health. These trends will also have significant implications for local communities and Michigan as a whole.

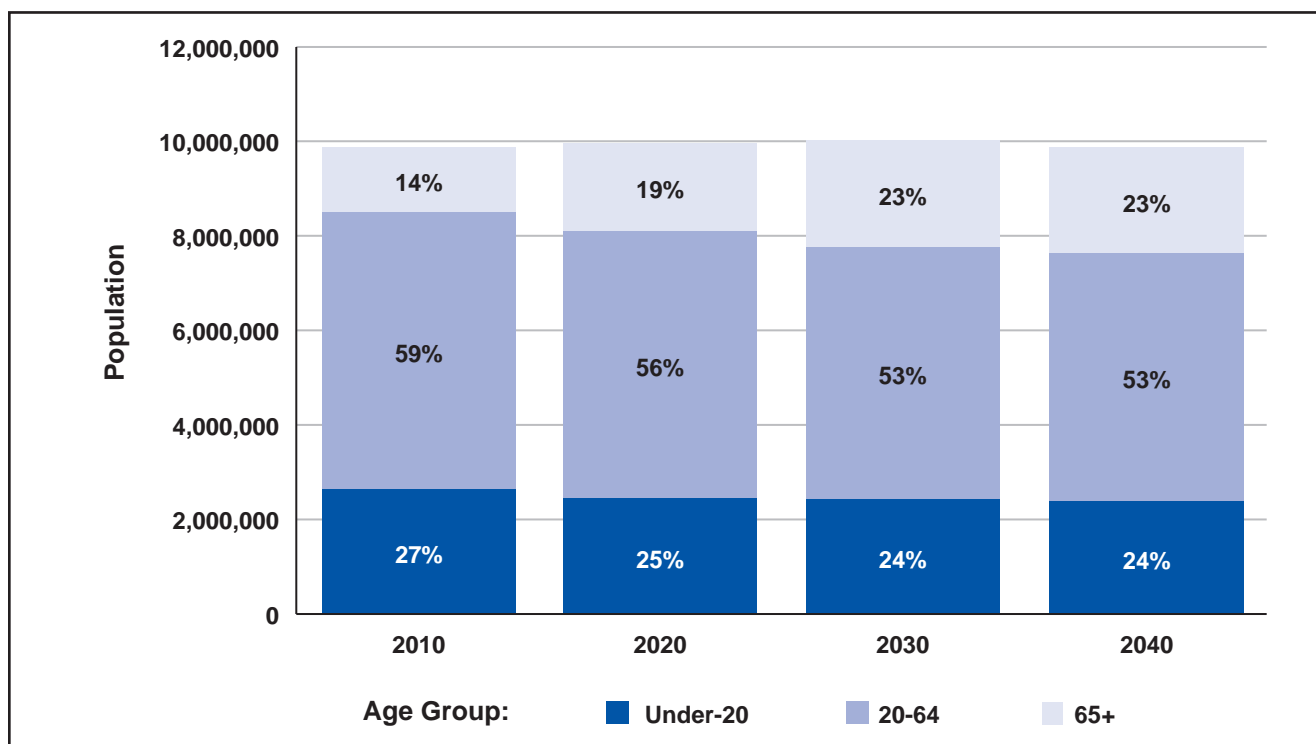
THE CHANGING AMERICAN HOUSEHOLD

Decades of shifting demographic trends have created changes in demand for housing, health care, transportation, and community services. These changes have implications for which households become ALICE households and where they live and work.

Growing Populations: Millennials, Baby Boomers, and Immigrants

Generational shifts: Both millennials and baby boomers are powerful demographic forces. Millennials tend to have different lifestyle preferences than past generations, including choosing to live in urban areas, and getting married and having children later in life. The large boomer cohort encompasses a group that is working longer, is involved in a wide array of activities, and is generally healthier than previous generations. Michigan's elderly population is projected to grow from 1,361,530 (14 percent) in 2010 to 2,233,648 (23 percent) by 2040, a 64 percent increase (Figure 13). In contrast, demographers predict that the rest of the population will decline in numbers, and their percentage of the overall population will decline as well. For example, the number of under-20-year-olds will decrease from 2,648,885 (27 percent) in 2010 to 2,405,090 (24 percent) by 2040, and the number of 20- to 64-year-olds will decline from 5,873,225 (59 percent) in 2010 to 5,234,496 (53 percent) by 2040 (Weldon Cooper Center for Public Service, 2016).

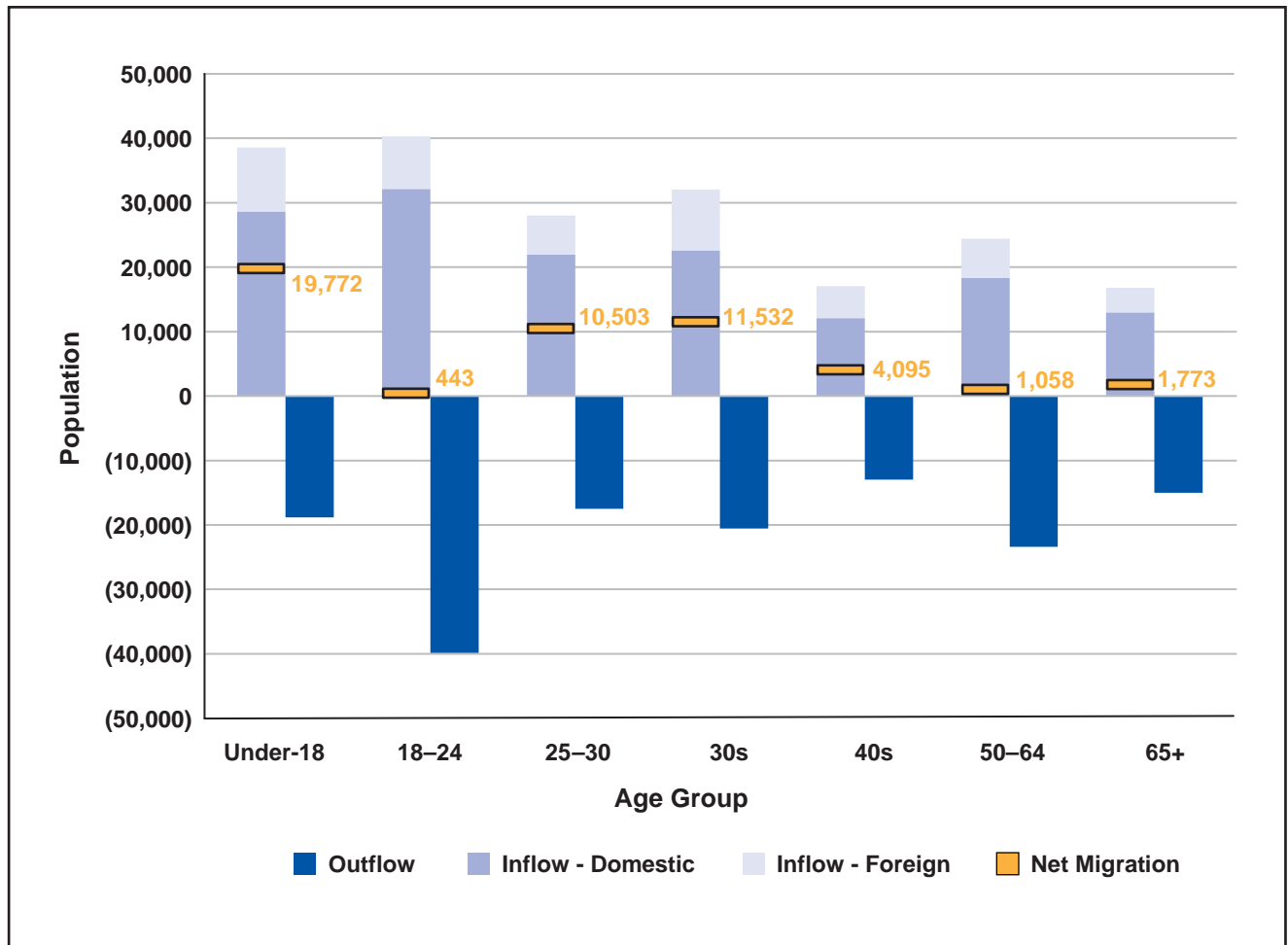
Figure 13.
Population Projection, Michigan, 2010 to 2040



Source: Weldon Cooper Center for Public Service, 2016

Migration and immigration: Michigan has seen an influx of people migrating from other states — particularly from southern and midwestern states — and immigrating from abroad. More people moved into Michigan than left in 2017. Although people moved in and out of the state across all age groups, the largest inflows and outflows were among under-18-year-olds and people in their mid-20s and 30s (Figure 14). For all age groups, there was a significant number of foreign-born immigrants moving into Michigan, and the inflows of foreign-born immigrants have increasingly outpaced the outflows of this group over the last decade. The number of foreign-born migrants was almost the same as the state’s net migration; in other words, without immigration, Michigan migration would be almost neutral (Aisch, Gebeloff, & Quealy, 2014; American Community Survey, 2017).

Figure 14.
Population Inflows and Outflows, Michigan, 2017



Source: American Community Survey, 2017

An ethnically diverse workforce: International migration (foreign inflow in Figure 14) plays an increasing role in Michigan’s racial and ethnic composition as well as its changing workforce. The total number of immigrants entering the state increased from 43,979 in 2010 to 48,421 in 2017, a 10 percent increase. The largest number of immigrants in 2017 were youth under 18, followed by people in their 30s. The smallest group of immigrants were seniors (American Community Survey, 2010, 2017).

Because of this steady flow of immigrants, the foreign-born population made up 7 percent of Michigan's total population in 2017, up slightly from 6 percent in 2010. In 2017, slightly more than half of the foreign-born people living in Michigan were naturalized citizens. The most recent data (from 2016) estimates that approximately 19 percent of the foreign-born population, or 1 percent of the total population in Michigan, is undocumented. Immigrants in Michigan come primarily from Asia (51 percent), Europe (20 percent), and Latin America (19 percent), but they also hail from Africa, Canada, and the Middle East (American Community Survey, 2016; Migration Policy Institute, 2014, 2016).

- **Immigrants impact the labor force:** In Michigan, a little over half (55 percent) of foreign-born residents participated in the labor force in 2017. The unemployment rate for this population was slightly lower than the Michigan average during this period (by less than 1 percentage point). However, this rate varied by length of residency, with long-time, foreign-born Michiganders having a lower unemployment rate than more recent immigrants. Nationally, the portion of the labor force that is foreign-born has risen over the last 20 years, from about 11 percent to just over 16 percent. Because the number of immigrants and their children are increasing faster than the domestic population, they will become an even bigger portion of the future workforce (American Community Survey, 2017; National Academies of Sciences, Engineering, and Medicine, 2017; State of Michigan, Department of Technology, Management and Budget, 2017).
- **Immigrants work in all sectors:** The foreign-born population in Michigan has an occupational and industrial distribution that is very similar to the native-born and overall state distributions. The largest differences in terms of industry of employment are in manufacturing (25 percent foreign-born vs. 18 percent native-born) and professional, scientific, and management industries (11 percent foreign-born vs. 9 percent native-born). For all other industry categories, there is less than 1 percent difference between foreign-born and native-born workers (American Community Survey, 2017).
- **Immigrants vary widely in education:** Among adults age 25 and older, 21 percent of Michigan's foreign-born population has not completed a high school education, compared with 8 percent of the native population. However, a much higher percentage of the foreign-born population has a graduate or professional degree (21 percent) compared to the rate of graduate or professional degrees in the native-born population (11 percent) (American Community Survey, 2017).

Implications of Demographic Trends

Changing infrastructure needs: There will be greater pressure on the state's infrastructure, especially the housing market, with demand for smaller, affordable rental units. Different groups prioritize different amenities for these units: Many young millennials prefer housing near compact, mixed-use, walkable centers with shopping, restaurants, and public transportation; seniors generally want housing that is accessible to family, health care, and other services; and many immigrants want locations close to schools, jobs, and public transportation. In addition, millennials are burdened by more student debt than previous generations, which has led to reduced rates of homeownership in this population. These trends are increasing the demand for smaller, low-cost housing units in Michigan. The demand has pushed down the vacancy rate of all rental units to 8 percent in 2017 (from 13 percent in 2010), while increasing their prices, making it harder for ALICE households of all ages to find and afford basic housing (Bleemer, Brown, Lee, Strair, & van der Klaauw, 2017; U.S. Census, 2017 — Housing Vacancies and Homeownership).

Increased need for caregiving: The aging population will increase demand for geriatric health services, including caregiving, assisted living facilities, nursing homes, and home health care. The challenges of ensuring seniors get the care they need include a shortage of paid and unpaid caregivers, lack of training among caregivers, and the financial and emotional burden of caregiving on family members.

- **The caregiver-support ratio is falling:** With the number of seniors increasing and the number of potential caregivers (aged 45 to 64) decreasing, there will be fewer people available to care for each senior. The ratio of working-age people to older seniors (80+) was 7 to 1 in 2010 nationally, and is projected to fall to 4 to 1 by 2030, and then to 3 to 1 in 2050. This will be a growing issue across Michigan in the coming years, but it is already a problem in some rural counties. In 2015 (the latest data year available), two Michigan counties — Huron and Delta — were among the top 100 counties in the U.S. with care ratios of less than 5.4 to 1 and a population of residents 80 and older that is greater than 2,200. Huron County had 2,227 residents over 80 years old and a care ratio of 4.6 to 1. Delta County had 2,218 residents over 80 years old and a care ratio of 5.3 to 1 (AARP Public Policy Institute, 2015; Orlov, 2015; Redfoot, Feinberg, & Houser, 2013).
- **Health aides are ALICE:** With the increased demand for caregivers, there is a growing need for more paid direct-care workers (home health aides, personal care aides, and nursing assistants), who are themselves likely to be ALICE. These jobs do not require extensive training and are not well-regulated, yet they involve substantial responsibility for the health of vulnerable clients. Together, these factors may lead to poor-quality caregiving and the risk of physical, mental, and financial abuse and neglect — an issue that is on the rise in Michigan and across the country (Espinoza, 2017; MetLife Mature Market Institute, 2011; U.S. Bureau of Justice Statistics, 2015).
- **Caregiving takes a toll:** In Michigan, there are currently more than 990,000 family caregivers (approximately 10 percent of the state population), whose unpaid care totals are estimated at more than 1 billion hours of caregiving valued at more than \$10 billion annually. While families of all income levels may choose to care for family members themselves, many ALICE caregivers are forced into the role because they cannot afford to hire outside care. Nationwide, half of caregivers reported household income of less than \$50,000 per year and said they had no choice in whether they took on caregiving responsibilities.

Caregiving also adds direct costs to a household budget and can reduce income due to hours away from work or the loss of a job. And the responsibility of making medical decisions as well as the amount of care required can mean further mental and physical strain for caregivers. Caregivers rely on community resources, and unfortunately, in Michigan, many caregivers aren't getting the support they need. The Long-Term Services and Supports scorecard ranked Michigan 36th worst among the 50 states when it comes to serving family caregivers, older adults, and people with disabilities (AARP Foundation, 2017; AARP Public Policy Institute, 2015; Dixon, 2017; Family Caregiving Alliance, 2014; MetLife Mature Market Institute, 2011; Rainville, Skufca, & Mehegan, 2016; Ramchand, et al., 2014).

MARKET INSTABILITY

In a complex, integrated global economy, ALICE workers will experience even greater fluctuations in employment and changes in job requirements. Economic disruptions and natural disasters in one part of the world will increasingly have an impact on ALICE workers in the U.S., contributing to employment instability, shifting supply and demand, and disruption in traditional modes of operation. ALICE households, with few resources to weather these fluctuations, will suffer the most.

Shifting Risk to Workers

As businesses seek new ways to improve productivity and reduce costs, they have increasingly shifted to a contingent workforce and developed more flexible, short-term staffing models that enable them to scale up or down as needed. Yet workers bear the brunt of this strategy in the form of unexpected gains or losses in work hours, which makes it difficult for ALICE households to pay bills regularly, make short-term family plans (e.g., child care), or make long-term financial plans such as qualifying for a mortgage. In many cases, shorter working

hours make working uneconomical for those who have to travel long distances to jobs. Irregular work schedules for families with children have also been shown to increase parenting stress (Browne, 2014; Watson, Frohlich, & Johnston, 2014).

Shifting to contractors or part-time workers also reduces the responsibility of employers to provide benefits, such as health insurance and retirement plans. This increases costs to ALICE households and makes them more vulnerable if they have a health crisis or have to retire early. In some cases, employer or government benefits (including paid and unpaid time off, health insurance, unemployment insurance, public assistance, and work supports) are tied to the number of hours worked, and unpredictable scheduling means workers could at times fall short of eligibility. For example, low-wage workers are two and a half times more likely to be out of work than other workers, but they are only half as likely to receive unemployment insurance (Garfield, Damico, Stephens, & Rouhani, 2018; U.S. Government Accountability Office, 2017).

The Changing Job Market

Michigan's job market is changing. Despite national media attention on innovation, the economic landscape in Michigan is projected to be largely comprised of low-paying jobs requiring few educational credentials. Of the total jobs in industries that are projected to be the fastest-growing in the next decade, 65 percent currently pay less than \$15 per hour, and 80 percent do not require more than a high school diploma, a trend that is also seen nationwide. While education and training has been shown to improve job prospects and wages for individuals, for the economy to accommodate a more educated population, job opportunities and wages would also need to shift (Figure 15) (Bureau of Labor Statistics, 2016 — Employed Involuntary Part-Time; Projections Management Partnership, 2016; Sola, 2016; Torpey, 2018).

Many of these jobs are also at the greatest risk of being replaced by technology. In Michigan, 80 percent of jobs in the top 20 fastest-growing occupations could be replaced by technology in the next two decades. In addition to automating existing jobs, technology is creating new on-demand jobs and services, with the most attention going to gig economy jobs, such as Airbnb rentals and Uber and Lyft driving (Frey & Osborne, 2013).

Michigan has long been at the center of economic transformation, especially in the manufacturing sector, as a creator of assembly line manufacturing, and home to industry-leading firms producing cars, chemicals, cereals, machinery, furniture, and appliances. However, with increased reliance on automation in many industries, related jobs have disappeared or changed (Austin, 2018). And while it is easy to identify jobs that are likely to disappear due to automation, it is more difficult to predict the many new jobs that will be created to build and repair the newly mechanized parts of this infrastructure. Workers filling maintainer roles in the past had to develop new sets of skills on the assembly line and in manufacturing industries, while workers today, in the face of rapidly increasing computing power, will need to learn to work with data and alongside new machines. The pace of change may be faster than anticipated. By one estimate, 50 percent of subject knowledge acquired during the first year of a four-year technical degree in the U.S. will be outdated by the time students graduate. Types of jobs that are predicted to emerge in the next 20 to 30 years are, in many cases, unrecognizable to today's workforce. These jobs include augmented reality architects, alternative currency bankers, waste data managers, 3-D printing engineers, privacy managers, wind turbine repair techs, nano-medics, drone dispatchers, body part and limb makers, memory augmentation therapists, mass energy storage developers, and self-driving car mechanics (Austin, Good, & Kolluri, 2017; T. Frey, 2011; Mejia, 2017; OECD, 2016; World Economic Forum, 2016).

Figure 15.
Job Projections, Michigan, 2016 to 2026

Occupation	2016 Employment	Annual Openings	Hourly Wage	Education or Training	Likelihood of Being Replaced by Technology
Retail Salespersons	146,620	21,200	\$10.23	None	92%
Food Prep, Including Fast Food	112,610	23,820	\$9.20	None	92%
Office Clerks, General	106,840	12,110	\$15.17	High school diploma or equivalent	96%
Team Assemblers	103,190	10,380	\$14.38	High school diploma or equivalent	97%
Registered Nurses	98,810	6,650	\$32.43	Bachelor's degree	1%
Cashiers	95,390	17,260	\$9.47	None	97%
Customer Service Representatives	89,830	11,980	\$15.32	High school diploma or equivalent	55%
Waiters and Waitresses	78,830	15,760	\$9.22	None	94%
Laborers and Movers, Hand	72,760	10,690	\$12.76	None	85%
Secretaries and Administrative Assistants	65,890	6,280	\$16.11	High school diploma or equivalent	96%
Janitors and Cleaners	65,120	9,400	\$11.25	None	66%
General and Operations Managers	62,070	5,760	\$47.40	Bachelor's degree	16%
Stock Clerks and Order Fillers	58,850	7,830	\$10.95	High school diploma or equivalent	64%
Heavy and Tractor-Trailer Truck Drivers	57,170	6,870	\$19.07	Postsecondary non-degree award	79%
Sales Representatives	54,370	5,680	\$28.21	High school diploma or equivalent	85%
Nursing Assistants	50,450	6,480	\$13.71	Postsecondary non-degree award	6%
Personal Care Aides	42,580	8,600	\$10.78	High school diploma or equivalent	74%
Landscaping and Groundskeeping Workers	38,240	5,170	\$12.61	None	95%
Cooks, Restaurant	35,940	5,670	\$11.29	None	96%
Home Health Aides	29,540	5,310	\$11.95	High school diploma or equivalent	39%

Sources: Bureau of Labor Statistics, 2016 — Employed Involuntary Part-Time; Projections Management Partnership, 2016

Increasing Exposure to Environmental Hazards

The impact of natural and man-made disasters is often felt more by ALICE workers and low-income communities. More affordable homes are often located in vulnerable areas. In Michigan, floods, violent weather, and human-made hazards — for example, water contamination due to lead pipes and chemicals used in manufacturing, such as PFAS (perfluoroalkyl and polyfluoroalkyl substances) — directly threaten the homes and health of ALICE families. For example, ALICE families who live in flood-prone areas may suffer the financial cost of flooding damage, and older homes — more often rented or owned by lower-income families — are more likely to have lead pipes and to be located in communities with contaminated water, like Flint (Malewitz, 2018; NASA, 2018; State of Michigan, 2016; Van Paasschen, 2017).

Households that have their own resources (like flood insurance) to put toward disaster recovery can often bounce back more quickly than households that rely on government assistance following a natural disaster. There is evidence that people with lower incomes face substantial barriers in obtaining aid following disasters, including difficulty getting to disaster assistance centers (due to transportation and child care issues) and a lack of knowledge of and comfort with governmental procedures. Even with assistance, many families are still not able to recover fully, especially in terms of lost and lower wages (Fothergill & Peek, 2004).

Maintainer jobs commonly held by ALICE workers — those that build and repair infrastructure and support the workforce — are also key to recovery following natural and man-made disasters. As a result, communities rely on ALICE to rebuild and recover. However, when ALICE can't work during these periods of recovery because of relocation, injury, or caregiving responsibilities (e.g., due to closed schools or senior centers), ALICE households suffer lost wages and community resilience is negatively impacted overall.

Natural disasters impact low-income families' work and living situations. As a result, these families are more likely to suffer from mental and physical health issues, including depression, stress, and post-traumatic stress disorder. Children and those with pre-existing mental and physical health conditions are at increased risk (SAMHSA, 2017).

Lack of Assets

Market instability is especially difficult for ALICE households, who lack financial resilience — the ability to bounce back after financial crisis or hardship. Without adequate assets, families have little to no savings to withstand an unexpected expense or loss of employment, and few opportunities to improve their situation. When, on the other hand, families have assets to invest in education, new technology, a small business, or their own home, they can improve their socioeconomic circumstances. They can also finance a secure retirement. These are opportunities for creating financial security that are often unavailable to ALICE, increasing the vulnerability of hard-working people.

More than three-quarters of U.S. workers live paycheck to paycheck at least some of the time, and nearly as many are in debt. They do not have savings or access to credit that might sustain them through a period of low income or an unexpected disaster. In 2015, 49 percent of Michigan residents did not have money set aside to cover expenses for three months to protect them against an emergency such as illness or the loss of a job. The wealth divide disproportionately affects households of color, which have fewer assets than White households. Nationally (state data is not available), the median wealth of White households was eight times the median wealth of Black households in 2010 and grew to 13 times in 2013 (the most recent data available) (CareerBuilder, 2017; FINRA Investor Education Foundation, 2016; Kochhar & Cilluffo, 2017; McKernan, Ratcliffe, & Shanks, 2011; Prosperity Now, 2018).

While data on wealth is minimal, there is data on three of the most common assets in Michigan — vehicles, homes, and investments — which can provide insight into resources families have for emergencies and to accumulate wealth. Most Michigan households (92 percent) have at least one vehicle. Although cars are a necessity for work in Michigan and offer other benefits beyond their cash value, they are not an effective means of accumulating wealth. The second most common asset is a home, which has traditionally provided financial stability and the primary means for low-income families to accumulate wealth. In 2017, 71 percent of Michigan households owned a home and slightly under half of those (43 percent) had a mortgage. Renting a home has become less affordable in Michigan as the cost of rentals has continued to rise, while demand for low-cost and multi-family housing has outpaced the supply. Michigan renters devote a high percentage of their household income to rent; the state ranks 28th in the nation for housing affordability, with an average wage of \$16.81 an hour needed to afford a two-bedroom rental unit (American Community Survey, 2017; National Low Income Housing Coalition, 2018).

The most effective resource to make it through an emergency is an income-producing investment, which can range from a savings account to a 401(k) retirement plan to a rental property. In 2017, 20 percent of households in Michigan had interest and dividends or rental income, similar to the national average of 21 percent, but down from 31 percent in 2010. Only 17 percent of Michigan households had retirement income (American Community Survey, 2014, 2017; CareerBuilder, 2017; McKernan, et al., 2011).

When families do not have savings or access to traditional financial services, they are often forced to go without critical necessities (such as heat or medical care) or to borrow money through alternative lending products, which have high interest rates and greater risks of predatory lending practices and default. In some cases, the consequence of not taking out these loans are worse than the financial risk of taking them. However, when caught in a cycle of high-rate lending and borrowing, households can spiral into a debt trap with long-term financial consequences (Consumer Financial Protection Bureau, 2017; Mayer & Jencks, 1989; McKernan, et al., 2011; McKernan, Ratcliffe, & Vinopal, 2009; Mills & Amick, 2011).

THE WEALTH–HEALTH GAP

There has long been a real and significant divide in health outcomes by socioeconomic status, largely because of differences in living conditions, but also because of disparities in levels of quality health care access. With advances in technology and medical care, such as personalized medicine, biotechnology, and genetic engineering, that gap is projected to grow. It is well-documented that people in lower-income groups do not live as long as those in higher-income groups. The National Academies of Sciences, Engineering, and Medicine projects that, of people born in 1960, those in the lowest-income quintile have a shorter life expectancy than those in the highest-income quintile: 13 years shorter for men (76 years compared to 89 years) and 14 years shorter for women (78 years compared to 92 years) (Chetty, Stepner, Abraham, et al., 2016; Harari, 2015; Komlos & Kelly, 2016; National Academies of Sciences, Engineering, and Medicine, 2015; Regalado, 2015).

The wealth–health divide is also exacerbated by the differences in the environments where families live. Those with the fewest resources live in areas with unhealthy living conditions, such as contaminated water and polluted air, because these homes are less expensive (as is the case with contaminated water in Flint and other relatively low-income communities in Michigan and nationwide). The impact of pollution, toxic exposure, and disease compounds over time.

Institutionalized racism and ongoing discrimination also factor into disproportionate exposure to adverse health conditions, as people of color have typically had less mobility and choice in where they live and in job opportunities. A 30-year analysis of 319 commercial hazardous-waste treatment and storage sites in the U.S. found a consistent pattern of placing hazardous-waste facilities in low-income neighborhoods, which are often disproportionately populated by Black and Hispanic families. A variety of large studies have also revealed an association between low socioeconomic status and greater harm from air pollution. A comprehensive review from Harvard University researchers revealed that Black, Asian, Hispanic, and Medicaid-eligible individuals of any race/ethnicity had a higher likelihood of death from any pollution-related cause compared to the rest of the population, with Black people almost three times as likely to die from exposure to air pollutants as other groups (Di, et al., 2017; Mohai & Saha, 2015).

THE DENTAL HEALTH DIVIDE

Nowhere is the wealth–health divide starker than in the disparity in dental care. Higher-income Americans have dental health insurance (most often separate from health insurance) and access to care that helps prevent tooth decay and breakage, and promotes jaw comfort, clear speech, and easier maintenance — all of which lead to better overall health. They often spend thousands of dollars on supplemental dental care to achieve whiter, straighter, stronger smiles, which leads to more social and job opportunities.

Those with the lowest incomes rarely have dental insurance and Medicaid’s dental coverage varies from state to state, so these families often forgo preventative care. They are far more likely to suffer from tooth decay and gum infection, which can increase the risk of cancer and cardiovascular diseases, and can affect speech and communication, eating and nutrition, sleeping, learning, playing, and quality of life. In addition, crooked or yellow teeth can stigmatize people in social settings and reduce job prospects, and they are associated with low educational achievement and social mobility. According to a 2015 American Dental Association survey, 29 percent of low-income respondents reported that the appearance of their mouth and teeth affected their ability to interview for a job.

Dental services for low-income Michiganders have improved significantly over the last decade. The Healthy Michigan Dental Plan provides coverage for residents who are between 19 and 64 years old, have income at or below 133 percent of the Federal Poverty Level, and do not qualify for or are not enrolled in Medicaid. Although the plan covers a variety of dental services — including two yearly oral exams, x-rays, cavity filling, and limited oral surgery — it does not cover wisdom tooth removal, crown procedures, braces, or implants. Those under the age of 21 with Medicaid or CHIP are covered by the Healthy Kids Dental Plan, which covers teeth cleanings, root canals, x-rays, emergency treatment, and other services. Most recently, in 2018, the Michigan Legislature passed a bill authorizing the creation of dental therapists. These trained clinicians provide preventative and restorative dental procedures under the supervision of a dentist and are expected to improve access to care for Michigan residents.

Even with these improvements, there are still gaps in dental health in Michigan by income and insurance type. A 2015 report by the American Dental Association’s Health Policy Institute found that Michigan has a gap of almost 30 percent in dental utilization between privately insured children and those enrolled in Medicaid. This gap is larger than the 16 percent average gap nationally and is the fourth largest gap in coverage among all states. Though the gap has diminished over time (narrowing by nearly 50 percent between 2005 and 2013), the rate of improvement is still less than the national average decrease of 53 percent.

Many dental services for adults require co-pays that ALICE families cannot afford. Even if the covered services are provided through the Healthy Michigan Dental Plan, there are associated costs. For seniors, Medicare does not cover routine oral health and dental care, but the State of Michigan provides limited supplemental services for low-income seniors. Unable to afford expensive services, many adults have their teeth pulled; nearly 1 in 5 Americans older than 65 do not have a single real tooth.

In addition, dental coverage does not guarantee access to treatment. Michigan has 61.5 practicing dentists per 100,000 people, ranking 17th nationally. However, even with a relatively high number of practicing dentists, there are 283 Dental Care Health Professional Shortage Areas (HPSAs) across the state, with an estimated 321 additional practitioners needed, in both rural and more populated areas. The impact of resource inequities must be addressed throughout the state to improve dental outcomes in Michigan.

Sources: Center for Health Care Strategies, 2018; Center for Health Workforce Studies, 2015; Dimensions of Dental Hygiene, 2018; Frakt, 2018; Health Policy Institute, 2015; Healthy Michigan Plan, n.d.; Jordan & Sullivan, 2017; Kaiser Family Foundation, 2017; Michigan Department of Health & Human Services, 2018 — Healthy Kids Dental; Michigan Department of Health & Human Services, 2018 — Michigan State Oral Health Plan; Michigan Department of Health & Human Services, 2018 — Services for Seniors; Otto, 2017; Robert Wood Johnson Foundation and University of Wisconsin Population Institute, 2018; United Health Foundation, 2017; Vujicic & Nasseh, 2015

NEXT STEPS

There is a basic belief in America that if you work hard, you can support yourself and your family. Yet the data presented in this Report shows that for more than 1,600,000 households in Michigan — representing 43 percent of the state’s population — this is not the case. Working households are still struggling due to the mismatch between the basic cost of living and the wages of many jobs across the state, exacerbated by systemic inequalities in opportunity and wealth. The ALICE data challenges persistent stereotypes about people who can’t afford to pay their bills or are forced to visit a food bank — assumptions that they are primarily people of color, live only in cities, are unemployed, or are struggling as the result of some moral failing. The data on ALICE households shows that hardship in Michigan exists across boundaries of race/ethnicity, age, geography, and employment status.

With projected demographic changes and persistent barriers to stability, many ALICE and poverty-level families will continue to face hardship. In particular:

- At least 49 percent of Michigan residents do not have money set aside to cover expenses for three months in case of an emergency such as illness or the loss of a job (FINRA Investor Education Foundation, 2016).
- The majority of residents under age 25 are unable to afford to live on their own, and for both economic and cultural reasons, they are delaying getting married, having children, or moving for new job opportunities.
- More seniors are aging without saving for retirement.
- There are fewer workers to meet the growing demand for senior caregiving.
- Income and wealth disparities persist by race/ethnicity, sex, gender identity, and sexual orientation.

OVERCOMING THE OBSTACLES: IDEAS BEING DEBATED, CONSIDERED, AND PILOTED

Economic change will continue, and these changes will both provide opportunity and inflict costs. Yet the distribution of opportunity and cost is not usually even or equitable. To have a positive impact on ALICE families, communities need to consider a range of system changes that would help ALICE weather downturns in the short term and become more financially secure in the long term. Policymakers, academics, and advocates have proposed a range of broad ideas that could be adapted on a local, statewide, or national front. The following are four of the biggest obstacles to financial stability for ALICE families, and a sample of ideas and pilot programs being debated and considered across the country.

Widening Skills Gap

1

Accessible, high-quality early childhood and K–12 education is key to both individual prosperity and economic growth, especially for disadvantaged families and communities. In Michigan, K–12 test scores are in the bottom third of all states and gaps in test scores by socioeconomic status persist across grade levels. Proposed strategies for improving education in the state include increased investment in teacher training, intentional focus on the needs of low-income students and English language learners, additional opportunities for college and career prep, and greater emphasis on early childhood education (French, 2018; French & Wilkinson, 2018; Heckman, 2011).

In addition, most future jobs (especially higher-paying jobs) will require digital skills. Since 2004, the share of occupations that require high levels of digital skills has more than doubled, from 10 to 22 percent (Liu, 2017). For ALICE to maintain employment over time, workers will need accessible, high-quality technology training throughout their lifetime. Public K–12 schools can incorporate digital skills into all aspects of the curriculum for students, higher education can offer more focused programs, and companies can invest in training for their employees.

Lack of Stable and Viable Employment

2

For ALICE, finding well-paying jobs with security and financial stability is becoming harder as low-wage and gig-economy jobs continue to dominate the landscape. Fluctuating income — through unpredictable schedules and on-demand work — is one of the biggest problems ALICE workers face. At the same time, employers are also trying to navigate a changing business environment, remain competitive, and offer comprehensive benefit packages. The following are several possible solutions that address these challenges:

- **Fewer barriers to employment:** Barriers for ALICE can include lack of job skills, family care responsibilities, physical and mental health problems (including substance abuse), limited English proficiency, and lack of reliable transportation. In Michigan, child care costs are of particular concern as the state has the second-lowest income limit for child care subsidy eligibility in the nation. There are several evidence-based solutions, such as work programs that provide direct connections to employment (including apprenticeships); an individualized approach (to address a wide range of challenges, from soft skills to housing); financial support and flexible schedules to accommodate child care needs; and the development of career pathways over time through work and education. Successful outcomes require employers, government agencies, and nonprofits to weave together larger webs of connected programs and resources (Schulman & Blank, 2016; Tessler, 2013; U.S. Department of Health & Human Services, 2012; Van Horn, Edwards, & Greene, 2015; Yellen, 2017).
- **Portable benefits:** Benefits such as health insurance, retirement plans like a 401(k), or paid leave could move with the worker from job to job, and across multiple jobs at once. These can be delivered in many forms — through programs that are not connected to work or the employer at all, or through programs that involve employers but establish benefits that can be provided across employers. Some examples of this approach already exist in the construction industry and business associations, and legislators in New York and Washington are considering benefit management systems that would allow employers to pay into workers' benefit funds (Foster, Nelson, & Reder, 2016; Guillot, 2017; Maxim & Muro, 2018; Quinton, 2017; Small Business Majority, 2017a; Strom & Schmitt, 2016).
- **Small business support:** Because of the less stable nature of many small businesses, their employees would benefit from measures that helped them weather fluctuations in their schedule and long-term employment, such as establishing portable benefits. In addition, small business entrepreneurs and their employees need more support to help them overcome common barriers, including limited resources to invest in skill development; student debt, which limits an owner's ability to invest in their business; and lack of access to affordable child care, which increases absenteeism and decreases productivity (Beesley, 2016; Small Business Majority, 2016, 2017b).
- **Lifetime employment:** Considering lifetime employment models from other countries can expand thinking on this topic. For example, guaranteed employment is an innovative policy that has been utilized in Germany and Japan, in which companies guarantee employment for large numbers of workers. To avoid layoffs, the practice allows for transfers and defined reductions in hours and wages in lean times (Noorderhaven, Koen, & Sorge, 2015).

Lack of Savings and Assets

3

Without enough money for even current expenses, ALICE families find it nearly impossible to save for emergencies or invest in future goals like education or retirement. A lack of savings is one of the biggest problems facing low-income families. Programs and infrastructure are needed to help them weather emergencies and periods of low income. Here are two approaches for policymakers to consider:

- **Access to credit:** For those with low incomes, saving for emergencies is nearly impossible. Access to credit at low rates has proven to be effective to help ALICE workers and employers — especially small businesses — weather an emergency. However, ALICE families still need to have enough income to repay the loan or they risk greater long-term financial crises (Collins & Gjertson, 2013; Mayer & Jencks, 1989).
- **Private and public financial instruments:** These range from new types of financial products to a guaranteed income or allowance. Employers could make wages more immediately available (rather than wait two weeks until payday), and banks could do the same for deposited funds. Financial institutions and the government could offer insurance or credit, as well as tax credits and savings incentives, to protect workers against dips in income. Going even further, for centuries economists, theologians, and policymakers have proposed a minimum guaranteed income for all families, although proposals run the gamut of approaches. The idea has received more bipartisan attention recently as more workers face periods of low-wages or unemployment (Murray, 2016; Schiller, 2017; Shaefer & Edin, 2013; Van Parijs & Vanderborght, 2017).

Systemic Bias

4

Bias against marginalized groups persists in the workplace, the housing market, education, health care, and the law, despite positive shifts in public opinion and attitudes regarding differences in race and ethnicity, age, sex, gender identity, sexual orientation, and disability.

Racial bias is among the most persistent, despite research confirming that the gaps in education, income, and wealth that now exist along racial lines in the U.S. have little to do with individual behaviors. Instead, these gaps reflect systemic policies and institutional practices that create different opportunities for people of different races and ethnicities. Discriminatory practices have been embedded in our social structures and legal system, especially in terms of housing policies, immigration practices, voting rights, school funding, and health care programs. To make a difference for ALICE households, changes need to be made within institutions that impede equity in the legal system, health care, housing, education, and jobs (Agency for Healthcare Research and Quality, 2015; Cramer, 2012; Goldrick-Rab, Kelchen, & Houle, 2014; Shapiro, Meschede, & Osoro, 2013; The Sentencing Project, 2018).

For solutions to be effective, they must be as comprehensive and as interconnected as the problems are.

Siloed solutions do not work. Because conditions vary across counties and states, the solutions to the challenges that ALICE and poverty-level households face will vary as well. Stakeholders — family, friends, nonprofits, businesses, policymakers, academics, and the government — will need to work together with innovation and vision and be willing to change the structure of the local and national economy — and even the fabric of their communities.

Ultimately, if ALICE households can become financially stable, Michigan's economy will be stronger and its communities more vibrant — improving life not just for ALICE, but for everyone. The data detailed in this Report can be a jumping-off point to create new and better ideas that can help working families move toward this goal. There is no one solution: A range of strategies will be needed to ensure that working people and their families aren't left behind.

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Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Kim Garland, CPA, Reporting & Compliance Manager

Re: Industrial Pretreatment Program Financial Analysis & Charges Update

Background: On October 8, 2019 the Great Lakes Water Authority Board of Directors approved an Industrial Pretreatment Program (IPP) Agreement ('Agreement') between GLWA and the City of Pontiac Wastewater Treatment Facility Drainage District (COPWTFDD) and the Clinton River Water Resource Recovery Facility Drainage District (CRWRRFDD).

Oakland County has a wastewater interceptor system known as the Clinton-Oakland Sewage Disposal System (COSDS). This system collects wastewater from municipalities in the central and eastern portion of Oakland County and delivers it to both above referenced Drainage Districts and the Oakland Macomb Interceptor Drain Drainage District (OMIDDD).

The OMIDDD has an agreement with GLWA for wastewater services. This includes conveyance to, and treatment at, GLWA's Water Resource Recovery Facility (WRRF) which allows for a portion of the wastewater flow in the COSDS interceptor that is diverted, such that it is delivered to the WRRF in Pontiac and the remaining flow travels downstream to the Oakland Macomb Interceptor Drain Drainage District (OMIDDD) into the GLWA collection system and is delivered to GLWA's WRRF. It should be noted that at the diversion point, most of the flow is diverted to the WRRF in Pontiac.

This flow diversion results in overlapping service areas and creates a geographic area that is governed by two IPPs with differing requirements and IPP rules. This Agreement addresses that overlap by dividing the IPP program into an administrative component (for reporting and oversight functions) and field work-only component (mainly sampling and testing).

Charges Impact: The GLWA Financial Services Area (FSA) in coordination with the Industrial Waste Control (IWC) team and The Foster Group (TFG) reviewed the costs associated with the each of the two components of the IPP. A detailed analysis of historical costs and budgeted expenses led to the conclusion that 25% of current IWC charges related to administrative cost components and 75% relate to field work components.

The intent of the Agreement is that Industrial Waste Control customers that fall within the geographical area defined in the Agreement will be invoiced for 25% for of the current GLWA IWC charges monthly for Administrative related costs. The services and costs related to

those service relating to the remaining 75% will be billed by the relevant Drainage District monthly.

Implementation Update: The GLWA team worked with the six member partner communities as planned and implemented the new process and charge structure. The process was fully effective in January 2020 with the start of the annual IWC reporting cycle.

Based on meter counts reported for December 2019 and billed in January 2020 the reduction in GLWA IWC revenues for one billing period (one month) was \$20,211. This calculation is shown in **Table 1 - Scope of Impact**.

The analysis compares November IWC invoices to January IWC invoices. The new Admin-Only process was phased in between December and January, so January was the first month in which the impact of all six-member partner communities could be measured. November was the last month in which all six communities were invoiced at the full IWC rate.

The IWC meter counts reported by member communities varies little month to month. As shown in Table 1, across the six-member partner communities there was a total reduction of \$542 due to changes in meter counts. This difference was factored out of the impact analysis to arrive at the true IWC Admin-Only charge impact.

Table 1 - Scope of Impact

Member Partner	November Invoice	January Invoice		Difference due to Monthly Count	IWC Admin-Only Charge Impact
	Full IWC Charges	Full IWC Charges	Admin Only Charges		
Auburn Hills	\$ 18,580	\$ 10,657	\$ 1,883	\$ (390)	\$ 5,649
Clarkson	264	-	66	-	198
Independence	4,718	-	1,163	(68)	3,488
Orion Township	5,244	3,473	442	(5)	1,324
Waterford Township	11,840	-	2,962	(3)	8,875
West Bloomfield	902	-	226	-	677
	\$ 41,549	\$ 14,130	\$ 6,741	\$ (466)	\$ 20,211

The final step in this process will be to post the revised FY 2020 Schedule of Charges will be to the GLWA website (www.glwater.org) as shown in **Table 2 - FY 2020 IWC Charges with Footnote Revision** reflecting the adjusted rates for the six member partner communities.

Table 2 - FY 2020 IWC Charges with Footnote Revision

Great Lakes Water Authority - FY 2020 Sewage Disposal System
Industrial Specific Retail Sewer Charges
Approved by the GLWA Board on March 13, 2019

Industrial Waste Control Charges		Pollutant Surcharges	
Meter Size - inches	Charge \$/mo	Pollutant	Charge \$/lb
5/8	3.38	BIOCHEMICAL OXYGEN DEMAND (BOD)	
3/4	5.07	for concentrations > 275 mg/l	0.491
1	8.45		
1-1/2	18.59	TOTAL SUSPENDED SOLIDS (TSS)	
2	27.04	for concentrations > 350 mg/l	0.499
3	49.01		
4	67.60	PHOSPHORUS (P)	
6	101.40	for concentrations > 12 mg/l	7.354
8	169.00		
10	236.60	FATS, OIL AND GREASE (FOG)	
12	270.40	for concentrations > 100 mg/l	0.473
14	338.00		
16	405.60	SEPTAGE DISPOSAL FEE	
18	473.20	Per 500 gallons of disposal	48.00
20	540.80		
24	608.40		
30	676.00		
36	743.60		
48	811.20		

Note: On October 8, 2019 the GLWA Board of Directors approved an Agreement between the Great Lakes Water Authority, the City of Pontiac Wastewater Treatment Facility Drainage District, and the Clinton River Water Resource Recovery Facility Drainage District which allowed for the application of an 'administrative-only' IWC charge of 25% to be applied to a specific geographic range of Industrial Waste Control customers. The remainder of the Industrial Pretreatment Program charges for these customers will be applied by the agreed-upon entity performing the associated field services. This allocation will be revisited as part of the annual cost of service study.

Future Years' Charges Impact: Moving forward, IWC Admin-Only Charges have been calculated and listed by meter size on the FY 2021 Proposed Charges Schedule. The administrative allocation of 25% remained the same for FY 2021 as the supporting analysis was recently completed. The administrative only percentage will be reviewed with the FY 2020 cost of service study.

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Lisa L Mancini, Financial Planning & Analysis Manager

Re: Continued Review – Proposed FY 2021 & FY 2022 Biennial Budget
and Five-Year Financial Plan

Background: In accordance with service agreements with Great Lakes Water Authority (GLWA) member partners, charges for the next fiscal year are annually presented at the end of January each year. This year that date is January 23, 2020. Key steps in that process are the development of a proposed biennial budget and five-year plan as well as the capital improvement plan. The first year of the biennial budget is the “revenue requirement” for the purposes of establishing costs for allocation among member partners. The information presented in the “Analysis” section below continues the discussion of the proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan that was begun at the December 19, 2019 Audit Committee meeting.

Analysis: Attached are the following documents related to the additional analysis of the upcoming FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan as well as in preparation for a public hearing related to the upcoming biennial budget and related FY 2021 charges on February 26, 2020.

- FY 2021 & FY 2022 Operational Budget Highlights – Contains updates for the questions asked during the presentation at the January 27, 2020 Audit Committee meeting.
- Draft copy of the Board Letter and Resolution for the adoption of the FY 2021 & FY 2022 Biennial Budget.
- Draft copy of the Board Letter and Resolution for the approval of the FY 2021 Wholesale Water and Wholesale Sewer Schedule of Service Charges.

Proposed Action: Receive and file this report.



FY 2021 & FY 2022 Operational Budget Highlights

*Audit Committee Meeting
February 21, 2020*



Presentation Topics

- Water and Field Services (Water Operating Services & Centralized Services)
- Wastewater System Operating Services
- Planning Services (Centralized Services)
- Information Technology (Centralized Services)
- Security and Integrity (Centralized Services)
- Administrative & Compliance Officer (Administrative Services)
- General Counsel (Administrative Services)
- Organizational Development (Administrative Services)
- Public Affairs (Administrative Services)
- Financial Services (Administrative Services)
- Chief Executive Office (Administrative Services)
- Board of Directors (Administrative Services)
- Grants and Rebates

Water System Budget Proposal as of January 10, 2020

Schedule 1A - Water System Revenue Requirements Budget

Water System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Revenues											
11 Revenues from Charges	\$ 330,580,000	\$ 326,132,700	\$ 338,566,200	\$ 7,986,200	2.4%	\$ 349,884,500	\$ 11,318,300	3.3%	\$ 360,478,000	\$ 371,326,900	\$ 382,539,100
11.1 Revenues from Internal Charges		-	-	-	NA	-	-	NA	-	-	-
10.1 Non-Operating Revenue	9,084,200	5,730,100	4,834,400	(4,249,800)	-46.8%	3,818,200	(1,016,200)	-21.0%	3,835,600	3,916,100	3,961,200
Total Revenues	339,664,200	331,862,800	343,400,600	3,736,400	1.1%	353,702,700	10,302,100	3.0%	364,313,600	375,243,000	386,500,300
Revenue Requirements											
1 Operations & Maintenance (O&M) Expense	\$131,490,500	\$131,490,500	\$137,127,300	\$5,636,800	4.3%	\$139,642,500	\$2,515,200	1.8%	\$140,985,200	\$143,284,900	\$146,442,600
2 O&M Legacy Pension Allocation	6,048,000	6,048,000	6,048,000	-	0.0%	6,048,000	-	0.0%	6,048,000	1,200,000	1,200,000
3 Debt Service Allocation	137,557,600	137,612,100	143,559,700	6,002,100	4.4%	145,292,100	1,732,400	1.2%	153,566,600	161,571,300	167,819,100
4 Accelerated Legacy Pension Allocation	6,268,300	6,268,300	6,268,300	-	0.0%	6,268,300	-	0.0%	6,268,300	1,933,900	1,933,900
5 Water Residential Assistance Program	1,698,300	1,698,300	1,677,600	(20,700)	-1.2%	1,768,500	90,900	5.4%	1,821,600	1,876,200	1,932,500
6 Lease Payment to Local System I&E Account	22,500,000	22,500,000	22,500,000	-	0.0%	22,500,000	-	0.0%	22,500,000	22,500,000	22,500,000
7 Improvement & Extension Fund Allocation	30,125,500	22,269,600	25,343,000	(4,782,500)	-15.9%	31,344,800	6,001,800	23.7%	32,676,300	42,110,100	43,619,600
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	838,400	(38,200)	-4.4%	447,600	766,600	1,052,600
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA	-	-	-
Annual Budgeted Revenue Requirements	\$ 339,664,200	\$ 331,862,800	\$ 343,400,500	\$ 3,736,300	1.1%	\$ 353,702,600	\$ 10,302,100	3.0%	\$ 364,313,600	\$ 375,243,000	\$ 386,500,300

Sewer System Budget Proposal as of January 10, 2020

Schedule 1B - Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Revenues											
11 Revenues from Charges <i>(prior to adjustment)</i>	\$ 471,874,500	\$ 471,874,500	\$ 489,434,200	\$ 17,559,700	3.7%	\$ 504,550,700	\$ 15,116,500	3.1%	\$ 519,834,300	\$ 535,470,500	\$ 551,775,800
10.1 Non-Operating Revenue	8,730,800	5,060,200	5,589,300	(3,141,500)	-36.0%	5,323,400	(265,900)	-4.8%	5,336,100	5,455,000	5,377,400
Total Revenues	480,605,300	476,934,700	495,023,500	14,418,200	3.0%	509,874,100	14,850,600	3.0%	525,170,400	540,925,500	557,153,200
Revenue Requirements											
1 Operations & Maintenance (O&M) Expense	\$187,057,200	\$187,057,200	\$184,946,100	\$ (2,111,100)	-1.1%	\$188,934,600	\$3,988,500	2.2%	\$194,027,300	\$198,497,900	\$202,047,700
2 O&M Legacy Pension Allocation	10,824,000	10,824,000	10,824,000	-	0.0%	10,824,000	-	0.0%	10,824,000	2,100,000	2,100,000
3 Debt Service Allocation	215,738,800	213,802,800	209,740,400	(5,998,400)	-2.8%	217,698,400	7,958,000	3.8%	211,559,100	221,193,600	210,988,300
4 Accelerated Legacy Pension Allocation	11,620,700	11,620,700	11,620,700	-	0.0%	11,620,700	-	0.0%	11,620,700	3,863,500	3,863,500
5 Water Residential Assistance Program	2,403,000	2,403,000	2,456,200	53,200	2.2%	2,549,400	93,200	3.8%	2,625,900	2,704,600	2,785,800
6 Lease Payment to Local System	27,500,000	27,500,000	27,500,000	-	0.0%	27,500,000	-	0.0%	27,500,000	27,500,000	27,500,000
7 Improvement & Extension Fund Allocation	25,461,600	23,727,000	47,936,100	22,474,500	88.3%	49,417,500	1,481,400	3.1%	65,315,800	83,575,700	106,684,600
8 Operating Reserve Deposit	-	-	-	-	NA	1,329,500	1,329,500	NA	1,697,600	1,490,200	1,183,300
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA	-	-	-
Annual Budgeted Revenue Requirements	480,605,300	476,934,700	495,023,500	14,418,200	3.0%	509,874,100	14,850,600	3.0%	525,170,400	540,925,500	557,153,200

Entity-wide Budget Proposal as of January 10, 2020

Schedule 1C - Combined Water and Sewer System Revenue Requirements Budget

Combined System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Revenues											
11 Revenues from Charges <i>(prior to adjustment)</i>	\$ 802,454,500	\$ 798,007,200	\$ 828,000,400	\$ 25,545,900	3.2%	\$ 854,435,200	\$ 26,434,800	3.2%	\$ 880,312,300	\$ 906,797,400	\$ 934,314,900
10.1 Non-Operating Revenue	17,815,000	10,790,300	10,423,700	(7,391,300)	-41.5%	9,141,600	(1,282,100)	-12.3%	9,171,700	9,371,100	9,338,600
Total Revenues	820,269,500	808,797,500	838,424,100	18,154,600	2.2%	863,576,800	25,152,700	3.0%	889,484,000	916,168,500	943,653,500
Revenue Requirements											
1 Operations & Maintenance (O&M) Expense	\$318,547,700	\$318,547,700	\$322,073,400	\$3,525,700	1.1%	\$328,577,100	\$6,503,700	2.0%	\$335,012,500	\$341,782,800	\$348,490,300
2 O&M Legacy Pension Allocation	16,872,000	16,872,000	16,872,000	-	0.0%	16,872,000	-	0.0%	16,872,000	3,300,000	3,300,000
3 Debt Service Allocation	353,296,400	351,414,900	353,300,100	3,700	0.0%	362,990,500	9,690,400	2.7%	365,125,700	382,764,900	378,807,400
4 Accelerated Legacy Pension Allocation	17,889,000	17,889,000	17,889,000	-	0.0%	17,889,000	-	0.0%	17,889,000	5,797,400	5,797,400
5 Water Residential Assistance Program	4,101,300	4,101,300	4,133,800	32,500	0.8%	4,317,900	184,100	4.5%	4,447,500	4,580,800	4,718,300
6 Lease Payment to Local System I&E Account	50,000,000	50,000,000	50,000,000	-	0.0%	50,000,000	-	0.0%	50,000,000	50,000,000	50,000,000
7 Improvement & Extension Fund Allocation	55,587,100	45,996,600	73,279,100	17,692,000	31.8%	80,762,300	7,483,200	10.2%	97,992,100	125,685,800	150,304,200
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	2,167,900	1,291,300	147.3%	2,145,200	2,256,800	2,235,900
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA	-	-	-
Annual Budgeted Revenue Requirements	820,269,500	808,797,500	838,424,000	18,154,500	2.2%	863,576,700	25,152,700	3.0%	889,484,000	916,168,500	943,653,500

Water System Operations Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 19,349,000	\$ 19,477,100	\$ 8,636,000	\$ 20,765,100	\$ 1,288,000	6.6%	\$ 20,859,400
3.1 Electric	24,391,800	23,468,500	11,739,200	24,417,800	949,300	4.0%	24,433,700
3.2 Gas	1,088,000	1,060,100	212,800	1,082,000	21,900	2.1%	1,082,100
3.3 Sewage Service	649,800	527,000	112,900	649,000	122,000	23.1%	649,000
3.4 Water Service	800	23,300	300	5,000	(18,300)	-78.5%	5,000
4.1 Chemicals	5,088,800	4,774,700	2,335,600	5,053,900	279,200	5.8%	5,059,600
4.2 Supplies & Other	4,998,600	4,739,900	1,704,100	5,168,800	428,900	9.0%	5,176,000
4.3 Contractual Services	15,851,600	13,190,200	4,449,700	14,900,700	1,710,500	13.0%	14,916,300
5.1 Capital Program Allocation	(1,873,300)	(1,983,900)	(717,100)	(1,805,200)	178,700	-9.0%	(1,812,800)
5.2 Shared Services	(351,500)	(53,000)	-	-	53,000	-100.0%	-
7.0 Unallocated Reserve	-	797,200	-	1,729,300	932,100	116.9%	2,723,000
Grand Total	\$ 69,193,600	\$ 66,021,100	\$ 28,473,500	\$ 71,966,400	\$ 5,945,300	9.0%	\$ 73,091,300

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Administration	\$ 1,821,400	\$ 1,977,400	\$ 736,900	\$ 2,187,100	\$ 209,700	10.6%	\$ 2,195,100
Water Treatment Plants	53,581,200	50,535,500	21,260,000	54,029,600	3,494,100	6.9%	54,147,600
Water Engineering	1,456,300	1,672,300	672,700	1,360,900	(311,400)	-18.6%	1,365,100
Water Quality	1,272,700	1,846,600	811,500	1,944,700	98,100	5.3%	1,929,400
Water System Operations Unallocated	-	797,200	-	1,729,300	932,100	116.9%	2,723,000
Pumping Stations	11,062,000	9,192,100	4,992,400	10,714,800	1,522,700	16.6%	10,731,100
Grand Total	\$ 69,193,600	\$ 66,021,100	\$ 28,473,500	\$ 71,966,400	\$ 5,945,300	9.0%	\$ 73,091,300

Water System Operations

Alum Sludge Hauling Project:

- Sludge that accumulates in the sedimentation basins and flocculation chambers at the Northeast, Southwest, and Springwells Water Treatment Plants must be removed manually, dewatered on site, loaded, transported, and disposed at a licensed solid waste landfill on a regular basis.
- Contract No. GLWA-CON-170 dated August 2017, with Mobile Dredging & Video Pipe, Inc., provides turn-key sludge removal, hauling and disposal services at the Northeast, Southwest, and Springwells WTPs.
- This service ensures regulatory compliance and drinking water of unquestionable quality. FY 2021 budget for Water Operations contractual services reflects a more realistic approach for the realignment of operational needs.

Mobile Dredging & Video Pipe, CON-170 - Analysis (Alum Sludge hauling, removal & disposal program)									
Location	FY 2019 Adopted Budget	FY 2019 Amended Budget	FY 2019 Activity	FY 2020 Adopted Budget	FY 2020 Activity @ 12.31.2019	FY 2020 Activity @ 01.31.2020	FY 2020 Estimate (Feb thru Jun)	FY 2020 Forecasted Budget	FY 2021 Department Requested
Springwells WTP	\$ 1,628,600	\$ 4,628,600	\$ 5,038,952	\$ 3,023,300	\$ 2,850,864	\$ 2,850,864	\$ -	\$ 3,023,300	\$ 3,482,600
Northeast WTP	696,400	2,015,900	2,981,707	1,121,800	805,920	805,920	-	1,121,800	2,000,000
Southwest WTP	-	2,000,000	2,613,760	600,000	-	1,044,646	1,520,000	2,500,000	2,600,000
Totals:	\$ 2,325,000	\$ 8,644,500	\$ 10,634,418	\$ 4,745,100	\$ 3,656,784	\$ 4,701,430	\$ 1,520,000	\$ 6,645,100	\$ 8,082,600
							**Estimate		

Water System Operations- Personnel

The personnel headcount increase in FY 2021 from the FY 2020 level is a result of:

- A new management professional position is being added to support the Water Director and improve operational efficiency by managing the chemical, engineering, and maintenance contracts related to water operations. This higher level of expertise is necessary to support the increasing demand for tracking and accuracy of high dollar contracts.
- Recruiting and developing talent is a high priority for GLWA. For this reason, two new positions are added to support the existing Electrical Instrumentation Control Technician – Instrument Technician (EICT-I) and the new Maintenance Technician Apprenticeship/Training programs through Focus Hope. The investment in this program will enable GLWA to develop a workforce for positions which have been challenging to recruit and fill.

Field Service Operations Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 4,457,400	\$ 5,214,200	\$ 2,023,400	\$ 5,216,300	\$ 2,100	0.0%	\$ 5,241,100
4.2 Supplies & Other	637,900	402,700	193,100	578,200	175,500	43.6%	578,200
4.3 Contractual Services	11,663,200	12,521,300	3,273,800	12,308,100	(213,200)	-1.7%	12,453,900
5.1 Capital Program Allocation	(600)	(128,400)	-	(127,500)	900	-0.7%	(128,000)
5.2 Shared Services	(28,400)	(16,700)	(6,900)	(17,000)	(300)	1.8%	(17,400)
Grand Total	\$ 16,729,500	\$ 17,993,100	\$ 5,483,400	\$ 17,958,100	\$ (35,000)	-0.2%	\$ 18,127,800

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Field Service Operations	\$ 16,729,500	\$ 17,993,100	\$ 5,483,400	\$ 17,958,100	\$ (35,000)	-0.2%	\$ 18,127,800
Grand Total	\$ 16,729,500	\$ 17,993,100	\$ 5,483,400	\$ 17,958,100	\$ (35,000)	-0.2%	\$ 18,127,800

Field Service Operations (Centralized Services)

- The contractual services budget decrease in FY 2021 from the FY 2020 level is due in part to a reduction in contracted sewer cleaning and investigation services.
- Contractual services are dependent on several factors and unforeseen circumstances, therefore the expenses for projects that are a combination of operations and maintenance (O&M) and capital improvement projects (CIP) fluctuate from fiscal year to fiscal year.
- Sewer cleaning and investigation services is an ongoing project for the Field Service Operations team.

Facility Operations Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 1,576,100	\$ 2,090,400	\$ 824,600	\$ 2,129,600	\$ 39,200	1.9%	\$ 2,139,400
4.2 Supplies & Other	728,300	963,200	382,100	727,900	(235,300)	-24.4%	709,600
4.3 Contractual Services	3,025,000	3,546,400	1,928,700	3,330,800	(215,600)	-6.1%	3,332,200
5.2 Shared Services	29,500	-	-	-	-	0.0%	-
Grand Total	\$ 5,358,900	\$ 6,600,000	\$ 3,135,400	\$ 6,188,300	\$ (411,700)	-6.2%	\$ 6,181,200

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Facility Operations	\$ 5,358,900	\$ 6,600,000	\$ 3,135,400	\$ 6,188,300	\$ (411,700)	-6.2%	\$ 6,181,200
Grand Total	\$ 5,358,900	\$ 6,600,000	\$ 3,135,400	\$ 6,188,300	\$ (411,700)	-6.2%	\$ 6,181,200

Facility Operations (Centralized Services)

The contractual services budget decrease in FY 2021 from the FY 2020 level is a result of:

- Lower facility costs based on historical review
 - ✓ Shared Services Agreement OPS-006 (Shared Facilities Shared Cost)
- Improved pricing on snow removal contract
 - ✓ Contract 1901555, dated November 2019, with Premier Group Associates
- In-sourcing of trade services
 - ✓ The Facility Operations Area is reaching a steady state in staffing and accommodating the higher level of expertise required in order to efficiently maintain the GLWA facilities as needed.

Wastewater System Operations Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 36,668,300	\$ 36,219,200	\$ 15,096,400	\$ 37,871,500	\$ 1,652,300	4.6%	\$ 38,559,200
3.1 Electric	12,329,000	12,491,400	5,257,600	12,538,000	46,600	0.4%	12,782,000
3.2 Gas	5,432,200	5,344,600	1,630,700	5,491,000	146,400	2.7%	5,597,000
3.3 Sewage Service	1,408,900	1,280,200	723,000	1,417,500	137,300	10.7%	1,443,500
3.4 Water Service	3,569,500	3,566,700	1,373,500	3,880,100	313,400	8.8%	3,955,300
4.1 Chemicals	8,186,800	9,123,900	3,883,100	8,365,900	(758,000)	-8.3%	8,492,000
4.2 Supplies & Other	17,535,400	14,248,600	5,413,900	13,344,400	(904,200)	-6.3%	13,036,000
4.3 Contractual Services	28,029,600	26,512,900	9,958,800	26,663,100	150,200	0.6%	26,870,300
5.1 Capital Program Allocation	(1,325,900)	(1,239,400)	(453,900)	(1,325,800)	(86,400)	7.0%	(1,331,600)
5.2 Shared Services	(229,500)	(154,300)	(64,300)	(157,400)	(3,100)	2.0%	(160,400)
7.0 Unallocated Reserve		5,764,900		4,603,900	(1,161,000)	-20.1%	5,971,800
Grand Total	\$ 111,628,200	\$ 113,158,700	\$ 42,818,800	\$ 112,692,200	\$ (466,500)	-0.4%	\$ 115,215,100

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Wastewater Administration	\$ 1,983,900	\$ 2,507,800	\$ 688,300	\$ 2,667,300	\$ 159,500	6.4%	\$ 2,695,000
Water Resource Recovery Facility	86,163,100	84,982,400	33,695,300	86,374,600	1,392,200	1.6%	87,918,200
Wastewater Engineering	1,778,200	2,262,000	685,100	2,453,300	191,300	8.5%	2,563,500
Industrial Waste Control	2,708,600	2,407,100	961,200	2,496,300	89,200	3.7%	2,511,500
Wastewater Laboratories	4,047,300	4,148,900	1,940,900	4,558,500	409,600	9.9%	4,195,500
Combined Sewer Overflow	12,688,700	11,085,600	4,848,000	9,538,300	(1,547,300)	-14.0%	9,359,600
Wastewater Operations Unallocated		5,764,900	-	4,603,900	(1,161,000)	-20.1%	5,971,800
Grand Total	\$ 109,369,800	\$ 113,158,700	\$ 42,818,800	\$ 112,692,200	\$ (466,500)	-0.4%	\$ 115,215,100

Wastewater System Operations

- Operational optimization
 - ✓ Biosolid management
 - ✓ Chemical reduction
- Focus areas for coming fiscal year
 - ✓ Overhaul of the instrumentation and controls for the facilities
 - ✓ SCADA reliability and security
 - ✓ Implementation of predictive tools
 - ✓ Maximizing our CMMS system
 - ✓ Focus on small focused projects
- **Staffing**
 - ✓ Three Maintenance Technicians were added in FY 2021 at a cost of \$120,000
 - ✓ In FY 2020 a Plant Technician was converted from a contract to a GLWA team member. The conversion resulted in a \$37,000 in cost.

Planning Services Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 4,538,200	\$ 6,272,400	\$ 1,996,400	\$ 6,450,600	\$ 178,200	2.8%	\$ 7,220,900
3.1 Electric	88,600	80,500	24,600	81,700	1,200	1.5%	82,000
4.2 Supplies & Other	475,800	726,400	189,400	564,900	(161,500)	-22.2%	565,000
4.3 Contractual Services	10,415,300	13,295,700	5,596,400	10,051,200	(3,244,500)	-24.4%	9,833,400
5.1 Capital Program Allocation	-	-	-	-	-	0.0%	-
5.2 Shared Services	(378,400)	(60,000)	(50,000)	-	60,000	-100.0%	-
6.0 Capital Outlay	-	-	-	-	-	0.0%	-
Grand Total	\$ 15,139,500	\$ 20,315,000	\$ 7,756,800	\$ 17,148,400	\$ (3,166,600)	-15.6%	\$ 17,701,300

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY2021 Percent Variance	FY 2022 Department Requested
Chief Planning Officer	\$ 368,600	\$ 408,900	\$ 128,800	\$ 382,000	\$ (26,900)	-6.6%	\$ 383,600
Systems Planning	4,842,900	3,386,100	1,534,400	2,960,700	(425,400)	-12.6%	3,046,900
Asset Management	3,115,100	2,966,600	1,142,000	3,693,900	727,300	24.5%	4,370,200
Systems Analytics	6,155,800	7,190,500	2,040,800	6,552,200	(638,300)	-8.9%	6,612,100
Capital Improvement Planning	657,100	6,362,900	2,910,800	3,559,600	(2,803,300)	-44.1%	3,288,500
Grand Total	\$ 15,139,500	\$ 20,315,000	\$ 7,756,800	\$ 17,148,400	\$ (3,166,600)	-15.6%	\$ 17,701,300

Planning Services (Centralized Services)

Systems Planning

- Completion of the Wastewater Master Plan (CDM Smith)
- Begin Mini Water Master Plan
- Begin Long Term CSO Control Plan
- Begin providing Aquasight analysis tool to partner community

Asset Management

- Completion of Strategic Asset Master Plan (CH2M Hill engineers)
- Slowed pace of Water Transmission System Pipe Integrity Program due to lessons learned from the pilot

Systems Analytics

- Integrated East and West Side Sewer Modeling & Monitoring programs with overall Wastewater Master Plan eliminating overlap

Planning Services (Centralized Services)

Capital Improvement Planning

- Begin system wide CIP with contractual services provided by AECOM

AECOM (CS-272)	Total Contract	FY2019 Actual	FY 2020 Estimate of Services Provided through 11.20.2019	Forecast for FY 2020	FY 2020 Forecast as Percent of Contract Total	FY 2021 Projected Spend	FY 2020 Adopted Budget	FY 2021 Department Requested
Operations & Maintenance	\$15,518,940	\$538,400	\$2,335,800	\$5,849,400	37.7%	\$3,823,500	\$3,206,200	\$2,938,700
Capital	43,092,100	20,100	1,727,000	4,220,700	9.8%	9,607,600	NA	NA
Total	\$58,611,040	\$558,500	\$4,062,800	\$10,070,100	17.2%	\$13,431,100	NA	NA

The AECOM contract is in the early stages of the project. The variances between the amounts budgeted and forecasted are the result of the changing priorities that are occurring as the project develops. The budget request is based on the best estimates of the project timeline and does not come from a specific project plan. A more detailed project plan is underway.

Information Technology Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 5,977,100	\$ 7,550,300	\$ 2,771,200	\$ 7,761,300	\$ 211,000	2.8%	\$ 7,794,800
4.2 Supplies & Other	6,238,700	5,991,400	\$ 2,301,400	7,662,800	1,671,400	27.9%	7,138,800
4.3 Contractual Services	16,904,500	21,007,900	\$ 8,302,200	20,069,300	(938,600)	-4.5%	19,808,500
5.2 Shared Services	(5,409,100)	(3,185,700)	\$ (1,640,900)	(2,020,000)	1,165,700	-36.6%	(357,000)
6.0 Capital Outlay	2,249,100	4,890,500	\$ 2,103,700	5,503,300	612,800	12.5%	5,998,800
Grand Total	\$ 25,960,300	\$ 36,254,400	\$ 13,837,600	\$ 38,976,700	\$ 2,722,300	7.5%	\$ 40,383,900

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Information Technology	\$ 25,960,300	\$ 36,254,400	\$ 13,837,600	\$ 38,976,700	\$ 2,722,300	7.5%	\$ 40,383,900
Enterprise Asset Management Systems	\$ 5,371,300	\$ 5,914,000	\$ 2,091,100	\$ 9,685,800	\$ 3,771,800	63.8%	\$ 9,811,200
Business Productivity Systems	635,900	4,098,700	789,300	2,570,600	(1,528,100)	-37.3%	2,139,600
Infrastructure	14,779,500	19,432,400	8,937,000	19,802,900	370,500	1.9%	21,443,400
Security & Risk	223,500	403,200	112,500	459,800	56,600	14.0%	462,100
Service Delivery	3,123,300	3,807,700	1,004,900	3,875,200	67,500	1.8%	3,928,700
Project Management Office	1,164,000	1,622,600	570,600	1,704,200	81,600	5.0%	1,716,700
Office of the CIO	662,800	975,800	332,200	878,200	(97,600)	-10.0%	882,200
Grand Total	\$ 25,960,300	\$ 36,254,400	\$ 13,837,600	\$ 38,976,700	\$ 2,722,300	7.5%	\$ 40,383,900

Information Technology (Centralized Services)

- Shared Services reimbursement decrease
- Implementation of Enterprise Asset Management System (EAM)
- Data Center Modernization

Information Technology (Centralized Services)

The variance between the FY 2021 Requested Budget and the FY 2019 Actual is \$13,016,400. The table below lists the items that comprise the majority of this variance. Additional commentary regarding these variances continues on the next page.

Description	FY 2019 Actual	FY 2021 Department Requested	Dollar Variance
Shared Service Activity	(\$5,409,100)	(\$2,020,000)	\$3,389,100
Personnel	5,797,800	7,761,500	1,963,700
Enterprise Asset Management (EAM) System Subscription	-	1,500,000	1,500,000
Enterprise Resource Planning (ERP) Subscription	-	1,500,000	1,500,000
AT&T negotiated one time credit	(1,300,000)	-	1,300,000
Data Center Modernization (Replication, Backup & Recovery)	2,343,700	3,313,800	970,100
Oracle Database Licensing	-	850,000	850,000
GIS Strategic Services	-	720,000	720,000
Program Management Information System (PMIS)	-	250,000	250,000
Information Technology Service Management System (ITSM)	-	100,000	100,000
Total	\$1,432,400	\$13,975,300	\$12,542,900

Information Technology (Centralized Services)

- Shared Services – A reduction in Shared Services revenue is realized in FY 2021 as the bifurcation activities continue. Although the revenue is reduced in FY 2021, the continued need for the budget of expenses remains as focus is shifted from the Shared Services to GLWA projects and initiatives.
- Personnel – Positions that were vacant in FY 2019 are being filled in FY 2020 and FY 2021.
- The largest portion of the total variance can be attributed to new systems implementations which are needed as the organization continues to grow and as new operational and business needs are identified. New initiatives include the following.
 - ✓ Enterprise Asset Management (EAM) – To replace the work order and asset management system
 - ✓ Enterprise Resource Planning (ERP) – To replace the Finance and HR/Payroll systems
 - ✓ Data Center modernization
 - ✓ GIS Strategic Services
 - ✓ Project Management Information System (PMIS) – Used for CIP projects
 - ✓ Information Technology Service Management – Used for incident and ticket management

Security and Integrity Budget Summary

Biennial Budget Request by Expense Category

Expense Categories	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 5,420,900	\$ 5,431,500	\$ 2,521,600	\$ 5,492,500	\$ 61,000	1.1%	\$ 5,520,000
4.2 Supplies & Other	502,000	378,500	93,700	453,100	74,600	19.7%	485,000
4.3 Contractual Services	312,400	314,100	38,700	345,300	31,200	9.9%	352,200
5.2 Shared Services	(487,700)	(325,000)	(135,400)	(331,500)	(6,500)	2.0%	(338,100)
Grand Total	\$ 5,747,600	\$ 5,799,100	\$ 2,518,600	\$ 5,959,400	\$ 160,300	2.8%	\$ 6,019,100

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Security & Integrity Area	\$ 5,747,600	\$ 5,799,100	\$ 1,488,157	\$ 5,959,400	\$ 160,300	2.8%	\$ 6,019,100
HazMat	1,540,800	1,545,500	\$ 653,300	1,594,200	48,700	3.2%	1,666,800
Security and Integrity	4,206,800	4,253,600	\$ 1,865,300	4,365,200	111,600	2.6%	4,352,300
Grand Total	\$ 5,747,600	\$ 5,799,100	\$ 2,518,600	\$ 5,959,400	\$ 160,300	2.8%	\$ 6,019,100

Security and Integrity (Centralized Services)

- Continuing the implementation of the Continuity of Operations Planning (COOP)
- Upgrading vehicle technology i.e. cellular hardware, monitor screen and the keyboard in each vehicle (24 vehicles)
- Purchase of racks, trays and lockboxes for security vehicles and the purchase of a new drone

Chief Administrative & Compliance Officer Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 922,000	\$ 1,233,300	\$ 450,100	\$ 1,469,000	\$ 235,700	19.1%	\$ 1,475,300
4.2 Supplies & Other	20,800	23,100	12,800	28,100	5,000	21.6%	28,200
4.3 Contractual Services	3,562,200	3,911,300	1,795,300	4,089,200	177,900	4.5%	4,144,600
Grand Total	\$ 4,505,000	\$ 5,167,700	\$ 2,258,200	\$ 5,586,300	\$ 418,600	8.1%	\$ 5,648,100

Biennial Budget Request by Team

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 922,000	\$ 1,233,300	\$ 450,100	\$ 1,469,000	\$ 235,700	19.1%	\$ 1,475,300
4.2 Supplies & Other	20,800	23,100	12,800	28,100	5,000	21.6%	28,200
4.3 Contractual Services	3,562,200	3,911,300	1,795,300	4,089,200	177,900	4.5%	4,144,600
Grand Total	\$ 4,505,000	\$ 5,167,700	\$ 2,258,200	\$ 5,586,300	\$ 418,600	8.1%	\$ 5,648,100

Chief Administrative & Compliance Officer (Administrative Services)

- Promote GLWA legislative and regulatory objectives with the support of a government relations contractor
- Expansion of the Risk Management Team

General Counsel Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 817,800	\$ 941,400	\$ 409,300	\$ 971,900	\$ 30,500	3.2%	\$ 975,800
4.2 Supplies & Other	24,100	78,400	10,400	79,900	1,500	1.9%	81,500
4.3 Contractual Services	1,164,700	2,019,100	703,100	2,059,400	40,300	2.0%	2,100,500
Grand Total	\$ 2,006,600	\$ 3,038,900	\$ 1,122,800	\$ 3,111,200	\$ 72,300	2.4%	\$ 3,157,800

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
General Counsel	\$ 2,006,600	\$ 3,038,900	\$ 1,122,800	\$ 3,111,200	\$ 72,300	2.4%	\$ 3,157,800
Grand Total	\$ 2,006,600	\$ 3,038,900	\$ 1,122,800	\$ 3,111,200	\$ 72,300	2.4%	\$ 3,157,800

General Counsel (Administrative Services)

- Work collaboratively with GLWA customers to secure resolutions supporting GLWA's Industrial Pretreatment Program (IPP)
- Provide training for areas, groups and teams on contractual, real estate, employment and regulatory matters impacting GLWA
- Develop GLWA Templates

Organizational Development Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 2,411,600	\$ 2,856,100	\$ 888,000	\$ 3,135,700	\$ 279,600	9.8%	\$ 3,149,700
4.2 Supplies & Other	222,800	210,300	86,200	419,000	208,700	99.2%	427,000
4.3 Contractual Services	580,000	1,300,000	137,900	866,500	(433,500)	-33.3%	1,131,500
5.2 Shared Services	(7,100)						
Grand Total	\$ 3,207,300	\$ 4,366,400	\$ 1,112,100	\$ 4,421,200	\$ 54,800	1.3%	\$ 4,708,200

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Organizational Development	\$ 3,207,300	\$ 4,366,400	\$ 1,112,100	\$ 4,421,200	\$ 54,800	1.3%	\$ 4,708,200
Grand Total	\$ 3,207,300	\$ 4,366,400	\$ 1,112,100	\$ 4,421,200	\$ 54,800	1.3%	\$ 4,708,200

Organizational Development (Administrative Services)

- Transfer of the Managed Services function from the vendor to Organizational Development
- Establishment of a Compensation Team
- Implementation of the third Apprenticeship Program EICT-E

Public Affairs Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 526,000	\$ 728,300	\$ 270,200	\$ 755,100	\$ 26,800	3.7%	\$ 804,700
4.2 Supplies & Other	336,900	333,800	79,700	476,300	142,500	42.7%	432,000
4.3 Contractual Services	398,800	324,000	163,100	356,500	32,500	10.0%	356,500
Grand Total	\$ 1,261,700	\$ 1,386,100	\$ 513,000	\$ 1,587,900	\$ 201,800	14.6%	\$ 1,593,200

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Public Affairs	\$ 1,261,700	\$ 1,386,100	\$ 513,000	\$ 1,587,900	\$ 201,800	14.6%	\$ 1,593,200
Grand Total	\$ 1,261,700	\$ 1,386,100	\$ 513,000	\$ 1,587,900	\$ 201,800	14.6%	\$ 1,593,200

Public Affairs (Administrative Services)

- Year two of GLWA Brand Awareness Campaign (five-month broadcast/ digital initiative) (Supplies & Other)
- Funding of GLWA five-year anniversary activities
 - ✓ This one-time funding request of \$50,000 for FY 2021 will cover the costs of communications, events, and supplies.
 - ✓ The budget for the GLWA five-year anniversary can be found in the Supplies & Other budget category.
- Implementation of the team member recognition program (Supplies & Other)
- Increased use of Fleishman Hillard services (Contractual Services) which include the following
 - ✓ Communications services for media outreach and branding awareness campaign
 - ✓ Conduct internal communications annual survey
 - ✓ Draft and design the annual Year in Review publication
 - ✓ Video crew and equipment for town hall meetings and for the GLWA branding videos

Financial Services Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 10,531,000	\$ 12,016,100	\$ 4,657,600	\$ 12,536,600	\$ 520,500	4.3%	\$ 12,583,500
3.0 Utilities	59,500	16,200	10,300	94,800	78,600	485.2%	96,500
4.2 Supplies & Other	391,100	629,600	136,400	654,700	25,100	4.0%	653,400
4.3 Contractual Services	2,904,600	2,523,900	1,216,200	2,711,000	187,100	7.4%	2,690,100
5.1 Capital Program Allocation	(90,700)	(78,500)	-	(84,900)	(6,400)	8.2%	(85,300)
5.2 Shared Services	(326,800)	(623,900)	(67,000)	(268,400)	355,500	-57.0%	(273,700)
Grand Total	\$ 13,468,700	\$ 14,483,400	\$ 5,953,500	\$ 15,643,800	\$ 1,160,400	8.0%	\$ 15,664,500

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
CFO Services	\$ 4,777,900	\$ 4,488,400	\$ 2,046,000	\$ 5,298,700	\$ 810,300	18.1%	\$ 5,265,000
Chief Financial Officer	678,100	840,400	336,900	828,900	(11,500)	-1.4%	831,800
Data Analytics & Internal Audit	633,700	544,000	265,700	750,500	206,500	38.0%	756,800
Financial Planning & Analysis	1,150,400	1,239,200	495,500	1,358,600	119,400	9.6%	1,369,400
Public Finance	1,147,400	878,400	408,700	1,014,300	135,900	15.5%	946,500
Reporting and Compliance	447,000	395,200	216,800	516,900	121,700	30.8%	519,200
Treasury	721,300	591,200	322,400	829,500	238,300	40.3%	841,300
Business Operations Support Services	5,651,000	6,483,200	2,552,400	6,963,100	479,900	7.4%	6,989,500
Procurement Director	2,596,200	2,715,300	1,127,500	3,111,600	396,300	14.6%	3,121,900
Logistics and Materials	1,691,400	1,723,900	827,300	1,921,300	197,400	11.5%	1,934,400
Owners' Representative	615,800	629,100	272,100	590,300	(38,800)	-6.2%	594,200
Transformation	747,600	1,414,900	325,500	1,339,900	(75,000)	-5.3%	1,339,000
Financial Reporting & Accounting	3,039,800	3,511,800	1,355,100	3,382,000	(129,800)	-3.7%	3,410,000
Grand Total	\$ 13,468,700	\$ 14,483,400	\$ 5,953,500	\$ 15,643,800	\$ 1,160,400	8.0%	\$ 15,664,500

Financial Services (Administrative Services)

The Financial Services budget increase in FY 2021 from the FY 2020 level is a result of

- Personnel
 - ✓ Procurement Director – Addition of 3 FTE: (1) Management Professional, (2) Professional Administrative Analysts to meet growing demands.
 - ✓ The FY 2021 budget for the additional 3 FTEs is \$300,000.
- Utilities
 - ✓ Logistics & Materials - McKinstry Warehouse: New connection for Electric (previously shared); Gas now billed separately
- Contractual Services
 - ✓ Public Finance - Service Charges Consultant for year of transition as previously reported; budgeted for \$100,000 in FY 2021, not budgeted in FY 2020 (budget amendment is anticipated)

Financial Services (Administrative Services)

The Financial Services budget increase in FY 2021 from the FY 2020 level is a result of

- Contractual Services (continued)
 - ✓ Data Analytics & Internal Audit - Continuation of Construction Audit Services; Expansion on Internal Audit Program. The budget for FY 2020 is \$81,200 (a budget amendment will be needed to cover the increase in services). The budget request for FY 2021 is \$250,000 which includes expansion of internal audit effort in operational, financial, and program areas.
- Shared Services
 - ✓ Treasury - Lower bank fees based on historical review

Chief Executive Officer Budget Summary

Biennial Budget Request by Expense Category

Expense Categories	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 384,900	\$ 386,400	\$ 156,500	\$ 397,200	\$ 10,800	2.8%	\$ 398,700
4.2 Supplies & Other	180,400	184,300	82,000	202,600	18,300	9.9%	206,700
4.3 Contractual Services	-	62,000	-	63,200	1,200	1.9%	64,600
Grand Total	\$ 565,300	\$ 632,700	\$ 238,500	\$ 663,000	\$ 30,300	4.8%	\$ 670,000

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Chief Executive Officer	\$ 565,300	\$ 632,700	\$ 238,500	\$ 663,000	\$ 30,300	4.8%	\$ 670,000
Grand Total	\$ 565,300	\$ 632,700	\$ 238,500	\$ 663,000	\$ 30,300	4.8%	\$ 670,000

Chief Executive Officer (Administrative Services)

- The increase in the FY 2021 budget for Supplies & Other of \$18,300 is due to the following items.
 - ✓ Park Rite (Mileage & Parking) – In FY 2019 there was an increase in the price of the 26 parking spaces from \$150 to \$200 per space. The budget for FY 2021 reflects this increase. At the time the increase became known, the budget for FY 2020 had already been created. A budget amendment will be required for FY 2020.
 - ✓ The FY 2021 budget for Membership Dues includes the estimated increase in the National Association of Clean Water and the Association of Metropolitan Water annual corporate dues.

Board of Directors Budget Summary

Biennial Budget Request by Expense Category

Expense Category	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
2.0 Personnel	\$ 100,800	\$ 154,500	\$ 46,200	\$ 154,200	\$ (300)	-0.2%	\$ 157,300
4.2 Supplies & Other	3,400	47,900	1,100	43,400	(4,500)	-9.4%	44,300
Grand Total	\$ 104,200	\$ 202,400	\$ 47,300	\$ 197,600	\$ (4,800)	-2.4%	\$ 201,600

Biennial Budget Request by Team

Team	FY 2019 Actual	FY 2020 Forecasted Budget	FY 2020 Activity as of 11.30.2019	FY 2021 Department Requested	FY 2021 Dollar Variance	FY 2021 Percent Variance	FY 2022 Department Requested
Board of Directors	\$ 104,200	\$ 202,400	\$ 47,300	\$ 197,600	\$ (4,800)	-2.4%	\$ 201,600
Grand Total	\$ 104,200	\$ 202,400	\$ 47,300	\$ 197,600	\$ (4,800)	-2.4%	\$ 201,600

Board of Directors (Administrative Services)

- The slight decrease in the Board of Directors FY 2021 budget from FY 2020 is due to a revision in estimates.

Grants and Rebates

The following is a list of grants and rebates that have been awarded to GLWA. This list is not complete. Information continues to be gathered on both grants that have been applied for and grants/rebates that have been awarded.

- Energy, Research & Innovation
 - ✓ Water Research Foundation – “Managing Prestressed Concrete Cylinder Pipe (PCCP) to Extend Asset Life”. This project has not started; funds have not been received yet - \$100,000.
 - ✓ Water Research Foundation – “Performance of Manufactured in-place Composite Pipe (MICP) Renewal Systems for Large Diameter Pipe”. This project has not started; funds have not been received yet - \$25,000.
- Field Services
 - ✓ SEMCOG – Valve survey work performed by Lakeshore Global. Funds will be received when work is completed (FY 2020) - \$30,000.
- DTE Rebates
 - ✓ In 2018 GLWA received \$21,200 in rebates for WRRF.
 - ✓ In 2019 GLWA received \$5,200 in rebates for lighting replacements and scum concentrator.



GLWA

Great Lakes Water Authority

..Title

Resolution Adopting the FY 2021 & FY 2022 Biennial Budget

..Body

Agenda of: February 26, 2020

Item No.: **2020-___**

Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: February 26, 2020

RE: Resolution Adopting the FY 2021 & FY 2022 Biennial Budget

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, The Board of Directors (Board) of the Great Lakes Water Authority (GLWA):

- 1) Concludes the Public Hearing related to the FY 2021 and FY 2022 Biennial Budget held on February 26, 2020;**
- 2) Pending public comment, adopts the attached resolution, 2020-___ adopting the FY 2021 and 2022 Biennial Budget for the GLWA;**
- 3) Notes that the GLWA By-Laws Article X, Section 5, requires a super-majority affirmative vote of at least five (5) members of the Board is necessary for the approval of the operating budget; and**
- 4) Authorizes the Chief Executive Officer to take such other action as may be necessary to accomplish the intent of this vote and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Great Lakes Water Authority (“GLWA” or the “Authority”) assumed the operation of the Regional Water and Sewer systems on January 1, 2016 (the “Effective Date”) pursuant to the Lease Agreements between the GLWA and the City of Detroit dated June 12, 2015. Section 5.6 of the Lease Agreements require the Authority to adopt a two-year budget for the Regional Water and Sewer Systems that sets forth budgeted revenues and expenses for each such Fiscal Year.

JUSTIFICATION

The Board has received a proposed Budget for FY 2021 and FY 2022 which was reviewed at Audit Committee meetings on December 19, 2019, January 27, 2020, and February 21, 2020; Board meetings of January 8, 2020 and January 22, 2020; and Member Partner meetings on January 9, 2020, and January 23, 2020 as it relates to the proposed Schedule of Charges.

BUDGET IMPACT

This action establishes a budget for FY 2021 and 2022.

COMMITTEE REVIEW

The GLWA Audit Committee reviewed the budget and supplemental analysis at the meetings noted above.

Great Lakes Water Authority

Resolution 2020 - xxx

Resolution Adopting the Biennial FY 2021 & FY 2022 Budget

By Board Member: _____

WHEREAS The Great Lakes Water Authority (“GLWA” or the “Authority”) assumed the operation of the regional water and sewer systems on January 1, 2016 (the “Effective Date”) pursuant to Water System and Sewer System Lease Agreements between the GLWA and the City of Detroit dated June 12, 2015; and

WHEREAS In accordance with the by-laws of the GLWA, the Board shall adopt a two-year (Biennial) operating budget for the Regional Water and Sewer Systems; and

WHEREAS The Authority, through the terms of the Leases, committed to an annual increase in revenue requirement budget of no more than 4% though the fiscal year ending June 30, 2025; and

WHEREAS The GLWA Board is now adopting its fifth fiscal year budget demonstrating its ability to achieve and excel in meeting that commitment with a Regional Water System annual revenue requirement budget increase of 1.1% which equates to an average 2.4% increase in revenues from Water Service Charges and a Regional Sewer System annual revenue requirements budget increase of 2.5% which equates to an average 3.2% increase in revenues from Sewer Service Charges; and

WHEREAS The budgeted expenses for each such Fiscal Year shall equal the sum of the Projected expenses and revenue requirements for the Regional Water System and the Regional Sewer System for each such Fiscal Year; and

WHEREAS The budgeted annual revenue requirements for the Regional Water System for FY 2021 is \$343,409,900 and for FY 2022 is \$353,712,300 as shown on “Schedule 1A – Water System Revenue Requirements” of the budget document; and

WHEREAS The budgeted annual revenue requirements for the Regional Sewer System for FY 2021 is \$492,602,100 and for FY 2022 is \$507,380,100 as shown on “Schedule 1B – Sewer System Revenue Requirements” of the budget document; and

WHEREAS The operations and maintenance budget for the Regional Water System for FY 2021 is \$137,127,300 and for FY 2022 is \$139,642,500 as shown on

“Schedule 1A – Water System Revenue Requirements” of the budget document; and

WHEREAS The operations and maintenance budget for the Regional Sewer System for FY 2021 is \$184,946,100 and for FY 2022 is \$188,934,600 as shown on Schedule 1B – Sewer System Revenue Requirements” of the budget document; and

WHEREAS The amounts necessary to pay the principal of and interest on all Regional Water System bonds and to restore any reserves therefore established in the Master Bond ordinance is \$185,464,400 for FY 2021 and \$186,234,800 for FY 2022 as shown on “Schedule 4 - Debt Service Coverage Calculations Consistent with the Master Bond Ordinance” of the budget document; and

WHEREAS The amounts necessary to pay the principal of and interest on all Regional Sewer System bonds and to restore any reserves therefore established in the Master Bond Ordinance is \$241,569,300 for FY 2021 and \$247,618,300 for FY 2022 as shown on “Schedule 4 - Debt Service Coverage Calculations Consistent with the Master Bond Ordinance” of the budget document; and

WHEREAS The amounts necessary to fund the annual water system capital expenditures of \$110,673,000 in FY 2021 and \$134,939,000 in FY 2022 for the capital improvement plan in accordance with the Schedule 5C - Water Construction Bond Fund budget with those capital amounts reflecting a 75% Capital Spending Ratio applied to FY 2021 and FY 2022 as shown in the proposed FY 2021 through FY 2025 Capital Improvement Plan; and

WHEREAS The amounts necessary to fund the annual sewer system capital expenditures of \$82,979,000 in FY 2021 and \$84,568,000 in FY 2022 for the capital improvement plan in accordance with Schedule 5D - Sewer Construction Bond Fund budget with those capital amounts reflecting a 75% Capital Spending Ratio applied to FY 2021 and FY 2022 as shown in the proposed FY 2021 through FY 2025 Capital Improvement Plan; and

WHEREAS The amounts necessary to fund the annual water system capital expenditures of \$17,892,000 in FY 2021 and \$13,760,200 in FY 2022 for capital outlay in accordance with the 5A - Water Improvement and Extension Fund budget; and

WHEREAS The amounts necessary to fund the annual sewer system capital expenditures of \$20,481,100 in FY 2021 and \$15,794,700 in FY 2022 for the capital outlay in accordance with the 5B - Sewer Improvement and Extension Fund budget; and

WHEREAS The GLWA Audit Committee began review of the budget and five-year financial plan document developed for FY 2021 through FY 2025 at its

meeting on December 19, 2019; with updates at its meetings on January 27, 2020, and February 21, 2020; and

WHEREAS The GLWA Board conducted a public hearing on the proposed budget in accordance with the provisions of Public Act No. 43 of the Acts of the State Legislature of 1963 (“Budget Hearings of Local Governments”); and

WHEREAS A notice for the public hearing on the proposed budget scheduled for February 26, 2020 at 2:00 pm at the Water Board Building, 735 Randolph, Detroit, Michigan was published in The Detroit Legal News announcing a public hearing on the budget in addition to posting the notice and proposed budget on glwater.org/financials; and

WHEREAS An affirmative vote of 5 Board Members is necessary for the adoption of this Resolution,

NOW THEREFORE BE IT:

RESOLVED That the GLWA Board conducted a public hearing on February 26, 2020 to receive public comment regarding the proposed budget for the Fiscal Years 2021 and 2022; and be it further

RESOLVED That the GLWA Board approves the budget for Fiscal Years 2021 and 2022; and be it finally

RESOLVED That the Chief Executive Officer, and the Chief Financial Officer/Treasurer are authorized to take such other action as may be necessary to accomplish the intent of this resolution.

Schedule 1A - Water System Revenue Requirements Budget

Water System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 330,580,000	\$ 326,215,000	\$ 338,575,500	\$ 7,995,500	2.4%	\$ 349,850,200	\$ 11,274,700	3.3%
10.1 Non-Operating Revenue	9,084,200	5,732,100	4,834,400	(4,249,800)	-46.8%	3,862,100	(972,300)	-20.1%
Total Revenues	339,664,200	331,947,100	343,409,900	3,745,700	1.1%	353,712,300	10,302,400	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$131,490,500	\$131,490,500	\$137,127,300	\$5,636,800	4.3%	\$139,642,500	\$2,515,200	1.8%
2 General Retirement System Legacy Pension	6,048,000	6,048,000	6,048,000	-	0.0%	6,048,000	-	0.0%
3 Debt Service Allocation	137,557,600	137,581,000	143,189,900	5,632,300	4.1%	141,151,000	(2,038,900)	-1.4%
4 General Retirement System Accelerated Pension	6,268,300	6,268,300	6,268,300	-	0.0%	6,268,300	-	0.0%
5 Water Residential Assistance Program Contribution	1,698,300	1,698,300	1,678,000	(20,300)	-1.2%	1,768,600	90,600	5.4%
6 Lease Payment to Local System I&E Account	22,500,000	22,500,000	22,500,000	-	0.0%	22,500,000	-	0.0%
7 Improvement & Extension Fund Allocation	30,125,500	22,385,000	25,721,800	(4,403,700)	-14.6%	35,495,500	9,773,700	38.0%
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	838,400	(38,200)	-4.4%
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 339,664,200	\$ 331,947,100	\$ 343,409,900	\$ 3,745,700	1.1%	\$ 353,712,300	\$ 10,302,400	3.0%

Schedule 1B - Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 471,874,500	\$ 471,874,500	\$ 487,012,900	\$ 15,138,400	3.2%	\$ 501,966,100	\$ 14,953,200	3.1%
10.1 Non-Operating Revenue	8,730,800	5,051,500	5,589,200	(3,141,600)	-36.0%	5,414,000	(175,200)	-3.1%
Total Revenues	480,605,300	476,926,000	492,602,100	11,996,800	2.5%	507,380,100	14,778,000	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$187,057,200	\$187,057,200	\$184,946,100	\$ (2,111,100)	-1.1%	\$188,934,600	\$3,988,500	2.2%
2 General Retirement System Legacy Pension	10,824,000	10,824,000	10,824,000	-	0.0%	10,824,000	-	0.0%
3 Debt Service	215,738,800	213,802,800	209,739,900	(5,998,900)	-2.8%	215,438,500	5,698,600	2.7%
4 General Retirement System Accelerated Pension	11,620,700	11,620,700	11,620,700	-	0.0%	11,620,700	-	0.0%
5 Water Residential Assistance Program Contribution	2,403,000	2,403,000	2,444,200	41,200	1.7%	2,536,900	92,700	3.8%
6 Lease Payment to Local System	27,500,000	27,500,000	27,500,000	-	0.0%	27,500,000	-	0.0%
7 Improvement & Extension Fund Allocation	25,461,600	23,718,300	45,527,200	20,065,600	78.8%	49,195,900	3,668,700	8.1%
8 Operating Reserve Deposit	-	-	-	-	NA	1,329,500	1,329,500	NA
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 480,605,300	\$ 476,926,000	\$ 492,602,100	\$ 11,996,800	2.5%	\$ 507,380,100	\$ 14,778,000	3.0%

Schedule 1C - Combined Water and Sewer System Revenue Requirements Budget

Combined System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 802,454,500	\$ 798,089,500	\$ 825,588,400	\$ 23,133,900	2.9%	\$ 851,816,300	\$ 26,227,900	3.2%
10.1 Non-Operating Revenue	17,815,000	10,783,600	10,423,600	(7,391,400)	-41.5%	9,276,100	(1,147,500)	-11.0%
Total Revenues	820,269,500	808,873,100	836,012,000	15,742,500	1.9%	861,092,400	25,080,400	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$318,547,700	\$318,547,700	\$322,073,400	\$3,525,700	1.1%	\$328,577,100	\$6,503,700	2.0%
2 General Retirement System Legacy Pension	16,872,000	16,872,000	16,872,000	-	0.0%	16,872,000	-	0.0%
3 Debt Service	353,296,400	351,383,800	352,929,800	(366,600)	-0.1%	356,589,500	3,659,700	1.0%
4 General Retirement System Accelerated Pension	17,889,000	17,889,000	17,889,000	-	0.0%	17,889,000	-	0.0%
5 Water Residential Assistance Program Contribution	4,101,300	4,101,300	4,122,200	20,900	0.5%	4,305,500	183,300	4.4%
6 Lease Payment to Local System	50,000,000	50,000,000	50,000,000	-	0.0%	50,000,000	-	0.0%
7 Improvement & Extension Fund Allocation	55,587,100	46,103,300	71,249,000	15,661,900	28.2%	84,691,400	13,442,400	18.9%
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	2,167,900	1,291,300	147.3%
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 820,269,500	\$ 808,873,100	\$ 836,012,000	\$ 15,742,500	1.9%	\$ 861,092,400	\$ 25,080,400	3.0%

There is no Schedule 3 for purposes of the Budget Resolution.

DRAFT

Schedule 4 - Debt Service Coverage Calculations Consistent with the Master Bond Ordinance

Flow of Funds Basis		FY 2021 Water Fund	FY 2021 Sewer Fund	(Informational Only)	FY 2022 Water Fund	FY 2022 Sewer Fund	(Informational Only)
Revenues							
1	Regional System Wholesale Revenues	\$ 338,575,500	\$ 487,012,900	\$ 825,588,400	\$ 349,850,200	\$ 501,966,100	\$ 851,816,300
2	Local System Revenues	72,850,000	99,303,900	172,153,900	74,795,700	110,569,600	185,365,300
3	Miscellaneous Revenue (Local System)	6,149,100	5,634,700	11,783,800	6,149,100	5,634,700	11,783,800
4	Non-Operating Revenue (Regional System)	4,834,400	5,589,200	10,423,600	3,862,100	5,414,000	9,276,100
5	Total Revenues	\$ 422,409,000	\$ 597,540,700	\$ 1,019,949,700	\$ 434,657,100	\$ 623,584,400	\$ 1,058,241,500
Revenue Requirements							
Operations & Maintenance Expense							
6	Regional System Wholesale Expenses	\$ 137,127,300	\$ 184,946,100	\$ 322,073,400	\$ 139,642,500	\$ 188,934,600	\$ 328,577,100
7	Local System Expenses	36,471,300	71,101,900	107,573,200	37,556,300	73,200,700	110,757,000
8	GRS Pension allocable to Regional System	6,048,000	10,824,000	16,872,000	6,048,000	10,824,000	16,872,000
9	GRS Pension allocable to Local System	4,272,000	2,856,000	7,128,000	4,272,000	2,856,000	7,128,000
10	Total Operations & Maintenance Expense	183,918,600	269,728,000	453,646,600	187,518,800	275,815,300	463,334,100
11	Net Revenues after Operations & Maintenance Expense	\$ 238,490,400	\$ 327,812,700	\$ 566,303,100	\$ 247,138,300	\$ 347,769,100	\$ 594,907,400
Debt Service by Lien							
12	Senior Lien Bonds	131,142,700	132,686,600	263,829,300	133,759,600	144,396,600	278,156,200
13	Second Lien Bonds	49,280,800	54,642,000	103,922,800	44,683,600	48,104,300	92,787,900
14	SRF Junior Lien Bonds	5,040,900	54,240,700	59,281,600	7,791,600	55,117,400	62,909,000
15	Total Debt Service	\$ 185,464,400	\$ 241,569,300	\$ 427,033,700	\$ 186,234,800	\$ 247,618,300	\$ 433,853,100
Debt Service Coverage							
16	Senior Lien Bonds $(11)/(12)$	1.82	2.47		1.85	2.41	
17	Second Lien Bonds $(11)/[(12)+(13)]$	1.32	1.75		1.38	1.81	
18	SRF Junior Lien Bonds $(11)/(15)$	1.29	1.36		1.33	1.40	

Schedule 5A - Water Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Water Improvement & Extension Fund			
Water System Revenue Transfers	\$22,385,000	\$25,721,800	\$35,495,500
Receipt of DWSD Shortfall Loan	-	-	-
Grant Revenues	-	-	-
Earnings on Investments, Net	-	-	-
Capital Outlay	(10,125,300)	(17,892,000)	(13,760,200)
Revenue Financed Capital - Strategic	(50,000,000)	(75,000,000)	(85,000,000)
Increase (Decrease) in I&E Reserves	(\$37,740,300)	(\$67,170,200)	(\$63,264,700)
Beginning Year Balance	264,584,900	226,844,600	159,674,400
Projected Ending Balance	\$226,844,600	\$159,674,400	\$96,409,700

Schedule 5B - Sewer Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Sewer Improvement & Extension Fund			
Sewer System Revenue Transfers	\$23,718,300	\$45,527,200	\$49,195,900
Receipt of DWSD Shortfall Loan	19,288,300	19,288,300	8,705,000
Grant Revenues	-	-	-
Earnings on Investments, Net	-	-	-
Capital Outlay	(20,122,200)	(20,481,100)	(15,794,700)
Revenue Financed Capital - Strategic	(25,000,000)	(50,000,000)	(35,000,000)
Increase (Decrease) in I&E Reserves	(\$2,115,600)	(\$5,665,600)	\$7,106,200
Beginning Year Balance	96,648,700	94,533,100	88,867,500
Projected Ending Balance	\$94,533,100	\$88,867,500	\$95,973,700

Schedule 5C - Water Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Water Construction Bond Fund			
Bond Proceeds, Net	\$0	\$0	\$0
Earnings on Investments, Net	1,131,300	820,400	376,100
Transfer from Improvement & Extension Fund	50,000,000	75,000,000	85,000,000
Contributions In Aid of Construction	-	-	-
Grant Revenues (DWRF Loans)	12,898,300	12,365,800	16,590,200
Project Expenditures	(70,930,700)	(110,673,000)	(134,939,000)
Increase (Decrease) in Construction Funds	(\$6,901,100)	(\$22,486,800)	(\$32,972,700)
Beginning Year Balance	92,331,900	85,430,800	62,944,000
Projected Ending Balance	\$85,430,800	\$62,944,000	\$29,971,300

Schedule 5D - Sewer Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Sewer Construction Bond Fund			
Bond Proceeds, Net	\$0	\$0	\$0
Earnings on Investments, Net	706,800	553,900	441,100
Transfer from Improvement & Extension Fund	25,000,000	50,000,000	35,000,000
Contributions In Aid of Construction	-	-	-
Grant Revenues (CWRF Loans)	40,505,000	33,200,000	15,112,000
Project Expenditures	(94,826,000)	(82,979,000)	(84,568,000)
Increase (Decrease) in Construction Funds	(\$28,614,200)	\$774,900	(\$34,014,900)
Beginning Year Balance	82,031,700	53,417,500	54,192,400
Projected Ending Balance	\$53,417,500	\$54,192,400	\$20,177,500

..TITLE

Resolution Regarding Approval of FY 2021 Schedule of Service Charges

..BODY

Agenda of: February 26, 2020
Item No.: **2020-__**
Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: February 26, 2020

RE: Resolution Regarding Approval of FY 2021 Schedule of Service Charges

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority, **approves the following actions, which require a supermajority affirmative vote of at least five (5) members of the Board, and the attached Resolution 2020-__** with an effective date of July 1, 2020:

- 1) FY 2021 wholesale water service schedule of charges;
- 2) FY 2021 wholesale sewer service schedule of charges;
- 3) FY 2021 City of Detroit allocated wholesale water revenue requirement of \$22,765,300, which is the net of \$43,465,300 gross revenue requirement less the Ownership Equity Credit of \$20,700,000 pursuant to the terms of the Water and Sewer Services Agreement (WSSA);
- 4) FY 2021 City of Detroit allocated wholesale sewer revenue requirement of \$192,503,600 which is the net of \$198,019,600 gross revenue requirement less the Ownership Equity Credit of \$5,516,000 in accordance with the WSSA;
- 5) FY 2021 City of Detroit allocated indirect water revenue requirement of \$47,031,500, in accordance with the Regional Water Supply System Lease;

- 6) FY 2021 City of Detroit allocated indirect sewer revenue requirement of \$35,566,600, in accordance with the Regional Sewage Disposal System Lease; and
- 7) authorizes the Chief Executive Officer to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

Pursuant to the water system and sewer system leases signed between the Great Lakes Water Authority (GLWA/Authority) and the City of Detroit, the GLWA began operations of the regional water supply and sewage disposal system on January 1, 2016. Consistent with the terms of those leases, the Authority shall, for each fiscal year fix and approve rates and charges to its customers in an amount that is expected to produce revenues sufficient to satisfy the Authority revenue requirement. The attached, proposed schedule of charges meets that requirement.

Leading up to this charge recommendation, staff presented the proposed FY 2021 and 2022 Biennial Budget and five-year financial plan for FY 2021 to 2025 to the Board at its meeting on January 8, 2020 and an analysis of proposed water and sewer system charges at its January 22, 2020 meeting. A Public Hearing was opened for the FY 2021 Water Service Charges and Sewer Service Charges on February 26, 2019 and will be held open until the FY 2021 charges are approved.

JUSTIFICATION

Great Lakes Water Authority (“GLWA”) management and its consultant, The Foster Group, developed a Schedule of Water Service Charges and Sewer Service Charges for FY 2021 including the City of Detroit Revenue Requirement for the water and sewer systems. These charges support the proposed FY 2021 water system revenue requirements budget and the proposed FY 2021 sewer system revenue requirements, respectively. The FY 2021 water and sewer revenue requirements reflect GLWA’s commitment to not only work within, but perform beyond, the four percent revenue requirement budget limitation outlined in the September 9, 2014 Memorandum of Understanding that resulted in the establishment of the Great Lakes Water Authority. The proposed wholesale customer charges and revenue requirements for the City of Detroit are the result of significant customer engagement in the charge setting process to evaluate the appropriate allocation of revenue requirements.

BUDGET IMPACT

The recommended FY 2021 Schedule of Water Service Charges and Sewer Service Charges as presented produces the necessary revenues to fund the FY 2021 Water System and Sewer System Budget.

COMMITTEE REVIEW

The Audit Committee has reviewed the FY 2021 financial plan, including charge setting matters, at its meetings on December 19, 2019, January 17, 2020 and February 21, 2020.

Proposed FY 2021 Water Charges

The proposed FY 2021 water service charges reflect the proposed Water BUDGET increase of 1.1 percent from FY 2020. As a result of the Contract Alignment Process (CAP) that was undertaken in 2019, the FY 2021 Units of Service were virtually unchanged from FY 2020. For FY 2021 GLWA is anticipating reduced investment earnings and a reduction in estimated sales volumes as compared to FY 2020, **therefore the average water system charges increase is proposed to be 3.8 percent.**

Proposed FY 2021 Sewer Charges

The proposed FY 2021 sewer service charges reflect the proposed Sewer BUDGET increase of 2.5 percent from FY 2020. For FY 2021 GLWA is anticipating reduced investment earnings as compared to FY 2020, **therefore the average sewer system charges increase is proposed to be 3.2 percent.**

Coordination with DWSD's Budget

Under the terms of the lease agreements and related financial commitments, key inputs are required from DWSD. An analysis of the DWSD budget inputs and related reconciliation based upon some of the changes above is also attached.

SHARED SERVICES IMPACT

This item does not impact the Shared Services Agreement between the GLWA and the City of Detroit.

Great Lakes Water Authority

Resolution 2020-

RE: Approval of FY 2021 Schedule of Water Service Charges

By Board Member: _____

Whereas The Great Lakes Water Authority (“GLWA”) management and its consultant, The Foster Group, have developed the attached Schedule of Water Service Charges and Sewer Service Charges for FY 2021, including the direct and indirect City of Detroit Revenue Requirements for the water and sewer systems, to support the FY 2021 water system and sewer system revenue requirements budget with an effective date of July 1, 2020; and

Whereas The FY 2021 water and sewer revenue requirements reflect GLWA’s commitment to work within the four percent limitation outlined in the Memorandum of Understanding; and

Whereas A Public Hearing was held for the Water Service Charges and Sewer Service Charges proposed by the GLWA for FY 2021 on February 26, 2020 at 2:00 p.m.; and

NOW THEREFORE BE IT:

RESOLVED The Great Lakes Water Authority Board approves the proposed:

- 1) FY 2021 wholesale water service schedule of charges;
- 2) FY 2021 wholesale sewer service schedule of charges;
- 3) FY 2021 City of Detroit allocated wholesale water revenue requirement of \$22,765,300, which is the net of \$43,465,300 gross revenue requirement less the Ownership Equity Credit of \$20,700,000 pursuant to the terms of the Water and Sewer Services Agreement (WSSA);
- 4) FY 2021 City of Detroit allocated wholesale sewer revenue requirement of \$192,503,600 which is the net of \$198,019,600 gross revenue requirement less the Ownership Equity Credit of \$5,516,000 in accordance with the WSSA;
- 5) FY 2021 City of Detroit allocated indirect water revenue requirement of \$47,031,500, in accordance with the Regional Water Supply System Lease;

6) FY 2021 City of Detroit allocated indirect sewer revenue requirement of \$35,566,600, in accordance with the Regional Sewage Disposal System Lease; and

RESOLVED That the Chief Executive Officer, and the Chief Financial Officer/Treasurer are authorized to take such other action as may be necessary to accomplish the intent of this vote.

Great Lakes Water Authority
Proposed FY 2021 Water Supply System Allocated Revenue Requirements and Service Charges

Line No.	Customer	Fixed Monthly Charge (a) \$/mo	Commodity Charge (a) \$/Mcf	Annual Revenue Req'ts \$
1	Allen Park	123,000	7.84	2,460,200
2	Almont Village	12,300	10.52	245,400
3	Ash Township	42,600	8.32	852,400
4	Belleville	16,100	9.80	321,600
5	Berlin Township	37,600	11.45	752,400
6	Brownstown Township	188,300	10.88	3,766,900
7	Bruce Twp	16,700	71.93	334,900
8	Burtchville Twp	16,900	18.72	337,600
9	Canton Township	530,200	12.23	10,603,400
10	Center Line	24,100	6.23	481,000
11	Chesterfield Township	218,700	10.37	4,373,300
12	Clinton Township	392,000	7.83	7,839,300
13	Commerce Township	184,300	14.57	3,686,300
14	Dearborn	542,500	7.27	10,850,200
15	Dearborn Heights	190,100	7.74	3,801,700
16	Eastpointe	81,000	6.18	1,619,600
17	Ecorse	79,200	4.33	1,583,300
18	Farmington	52,600	9.27	1,051,100
19	Farmington Hills	463,200	10.24	9,263,700
20	Ferndale	52,500	6.23	1,050,100
21	Flat Rock	70,900	9.21	1,417,200
22	Flint (b)	575,100	8.80	11,501,400
23	Fraser	63,500	8.55	1,269,100
24	Garden City	88,300	8.34	1,766,000
25	Gibraltar	17,400	8.35	347,400
26	Grosse Ile Township	57,600	11.70	1,152,300
27	Grosse Pt. Park	77,000	11.11	1,540,600
28	Grosse Pt. Shores	34,000	13.70	680,700
29	Grosse Pt. Woods	74,100	9.17	1,481,600
30	Hamtramck	41,100	5.41	821,200
31	Harper Woods	42,700	6.80	854,900
32	Harrison Township	79,500	6.85	1,590,100
33	Hazel Park	38,400	6.01	767,900
34	Highland Park	60,600	4.64	1,212,200
35	Huron Township	76,400	10.13	1,527,600
36	Imlay City	75,000	13.57	1,500,000
37	Imlay Twp	800	40.00	16,800
38	Inkster	64,100	5.48	1,282,600
39	Keego Harbor	15,600	12.38	311,000
40	Lapeer	80,700	11.90	1,613,200
41	Lenox Township	15,400	8.23	307,500
42	Lincoln Park	116,500	6.15	2,329,200
43	Livonia	597,700	9.97	11,954,000
44	Macomb Township	656,100	16.11	13,122,700
45	Madison Heights	99,900	6.85	1,997,100
46	Mayfield Twp	2,500	23.45	49,700
47	Melvindale	33,700	6.28	674,300
48	New Haven, Village of	20,600	6.77	411,800
49	N O C W A	1,149,100	10.27	22,982,800
50	Northville	46,300	11.78	926,700
51	Northville Township	291,500	17.04	5,830,400
52	Novi	471,100	12.75	9,421,300
53	Oak Park	72,000	6.06	1,440,500
54	Oakland Co. Drain Comm.	4,400	3.22	87,300
55	Plymouth	55,800	10.28	1,115,700
56	Plymouth Township	231,000	11.37	4,620,100
57	Redford Township	166,100	8.08	3,321,200
58	River Rouge	35,000	7.57	700,100
59	Riverview	45,200	7.87	903,500
60	Rockwood	14,400	11.70	288,600

Great Lakes Water Authority
Proposed FY 2021 Water Supply System Allocated Revenue Requirements and Service Charges

Line No.	Customer	Fixed Monthly Charge (a) \$/mo	Commodity Charge (a) \$/Mcf	Annual Revenue Req'ts \$
61	Romeo	13,000	18.39	260,800
62	Romulus	217,500	8.26	4,349,700
63	Roseville	139,400	5.93	2,788,300
64	Royal Oak Township	10,600	7.14	211,500
65	S O C W A	1,198,600	7.62	23,972,900
66	Shelby Township	728,100	15.22	14,561,400
67	South Rockwood	6,000	10.04	120,200
68	Southgate	115,100	7.94	2,302,700
69	St. Clair County-Greenwood Township	24,100	12.90	482,700
70	St. Clair Shores	159,000	6.72	3,180,800
71	Sterling Heights	788,800	11.04	15,776,600
72	Sumpter Township	34,600	9.71	692,900
73	Sylvan Lake	12,200	15.11	243,100
74	Taylor	242,600	7.28	4,851,400
75	Trenton	87,100	8.15	1,742,500
76	Troy	704,200	12.20	14,083,000
77	Utica	30,000	9.36	599,700
78	Van Buren Township	178,000	11.20	3,560,500
79	Walled Lake	41,900	10.69	837,500
80	Warren	532,600	6.92	10,651,400
81	Washington Township	117,400	12.56	2,348,500
82	Wayne	160,300	13.44	3,206,200
83	West Bloomfield Township	540,600	16.37	10,812,900
84	Westland	323,200	7.84	6,464,300
85	Wixom	128,200	13.80	2,563,900
86	Woodhaven	87,100	11.97	1,741,900
87	Ypsilanti Comm Util Auth	543,500	8.80	10,869,800
88	Total Wholesale Contract Customers			323,689,800
89	Adjustment to Flint Revenue Requirement for KWA Debt Service			(6,667,400)
90	Adjustment for Highland Park Bad Debt			(1,212,200)
91	Net Requirement from Wholesale Charges (agrees with GLWA Budget "Schedule 3A")			315,810,200
Detroit Customer Class - \$				
92	Wholesale Revenue Requirement (c)			43,465,300
93	less: Ownership Benefit per Lease			(20,700,000)
94	Net Wholesale Revenue Requirement			22,765,300
95	Indirect Retail Revenue Requirements (d)			47,031,500
96	less: Use of Lease Payment for Debt Service			(8,775,700)
97	Net Indirect Retail Revenue Requirements (d)			38,255,800
98	Subtotal Subject to GLWA Board Approval (94) + (97)			61,021,100
99	Direct Retail Revenue Requirements (e)			40,743,300
100	Total Local System Revenue Requirement (97) + (99)			78,999,100
101	Net Requirement from Detroit Customer Class (agrees with GLWA Budget "Schedule 3A")			101,764,400

(a) Reflects proposed charges presented on January 23, 2020.

(b) Net fixed monthly charge will include \$555,600 monthly credits for KWA debt service.

(c) Wholesale revenue requirements for the Detroit Customer Class.

(d) Local System revenue requirements related to Master Bond Ordinance (local debt service, etc.)

(e) Local System operating expenses (net of shared services reimbursement) and I&E deposit. Not Subject to GLWA Board approval.

Great Lakes Water Authority
Proposed FY 2021 Sewage Disposal System Allocated Revenue Requirements and Service Charges

	Fixed Monthly <u>Charge</u> \$/mo	Annual Revenue <u>Requirement</u> \$
<u>Suburban Wholesale</u>		
1	6,470,000	77,639,500
2	4,631,800	55,582,000
3	3,867,700	46,412,300
4	2,980,100	35,760,900
5	2,122,700	25,472,200
6	1,666,400	19,996,200
7	235,200	2,821,800
8	154,800	1,858,000
9	131,100	1,573,600
10	98,400	1,181,100
11	88,400	1,060,700
12	73,100	876,900
13	484,800	5,817,500
14	341,100	4,093,600
15	76,300	915,400
16	18,700	224,800
17	22,600	270,800
18	4,400	52,200
19		----- 281,609,500
20		14,209,800
21		----- 295,819,300
22		less: Highland Park Bad Debt (1,310,000)
23		----- 294,509,300
<i>* Wholesale charges will be effective July 1, 2020</i>		
Detroit Customer Class - \$		
24		198,019,600
25		less: Ownership Benefit per Lease (5,516,000)
26		192,503,600
27		35,566,600
28		less: Use of Lease Payment for Debt Service (4,585,900)
29		30,980,700
30		----- 223,484,300
31		73,957,900
32		104,938,600
33		----- 297,442,200

(a) Agrees with GLWA Budget "Schedule 3A"

(b) Reserved

(c) Wholesale revenue requirements for the Detroit Customer Class.

(d) Local System revenue requirements related to Master Bond Ordinance (local debt service, etc.)

(e) Local System operating expenses (net of shared services reimbursement) and I&E deposit. Not Subject to GLWA Board approval.

Great Lakes Water Authority
Proposed FY 2021 Industrial Specific Retail Sewer Charges

Industrial Waste Control Charges	
<u>Meter Size - inches</u>	<u>Charge</u> \$/mo
5/8	3.49
3/4	5.24
1	8.73
1-1/2	19.20
2	27.92
3	50.61
4	69.80
6	104.70
8	174.50
10	244.30
12	279.20
14	349.00
16	418.80
18	488.60
20	558.40
24	628.20
30	698.00
36	767.80
48	837.60

Pollutant Surcharges	
<u>Pollutant</u>	<u>Charge</u> \$/lb
BIOCHEMICAL OXYGEN DEMAND (BOD) for concentrations > 275 mg/l	0.508
TOTAL SUSPENDED SOLIDS (TSS) for concentrations > 350 mg/l	0.516
PHOSPHORUS (P) for concentrations > 12 mg/l	7.611
FATS, OIL AND GREASE (FOG) for concentrations > 100 mg/l	0.490
SEPTAGE DISPOSAL FEE Per 500 gallons of disposal	49.00

Great Lakes Water Authority
Proposed FY 2021 Industrial Specific Retail Sewer Charges

Industrial Waste Control Charges- Administration Only
--

<u>Meter Size - inches</u>	<u>Charge</u> \$/mo
5/8	0.87
3/4	1.31
1	2.18
1-1/2	4.80
2	6.98
3	12.65
4	17.45
6	26.18
8	43.63
10	61.08
12	69.80
14	87.25
16	104.70
18	122.15
20	139.60
24	157.05
30	174.50
36	191.95
48	209.40



Financial Services Audit Committee Communication

Date: February 20, 2020

To: Great Lakes Water Authority Audit Committee

From: Nicolette Bateson, CPA, Chief Financial Officer & Treasurer

Re: Continued Review – Proposed FY 2021 & FY 2022 Biennial Budget
and Five-Year Financial Plan

Background: In accordance with service agreements with Great Lakes Water Authority (GLWA) member partners, charges for the next fiscal year are annually presented at the end of January each year. This year that date is January 23, 2020. Key steps in that process are the development of a proposed biennial budget and five-year plan as well as the capital improvement plan. The first year of the biennial budget is the “revenue requirement” for the purposes of establishing costs for allocation among member partners. The information presented in the “Analysis” section below continues the discussion of the proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan that was begun at the December 19, 2019 Audit Committee meeting.

Analysis: In preparation for a public hearing related to the upcoming biennial budget and related FY 2021 charges on February 26, 2020, the attached summary was prepared (see “*FY 2021 & FY 2022 Biennial Budget and related FY 2021 Schedule of Charges*”). This document includes a one-pager on both the budget (page 9) and charges (page 16).

Review of the proposed budget and five-year plan as well as charges has occurred at the following meetings.

- ✓ December 19, 2019 Audit Committee
- ✓ January 8, 2020 Board Meeting (emphasis on budget and five-year plan)
- ✓ January 22, 2020 Board Meeting (emphasis on budget and five-year plan)
- ✓ January 27, 2020 Audit Committee (emphasis on departmental presentations and other analysis)

These meetings are in addition to annual rollout meetings with member partners.

For today’s Audit Committee, staff is preparing follow-up analysis and draft resolutions. As we proceed toward the public hearing, there are some interdependencies that may impact the readiness of the Board to act on the proposed budget and charges on February 26, 2020

after receiving public input. In particular, resolution of the Water Residential Assistance Program (WRAP) funding proposal remains open. Staff looks forward to a discussion at the Audit Committee of any open items and how to facilitate resolution of budget and charges for Board action.

In the event that the Board does not act on the budget and charges on February 26, 2020, it is the Board's policy to meet weekly until the open matters are resolved. Staff would like to discuss those potential dates at the Audit Committee meeting.

Proposed Action: Receive and file this report.



FY 2021 & FY 2022
Biennial Budget
and
FY 2021 Schedule of Charges

January 24, 2020

January 24, 2020

Annually, in January, the Great Lakes Water Authority (GLWA) presents a proposed biennial budget and related schedule of charges for the upcoming fiscal year which begins on July 1, 2020. In addition, public hearings on the proposed budget and charges is scheduled for February each year. This year, the Public Hearings for the proposed FY 2021 and FY 2022 Biennial Budget and FY 2021 Water and Sewerage Service Charges are scheduled for the Board of Directors meeting at **2:00 p.m. on Wednesday, February 26, 2020 at 735 Randolph, 5th Floor Board Room, Detroit, Michigan 48226.**

This hearing will provide GLWA an opportunity to present the Authority's budget which encompasses the Capital Improvement Program (CIP), estimated sales volume and other factors that serve as the basis for the proposed revenue requirements and schedule of charges for FY 2021. This hearing also provides an opportunity for the public and our member partners to comment or submit questions in writing related to the proposed charges. All comments or questions raised during the hearing will receive a written response. Please note that the proposed budget and charges are subject to change after the public hearing and subsequent deliberation by the GLWA Board.

Our primary objective continues to be one of providing our member partners with wholesale water and wastewater services of unquestionable quality at fair and equitable charges. GLWA is committed to exceeding our member partners' expectations in the region. GLWA would like to remind our valued member partners of added services that we provide at no additional cost.

- ✓ Extensive training and development opportunities for your team members through the One Water Institute (OWI)
- ✓ Expanded local system water testing to meet new Michigan Department of Environment Great Lakes and Energy (EGLE) for all member partners
- ✓ Public Communication materials related to the state of Michigan's new Lead and Copper Rule, educating the public about the perils of "flushable" wipes, and providing easy-to digest graphics regarding a range of emerging contaminants. These materials can be found at <https://www.glwater.org/members/member-partner-resources/>
- ✓ Community access videos designed to inform local elected officials, staff and residents on GLWA's budget and service charges
 - Introduction to GLWA Charges and Community Rates* - <http://bit.ly/2Eg4I6J>
 - The ABC's of Water Charges* - <http://bit.ly/2DFWnlh>
 - From Budgets to Customer Sewer and Water Charges* - <http://bit.ly/2DCDkyy>

If you are unable to attend the Public Hearing, comments or questions may be submitted in writing to Sue F. McCormick, Chief Executive Officer, Great Lakes Water Authority, 735 Randolph Detroit, Michigan, 48226.



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**GREAT LAKES WATER AUTHORITY
NOTICE OF PUBLIC HEARING
PROPOSED BIENNIAL BUDGET
For the Two-Year Period ended June 30, 2022
(FY 2021 and FY 2022)**

Notice is hereby given that the Great Lakes Water Authority Board of Directors will hold a Public Hearing on the FY 2021 and FY 2022 Biennial budget.

DATE: Wednesday, February 26, 2020

TIME: 2:00 p.m.

**PLACE: 5th Floor Board Room
735 Randolph
Detroit, Michigan 48226**

The proposed budget is scheduled to take effect on July 1, 2020. The budget is available for public inspection at the office of the Authority, Water Board Building, 735 Randolph, Detroit, Michigan 48226. A copy of the budget may also be found online at <https://www.glwater.org/financials/> .

Individuals or groups wishing to make oral presentations or submit prepared statements pertaining to the proposed budget may do so at the Public Hearing. Individuals or groups giving oral presentations are encouraged to have their presentations in writing, with a copy to be submitted for the record to the Great Lakes Water Authority Board of Directors. Oral presentations should be brief to allow all parties the opportunity to participate. A time limit may be imposed based upon registration at the hearing.

Interested parties who are unable to attend the Public Hearing may submit their comments in writing to:

Sue F. McCormick, Chief Executive Officer
Great Lakes Water Authority
735 Randolph
Detroit, Michigan, 48226

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 1A - Water System Revenue Requirements Budget

Water System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 330,580,000	\$ 326,215,000	\$ 338,575,500	\$ 7,995,500	2.4%	\$ 349,850,200	\$ 11,274,700	3.3%
10.1 Non-Operating Revenue	9,084,200	5,732,100	4,834,400	(4,249,800)	-46.8%	3,862,100	(972,300)	-20.1%
Total Revenues	339,664,200	331,947,100	343,409,900	3,745,700	1.1%	353,712,300	10,302,400	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$131,490,500	\$131,490,500	\$137,127,300	\$5,636,800	4.3%	\$139,642,500	\$2,515,200	1.8%
2 General Retirement System Legacy Pension	6,048,000	6,048,000	6,048,000	-	0.0%	6,048,000	-	0.0%
3 Debt Service Allocation	137,557,600	137,581,000	143,189,900	5,632,300	4.1%	141,151,000	(2,038,900)	-1.4%
4 General Retirement System Accelerated Pension	6,268,300	6,268,300	6,268,300	-	0.0%	6,268,300	-	0.0%
5 Water Residential Assistance Program Contribution	1,698,300	1,698,300	1,678,000	(20,300)	-1.2%	1,768,600	90,600	5.4%
6 Lease Payment to Local System I&E Account	22,500,000	22,500,000	22,500,000	-	0.0%	22,500,000	-	0.0%
7 Improvement & Extension Fund Allocation	30,125,500	22,385,000	25,721,800	(4,403,700)	-14.6%	35,495,500	9,773,700	38.0%
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	838,400	(38,200)	-4.4%
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 339,664,200	\$ 331,947,100	\$ 343,409,900	\$ 3,745,700	1.1%	\$ 353,712,300	\$ 10,302,400	3.0%

Note: Revenues from Charges for FY 2021 above is comprised of the following

Regional System Wholesale Revenues – Suburban Wholesale Customers	\$315,810,200
Regional System Wholesale Revenues – Detroit Customers	<u>22,765,300</u>
Total Revenues from Charges	<u>\$338,575,500</u>

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 1B - Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 471,874,500	\$ 471,874,500	\$ 487,012,900	\$ 15,138,400	3.2%	\$ 501,966,100	\$ 14,953,200	3.1%
10.1 Non-Operating Revenue	8,730,800	5,051,500	5,589,200	(3,141,600)	-36.0%	5,414,000	(175,200)	-3.1%
Total Revenues	480,605,300	476,926,000	492,602,100	11,996,800	2.5%	507,380,100	14,778,000	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$187,057,200	\$187,057,200	\$184,946,100	\$ (2,111,100)	-1.1%	\$188,934,600	\$3,988,500	2.2%
2 General Retirement System Legacy Pension	10,824,000	10,824,000	10,824,000	-	0.0%	10,824,000	-	0.0%
3 Debt Service	215,738,800	213,802,800	209,739,900	(5,998,900)	-2.8%	215,438,500	5,698,600	2.7%
4 General Retirement System Accelerated Pension	11,620,700	11,620,700	11,620,700	-	0.0%	11,620,700	-	0.0%
5 Water Residential Assistance Program Contribution	2,403,000	2,403,000	2,444,200	41,200	1.7%	2,536,900	92,700	3.8%
6 Lease Payment to Local System	27,500,000	27,500,000	27,500,000	-	0.0%	27,500,000	-	0.0%
7 Improvement & Extension Fund Allocation	25,461,600	23,718,300	45,527,200	20,065,600	78.8%	49,195,900	3,668,700	8.1%
8 Operating Reserve Deposit	-	-	-	-	NA	1,329,500	1,329,500	NA
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 480,605,300	\$ 476,926,000	\$ 492,602,100	\$ 11,996,800	2.5%	\$ 507,380,100	\$ 14,778,000	3.0%

Note: Revenues from Charges for FY 2021 above is comprised of the following

Regional System Wholesale Revenues – Suburban Wholesale Customers	\$294,509,300
Regional System Wholesale Revenues – Detroit Customers	<u>192,503,600</u>
Total Revenues from Charges	<u>\$487,012,900</u>

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 1C - Combined Water and Sewer System Revenue Requirements Budget

Combined System Revenue Requirements	Current Year		Biennial Budget					
	FY 2020 Adopted	FY 2020 Estimated	FY 2021 Requested	FY 2021 \$ Change	FY 2021 % Change	FY 2022 Requested	FY 2022 \$ Change	FY 2022 % Change
Revenues								
11 Revenues from Charges	\$ 802,454,500	\$ 798,089,500	\$ 825,588,400	\$ 23,133,900	2.9%	\$ 851,816,300	\$ 26,227,900	3.2%
10.1 Non-Operating Revenue	17,815,000	10,783,600	10,423,600	(7,391,400)	-41.5%	9,276,100	(1,147,500)	-11.0%
Total Revenues	820,269,500	808,873,100	836,012,000	15,742,500	1.9%	861,092,400	25,080,400	3.0%
Revenue Requirements								
1 Operations & Maintenance (O&M) Expense	\$318,547,700	\$318,547,700	\$322,073,400	\$3,525,700	1.1%	\$328,577,100	\$6,503,700	2.0%
2 General Retirement System Legacy Pension	16,872,000	16,872,000	16,872,000	-	0.0%	16,872,000	-	0.0%
3 Debt Service	353,296,400	351,383,800	352,929,800	(366,600)	-0.1%	356,589,500	3,659,700	1.0%
4 General Retirement System Accelerated Pension	17,889,000	17,889,000	17,889,000	-	0.0%	17,889,000	-	0.0%
5 Water Residential Assistance Program Contribution	4,101,300	4,101,300	4,122,200	20,900	0.5%	4,305,500	183,300	4.4%
6 Lease Payment to Local System	50,000,000	50,000,000	50,000,000	-	0.0%	50,000,000	-	0.0%
7 Improvement & Extension Fund Allocation	55,587,100	46,103,300	71,249,000	15,661,900	28.2%	84,691,400	13,442,400	18.9%
8 Operating Reserve Deposit	3,976,000	3,976,000	876,600	(3,099,400)	-78.0%	2,167,900	1,291,300	147.3%
9 Extraordinary Repair & Replacement Deposit	-	-	-	-	NA	-	-	NA
Annual Budgeted Revenue Requirements	\$ 820,269,500	\$ 808,873,100	\$ 836,012,000	\$ 15,742,500	1.9%	\$ 861,092,400	\$ 25,080,400	3.0%

Great Lakes Water Authority
FY 2021 & FY 2022 Proposed Biennial Budget Summary
As of January 24, 2020

There is no Schedule 3 for purposes of this presentation

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 4 - Debt Service Coverage Calculations Consistent with the Master Bond Ordinance

Flow of Funds Basis		FY 2021 Water Fund	FY 2021 Sewer Fund	(Informational Only)	FY 2022 Water Fund	FY 2022 Sewer Fund	(Informational Only)
Revenues							
1	Regional System Wholesale Revenues	\$ 338,575,500	\$ 487,012,900	\$ 825,588,400	\$ 349,850,200	\$ 501,966,100	\$ 851,816,300
2	Local System Revenues	72,850,000	99,303,900	172,153,900	74,795,700	110,569,600	185,365,300
3	Miscellaneous Revenue (Local System)	6,149,100	5,634,700	11,783,800	6,149,100	5,634,700	11,783,800
4	Non-Operating Revenue (Regional System)	4,834,400	5,589,200	10,423,600	3,862,100	5,414,000	9,276,100
5	Total Revenues	\$ 422,409,000	\$ 597,540,700	\$ 1,019,949,700	\$ 434,657,100	\$ 623,584,400	\$ 1,058,241,500
Revenue Requirements							
Operations & Maintenance Expense							
6	Regional System Wholesale Expenses	\$ 137,127,300	\$ 184,946,100	\$ 322,073,400	\$ 139,642,500	\$ 188,934,600	\$ 328,577,100
7	Local System Expenses	36,471,300	71,101,900	107,573,200	37,556,300	73,200,700	110,757,000
8	GRS Pension allocable to Regional System	6,048,000	10,824,000	16,872,000	6,048,000	10,824,000	16,872,000
9	GRS Pension allocable to Local System	4,272,000	2,856,000	7,128,000	4,272,000	2,856,000	7,128,000
10	Total Operations & Maintenance Expense	183,918,600	269,728,000	453,646,600	187,518,800	275,815,300	463,334,100
11	Net Revenues after Operations & Maintenance Expense	\$ 238,490,400	\$ 327,812,700	\$ 566,303,100	\$ 247,138,300	\$ 347,769,100	\$ 594,907,400
Debt Service by Lien							
12	Senior Lien Bonds	131,142,700	132,686,600	263,829,300	133,759,600	144,396,600	278,156,200
13	Second Lien Bonds	49,280,800	54,642,000	103,922,800	44,683,600	48,104,300	92,787,900
14	SRF Junior Lien Bonds	5,040,900	54,240,700	59,281,600	7,791,600	55,117,400	62,909,000
15	Total Debt Service	\$ 185,464,400	\$ 241,569,300	\$ 427,033,700	\$ 186,234,800	\$ 247,618,300	\$ 433,853,100
Debt Service Coverage							
16	Senior Lien Bonds $(11)/(12)$	1.82	2.47		1.85	2.41	
17	Second Lien Bonds $(11)/[(12)+(13)]$	1.32	1.75		1.38	1.81	
18	SRF Junior Lien Bonds $(11)/(15)$	1.29	1.36		1.33	1.40	

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 5A - Water Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Water Improvement & Extension Fund			
Water System Revenue Transfers	\$22,385,000	\$25,721,800	\$35,495,500
Receipt of DWSD Shortfall Loan	-	-	-
Grant Revenues	-	-	-
Earnings on Investments, Net	-	-	-
Capital Outlay	(10,125,300)	(17,892,000)	(13,760,200)
Revenue Financed Capital - Strategic	(50,000,000)	(75,000,000)	(85,000,000)
Increase (Decrease) in I&E Reserves	(\$37,740,300)	(\$67,170,200)	(\$63,264,700)
Beginning Year Balance	264,584,900	226,844,600	159,674,400
Projected Ending Balance	\$226,844,600	\$159,674,400	\$96,409,700

Schedule 5B - Sewer Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Sewer Improvement & Extension Fund			
Sewer System Revenue Transfers	\$23,718,300	\$45,527,200	\$49,195,900
Receipt of DWSD Shortfall Loan	19,288,300	19,288,300	8,705,000
Grant Revenues	-	-	-
Earnings on Investments, Net	-	-	-
Capital Outlay	(20,122,200)	(20,481,100)	(15,794,700)
Revenue Financed Capital - Specific	-	-	-
Revenue Financed Capital - Strategic	(25,000,000)	(50,000,000)	(35,000,000)
Increase (Decrease) in I&E Reserves	(\$2,115,600)	(\$5,665,600)	\$7,106,200
Beginning Year Balance	96,648,700	94,533,100	88,867,500
Projected Ending Balance	\$94,533,100	\$88,867,500	\$95,973,700

Great Lakes Water Authority
 FY 2021 & FY 2022 Proposed Biennial Budget Summary
 As of January 24, 2020

Schedule 5C - Water Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Water Construction Bond Fund			
Bond Proceeds, Net	\$0	\$0	\$0
Earnings on Investments, Net	1,131,300	820,400	376,100
Transfer from Improvement & Extension Fund	50,000,000	75,000,000	85,000,000
Contributions In Aid of Construction	-	-	-
Grant Revenues (DWRF Loans)	12,898,300	12,365,800	16,590,200
Project Expenditures	(70,930,700)	(110,673,000)	(134,939,000)
Increase (Decrease) in Construction Funds	(\$6,901,100)	(\$22,486,800)	(\$32,972,700)
Beginning Year Balance	92,331,900	85,430,800	62,944,000
Projected Ending Balance	\$85,430,800	\$62,944,000	\$29,971,300

Schedule 5D - Sewer Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget	
	FY 2020 Estimated	FY 2021 Requested	FY 2022 Forecast
Sewer Construction Bond Fund			
Bond Proceeds, Net	\$0	\$0	\$0
Earnings on Investments, Net	-	-	-
Transfer from Improvement & Extension Fund - Specific	(82,031,700)	(53,417,500)	(54,192,400)
Transfer from Improvement & Extension Fund	(53,417,500)	(54,192,400)	(20,177,500)
Contributions In Aid of Construction	-	-	-
Grant Revenues (CWRP Loans)	-	-	-
Project Expenditures	-	-	-
Increase (Decrease) in Construction Funds	(\$135,449,200)	(\$107,609,900)	(\$74,369,900)
Beginning Year Balance	-	(135,449,200)	(243,059,100)
Projected Ending Balance	(\$135,449,200)	(\$243,059,100)	(\$317,429,000)

The combined GLWA revenue requirement budget is the basis for establishing the annual charges for services. Much of the FY 2021 budget of \$836 million is fixed commitments such as debt service (42%), lease payment (6%), legacy liabilities (4%) as well as capital funding (9%), and other (1%). Operations & Maintenance (O&M) expense represents \$322 million, or 38%, of the total requirement for FY 2021 and is the focus of this One Pager. FY 2021 presents an increase of \$3.5 million, or 1.1%, over FY 2020. The second year of the biennial budget, FY 2022, increases 2%. Highlights for the upcoming year include:

Water Operations – increase of \$5.9 million

The majority of this net increase (\$5.2 million) is to the removal, hauling, and disposal of alum sludge at the water treatment plants. This mobile dredging & video piping program is a long-term maintenance effort that aligns with regulatory requirements.

Wastewater Operations – decrease \$309 thousand

Ongoing efforts to achieve operational efficiencies have resulted in budgeted reductions of \$548,000 in utilities and \$758,000 in chemicals. Additionally, increased production through the environmentally stable Bio-dryer Facility, which significantly reduces the high cost of material sent to landfills, contributed an additional \$1,469,000 in projected savings. These savings are being reinvested into a multi-year instrumentation and control systems upgrade program budgeted at \$742,000 for FY 2021.

Centralized Services¹ – decrease \$4.2 million

Factors that decreased the budget include a reduction of contractual services in the planning area (\$2.2 million) due to material completion of large consulting projects for asset management and the wastewater master plan in FY 2020. In

addition, the pace of spending for the new, annual Water Transmission System Pipe Integrity Program has been slowed to align with other operational demands and projects.

Also, the field services team expects a reduction of \$2.5 million of contracted sewer cleaning and investigation services. The facilities team expects a decrease of \$2 million dollars from improved pricing on snow removal (\$400,000), in-sourcing trade services (\$500,000), and lower facility costs based on historical review (\$1.1 million).

Factors increasing the budget are related to information technology (\$2.7 million). This includes a loss of \$1.2 million in information shared service reimbursements as well as implementation expenses for a new enterprise asset management system (\$1.6 million).

Administrative Services² – increase \$2.1 million

The administrative services budget is largely driven by personnel costs and contractual services for eight areas. Programs that are supported by these increases include One Water Institute, procurement strategic initiatives, internal audit, and government relations service.

Staffing - If all positions were filled for the entire year, the full-time-equivalent (FTE) count would be 1,219, up by 12 positions from the prior year plan. Based on assumptions related to recruitment and turnover, the budget provides funding for 1,200 positions. Two positions are in water operations, four in wastewater operations, one in safety, two in organizational development, two in financial services and a partial allocation among other areas.

Questions? Contact the Office of the Chief Financial Officer at cfo@glwater.org

¹ Includes the Planning Services, Systems Operations Control; Facility and Fleet Operations; Field Service Operations; Energy, Research & Innovation; Information Technology; and Security & Integrity/HazMat.

² Includes the Board of Directors, Chief Executive Officer, Chief Administrative & Compliance Officer, Risk Management & Safety, General Counsel, Public Affairs, Organizational Development, and Financial Services



**GREAT LAKES WATER AUTHORITY
NOTICE OF PUBLIC HEARING
PROPOSED FY 2021 WATER AND SEWERAGE SERVICE CHARGES**

Notice is hereby given that the Great Lakes Water Authority Board of Directors will hold a Public Hearing on Water and Sewerage service charges proposed by the Great Lakes Water Authority for Fiscal Year 2021.

DATE: Wednesday, February 26, 2020

TIME: 2:00 p.m.

**PLACE: 5th Floor Board Room
735 Randolph
Detroit, Michigan 48226**

The proposed service charges are scheduled to take effect on July 1, 2020.

The proposed schedule of charges is available for public inspection at the office of the Authority, Water Board Building, 735 Randolph, Detroit, Michigan 48226. The proposed schedule of charges may also be found online at <https://www.glwater.org/financials/>.

Individuals or groups wishing to make oral presentations or submit prepared statements pertaining to the proposed service charges may do so at the Public Hearing. Individuals or groups giving oral presentations are encouraged to have their presentations in writing, with a copy to be submitted for the record to the Great Lakes Water Authority Board of Directors. Oral presentations should be brief to allow all parties the opportunity to participate. A time limit may be imposed based upon registration at the hearing.

Interested parties who are unable to attend the Public Hearing may submit their comments in writing to:

Sue F. McCormick, Chief Executive Officer
Great Lakes Water Authority
735 Randolph
Detroit, Michigan, 48226

Great Lakes Water Authority
Proposed FY 2021 Water Supply System Allocated Revenue Requirements and Service Charges

Line No.	Customer	Fixed Monthly Charge (a) \$/mo	Commodity Charge (a) \$/Mcf	Annual Revenue Req'ts \$
1	Allen Park	123,000	7.84	2,460,200
2	Almont Village	12,300	10.52	245,400
3	Ash Township	42,600	8.32	852,400
4	Belleville	16,100	9.80	321,600
5	Berlin Township	37,600	11.45	752,400
6	Brownstown Township	188,300	10.88	3,766,900
7	Bruce Twp	16,700	71.93	334,900
8	Burtchville Twp	16,900	18.72	337,600
9	Canton Township	530,200	12.23	10,603,400
10	Center Line	24,100	6.23	481,000
11	Chesterfield Township	218,700	10.37	4,373,300
12	Clinton Township	392,000	7.83	7,839,300
13	Commerce Township	184,300	14.57	3,686,300
14	Dearborn	542,500	7.27	10,850,200
15	Dearborn Heights	190,100	7.74	3,801,700
16	Eastpointe	81,000	6.18	1,619,600
17	Ecorse	79,200	4.33	1,583,300
18	Farmington	52,600	9.27	1,051,100
19	Farmington Hills	463,200	10.24	9,263,700
20	Ferndale	52,500	6.23	1,050,100
21	Flat Rock	70,900	9.21	1,417,200
22	Flint (b)	575,100	8.80	11,501,400
23	Fraser	63,500	8.55	1,269,100
24	Garden City	88,300	8.34	1,766,000
25	Gibraltar	17,400	8.35	347,400
26	Grosse Ile Township	57,600	11.70	1,152,300
27	Grosse Pt. Park	77,000	11.11	1,540,600
28	Grosse Pt. Shores	34,000	13.70	680,700
29	Grosse Pt. Woods	74,100	9.17	1,481,600
30	Hamtramck	41,100	5.41	821,200
31	Harper Woods	42,700	6.80	854,900
32	Harrison Township	79,500	6.85	1,590,100
33	Hazel Park	38,400	6.01	767,900
34	Highland Park	60,600	4.64	1,212,200
35	Huron Township	76,400	10.13	1,527,600
36	Imlay City	75,000	13.57	1,500,000
37	Imlay Twp	800	40.00	16,800
38	Inkster	64,100	5.48	1,282,600
39	Keego Harbor	15,600	12.38	311,000
40	Lapeer	80,700	11.90	1,613,200
41	Lenox Township	15,400	8.23	307,500
42	Lincoln Park	116,500	6.15	2,329,200
43	Livonia	597,700	9.97	11,954,000
44	Macomb Township	656,100	16.11	13,122,700
45	Madison Heights	99,900	6.85	1,997,100
46	Mayfield Twp	2,500	23.45	49,700
47	Melvindale	33,700	6.28	674,300
48	New Haven, Village of	20,600	6.77	411,800
49	N O C W A	1,149,100	10.27	22,982,800
50	Northville	46,300	11.78	926,700
51	Northville Township	291,500	17.04	5,830,400
52	Novi	471,100	12.75	9,421,300
53	Oak Park	72,000	6.06	1,440,500
54	Oakland Co. Drain Comm.	4,400	3.22	87,300
55	Plymouth	55,800	10.28	1,115,700
56	Plymouth Township	231,000	11.37	4,620,100
57	Redford Township	166,100	8.08	3,321,200
58	River Rouge	35,000	7.57	700,100
59	Riverview	45,200	7.87	903,500
60	Rockwood	14,400	11.70	288,000

Great Lakes Water Authority
Proposed FY 2021 Water Supply System Allocated Revenue Requirements and Service Charges

Line No.	Customer	Fixed Monthly Charge (a) \$/mo	Commodity Charge (a) \$/Mcf	Annual Revenue Req'ts \$
61	Romeo	13,000	18.39	260,800
62	Romulus	217,500	8.26	4,349,700
63	Roseville	139,400	5.93	2,788,300
64	Royal Oak Township	10,600	7.14	211,500
65	S O C W A	1,198,600	7.62	23,972,900
66	Shelby Township	728,100	15.22	14,561,400
67	South Rockwood	6,000	10.04	120,200
68	Southgate	115,100	7.94	2,302,700
69	St. Clair County-Greenwood Township	24,100	12.90	482,700
70	St. Clair Shores	159,000	6.72	3,180,800
71	Sterling Heights	788,800	11.04	15,776,600
72	Sumpter Township	34,600	9.71	692,900
73	Sylvan Lake	12,200	15.11	243,100
74	Taylor	242,600	7.28	4,851,400
75	Trenton	87,100	8.15	1,742,500
76	Troy	704,200	12.20	14,083,000
77	Utica	30,000	9.36	599,700
78	Van Buren Township	178,000	11.20	3,560,500
79	Walled Lake	41,900	10.69	837,500
80	Warren	532,600	6.92	10,651,400
81	Washington Township	117,400	12.56	2,348,500
82	Wayne	160,300	13.44	3,206,200
83	West Bloomfield Township	540,600	16.37	10,812,900
84	Westland	323,200	7.84	6,464,300
85	Wixom	128,200	13.80	2,563,900
86	Woodhaven	87,100	11.97	1,741,900
87	Ypsilanti Comm Util Auth	543,500	8.80	10,869,800
88	Total Wholesale Contract Customers			323,689,800
89	Adjustment to Flint Revenue Requirement for KWA Debt Service			(6,667,400)
90	Adjustment for Highland Park Bad Debt			(1,212,200)
91	Net Requirement from Wholesale Charges (agrees with GLWA Budget "Schedule 3A")			315,810,200
Detroit Customer Class - \$				
92	Wholesale Revenue Requirement (c)			43,465,300
93	less: Ownership Benefit per Lease			(20,700,000)
94	Net Wholesale Revenue Requirement			22,765,300
95	Indirect Retail Revenue Requirements (d)			47,031,500
96	less: Use of Lease Payment for Debt Service			(8,775,700)
97	Net Indirect Retail Revenue Requirements (d)			38,255,800
98	Subtotal Subject to GLWA Board Approval (94) + (97)			61,021,100
99	Direct Retail Revenue Requirements (e)			40,743,300
100	Total Local System Revenue Requirement (97) + (99)			78,999,100
101	Net Requirement from Detroit Customer Class (agrees with GLWA Budget "Schedule 3A")			101,764,400

(a) Reflects proposed charges presented on January 23, 2020.

(b) Net fixed monthly charge will include \$555,600 monthly credits for KWA debt service.

(c) Wholesale revenue requirements for the Detroit Customer Class.

(d) Local System revenue requirements related to Master Bond Ordinance (local debt service, etc.)

(e) Local System operating expenses (net of shared services reimbursement) and I&E deposit. Not Subject to GLWA Board approval.

Great Lakes Water Authority
Proposed FY 2021 Sewage Disposal System Allocated Revenue Requirements and Service Charges

	<u>Fixed Monthly Charge</u> \$/mo	<u>Annual Revenue Requirement</u> \$
<u>Suburban Wholesale</u>		
1	OMID	6,470,000
2	Rouge Valley	77,639,500
3	Oakland GWK	55,582,000
4	Evergreen Farmington	46,412,300
5	SE Macomb San Dist	35,760,900
6	Dearborn	25,472,200
7	Grosse Pointe Farms	19,996,200
8	Grosse Pointe Park	235,200
9	Melvindale	2,821,800
10	Farmington	154,800
11	Center Line	1,858,000
12	Allen Park	131,100
13	Highland Park	1,573,600
14	Hamtramck	98,400
15	Grosse Pointe	1,181,100
16	Harper Woods	88,400
17	Redford Township	73,100
18	Wayne County #3	876,900
19	Subtotal "Regional Wholesale Revenues from Charges"	484,800
20	Industrial Specific Revenues	341,100
21	Subtotal "Regional Wholesale Revenues from Charges"	76,300
22	less: Highland Park Bad Debt	915,400
23	Total "Regional Wholesale Revenues" (a)	224,800
	<i>* Wholesale charges will be effective July 1, 2020</i>	270,800
	Detroit Customer Class - \$	52,200
24	Wholesale Revenue Requirement (c)	4,400
25	less: Ownership Benefit per Lease	-----
26	Net Wholesale Revenue Requirement	281,609,500
27	Indirect Retail Revenue Requirements (d)	14,209,800
28	less: Use of Lease Payment for Debt Service	-----
29	Net Indirect Retail Revenue Requirements (d)	295,819,300
30	Subtotal Subject to GLWA Board Approval (26) + (29)	(1,310,000)
31	Direct Retail Revenue Requirements (e)	-----
32	Total Local System Revenue Requirement (29) + (31)	294,509,300
33	Net Requirement from Detroit Customer Class (a)	198,019,600

(a) Agrees with GLWA Budget "Schedule 3A"

(b) Reserved

(c) Wholesale revenue requirements for the Detroit Customer Class.

(d) Local System revenue requirements related to Master Bond Ordinance (local debt service, etc.)

(e) Local System operating expenses (net of shared services reimbursement) and I&E deposit. Not Subject to GLWA Board approval.

Great Lakes Water Authority
Proposed FY 2021 Industrial Specific Retail Sewer Charges

Industrial Waste Control Charges	
<u>Meter Size - inches</u>	<u>Charge</u> \$/mo
5/8	3.49
3/4	5.24
1	8.73
1-1/2	19.20
2	27.92
3	50.61
4	69.80
6	104.70
8	174.50
10	244.30
12	279.20
14	349.00
16	418.80
18	488.60
20	558.40
24	628.20
30	698.00
36	767.80
48	837.60

Pollutant Surcharges	
<u>Pollutant</u>	<u>Charge</u> \$/lb
BIOCHEMICAL OXYGEN DEMAND (BOD) for concentrations > 275 mg/l	0.508
TOTAL SUSPENDED SOLIDS (TSS) for concentrations > 350 mg/l	0.516
PHOSPHORUS (P) for concentrations > 12 mg/l	7.611
FATS, OIL AND GREASE (FOG) for concentrations > 100 mg/l	0.490
SEPTAGE DISPOSAL FEE Per 500 gallons of disposal	49.00

Great Lakes Water Authority
Proposed FY 2021 Industrial Specific Retail Sewer Charges

Industrial Waste Control Charges- Administration Only
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<u>Meter Size - inches</u>	<u>Charge</u> \$/mo
5/8	0.87
3/4	1.31
1	2.18
1-1/2	4.80
2	6.98
3	12.65
4	17.45
6	26.18
8	43.63
10	61.08
12	69.80
14	87.25
16	104.70
18	122.15
20	139.60
24	157.05
30	174.50
36	191.95
48	209.40



FY 2021 Service Charges Highlights

On February 26, 2020, the GLWA Board of Directors will hold a Public Hearing for the proposed schedule of charges for the fiscal year beginning July 1, 2020. Board deliberation and action will occur after receiving public input.

Charges are Based on Four Key Elements.

1) Budget: The costs for the daily operations and maintenance activities (such as the people, services, utilities, chemicals, and parts to operate plants and maintain the pipelines), the lease payment for the regional system, Water Residential Assistance Program (WRAP) funding, debt service, legacy pension, and capital project funding. The budget is also known as the “revenue requirement”.

2) Capital Improvement Plan (CIP): Annually the GLWA’s engineers evaluate the physical improvement needs of the regional systems. Those needs are funded by a combination of cash on hand and debt.

3) Units of Service (UOS): Quantifies each community’s service needs based on engineering studies, metering data, and other criteria. For the water system, this includes the amount of water purchased each year. For the sewer system, each member partner is assigned a percentage “share.”

4) Cost of Service Study (COS): The inputs from the three sources above are applied to an agreed upon charges methodology to allocate the revenue requirement (i.e. budget) by functional categories (such as purification for the water system or sludge disposal for the sewer system) and then allocated to each customer. The outcome is the charge calculation for each community. Unique to FY 2021, the proposed charges are indexed from the previous year’s charges given a

concentrated effort to evaluate the charges methodology with our member partners.

FY 2021 Water System Charges

The average wholesale water charge increase is proposed to be 3.5 percent with the entire system adjustment at 3.8 percent. This outcome is the result of 1) a proposed FY 2021 Water budget increase of 1.1 percent, 2) reduced investment earnings, and 3) reduced estimated sales volumes which has the impact of increasing the unit cost. As a result of the 2019 Contract Alignment Process (CAP), the FY 2021 Units of Service were virtually unchanged from FY 2020. This has significantly improved charge stability among member partner communities. The increase is proposed to be applied uniformly to all member partners that did not have changes in contractual demand

Proposed FY 2021 Sewer System Charges

The average wholesale sewer charge increase is proposed to be 3.5 percent with the entire system adjustment at 3.2 percent. This outcome is the result of 1) a proposed FY 2021 Sewer budget increase of 2.5 percent and 2) reduced investment earnings. Since there were no changes made to the sewer shares for FY 2021, the proposed increase will be applied uniformly to all member partners.

Average System Charge Adjustments

Year	Water	Sewer
2017	4.5%	8.3%
2018	1.9%	-0.7%
2019	1.6%	0.1%
2020	0.6%	0.8%
2021*	3.8%	3.2%
Five Year Average	2.5%	2.3%

* Proposed

For Additional Information: See [How GLWA Sets Charges Infographic](#) and visit us at www.glwater.org



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds

Background: Attached is the draft Great Lakes Water Authority (“GLWA”) Board letter for the February 26, 2020 Board meeting regarding Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds.

Key Takeaways: Please note the following.

- The not to exceed amount of the Notice of Intent is \$75 million
- The publication of the Notice of Intent to Issue Sewage Disposal System Revenue Bonds is required pursuant to Section 33 of Public Act 94 of 1933 to begin the 45-day referendum period. If the 45-day referendum period expires without a petition requesting a referendum, then the Authority may authorize and issue such bonds.
- The \$75 million not to exceed amount in the notice is anticipated to cover the approved State Revolving Fund (SRF) bonds which will be closing in calendar year 2020 for both Great Lakes Water Authority (GLWA) and the Detroit Water and Sewerage Department (DWSD).
- Projects to be funded include the following.
 - The GLWA Project to be funded is the Pump Station No. 1 (PS-1) Ferric Chloride System Rehabilitation and Struvite Removal Project - (CIP# 211008) with an estimated budget of \$13 million.
 - These bonds would also fund a DWSD Sewer Replacement Project with a budget of \$30 million.
 - The remaining authorized amount would provide for future projects in the GLWA and DWSD and capital improvement programs.

Proposed Action: The GLWA Audit Committee recommends the approval of the Resolution Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds to the GLWA Board of Directors at its meeting on February 26, 2020.

..Title

Resolution Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds

..Body

Agenda of: February 26, 2020
Item No.: **2020-067**
Amount: Not to Exceed \$75,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: February 26, 2020

RE: Resolution Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds

MOTION

Upon recommendation of Sue McCormick, Chief Executive Officer, The Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approve the Resolution Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds in an Amount Not to Exceed \$75,000,000 as presented**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The publication of the Notice of Intent to Issue Sewage Disposal System Revenue Bonds is required pursuant to Section 33 of Public Act 94 of 1933 to begin the 45-day referendum period. "If within 45 days after the publication of the notice a petition, signed by not less than 10% or 15,000 of the registered electors, whichever is less, residing within the limits of the borrower, is filed with the clerk, or other recording officer, of the borrower, requesting a referendum upon the question of the issuance of the bonds, then the bonds shall not be issued until approved by the vote of a majority of the electors of the borrower qualified to vote and voting on the bonds at a general or special election." If the 45-day referendum period expires without a petition requesting a referendum, then the Authority may authorize and issue such bonds.

Included is a copy of the resolution authorizing the publication of Notice of Intent to issue sewage disposal system revenue bonds. As can be seen from the draft resolution, the not to exceed amount is \$75 million.

JUSTIFICATION

The \$75 million not to exceed amount in the notice is anticipated to cover the approved State Revolving Fund (SRF) bonds which will be closing in calendar year 2020 for both Great Lakes Water Authority (GLWA) and the Detroit Water and Sewerage Department (DWSD). The projects include:

Pump Station No. 1 (PS-1) Ferric Chloride System Rehabilitation and Struvite Removal Project - (CIP# 211008): The primary purpose of the project is to provide efficient and reliable operations at the Water Resource Recovery Facility (WRRF) by implementing necessary improvements to the Pump Station No. 1 Ferric Chloride System and Waste Activated Sludge (WAS) Transfer Pipeline.

Currently, WAS is thickened at the WRRF Complex B Gravity Thickeners. There is a single line that transports WAS to Complex A where the thickened WAS is blended with thickened Primary Sludge. The blended sludge is then pumped on for dewatering and then ultimate disposal. Recent investigations have indicated significant buildup of struvite in the pipe that transports thickened WAS to Complex A. Addressing the issues associated with the struvite buildup in the WAS transport line will allow the WRRF to continue to thicken, dewater and ultimately dispose of biosolids that are removed during the treatment process.

The estimated cost of this project is \$13 million, which has been approved by the Michigan Department of Environment, Great Lakes and Energy (EGLE) for funding through its SRF program. This project is currently scheduled to be funded in the fourth quarter of the state of Michigan's FY 2020.

DWSD Sewer Replacement Project: The two (2) projects for this loan are comprised of the rehabilitation with some limited replacement of aging sewers in nine (9) neighborhoods within the City of Detroit. Construction will include rehabilitation of sewers and manhole structures, and in limited instances, excavation of existing sewers for replacement. The impact of the project will be improved customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility (WRRF). The estimated cost of this project is \$30 million, which has been approved by the EGLE for funding through its SRF program. This project is currently scheduled to be funded in the third quarter of the state of Michigan's FY 2020.

GLWA is the loan applicant on the SRF loan issued on behalf of DWSD, and DWSD will be the DWRF loan recipient as determined by EGLE. All project costs financed by GLWA, on behalf of DWSD, through the SRF program and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system. Debt service is anticipated to begin in FY 2021 for this project and is included as part of the FY 2021 financial plan.

Both SRF bonds will be sold to the Michigan Finance Authority in separate series. The current program interest rate is 2.00% and is typically payable over a 20-year term. The sewer system improvements that are within the City of Detroit will qualify for "disadvantaged community status" and will be payable over a 30-year term.

BUDGET IMPACT

Debt service on the referenced SRF projects is anticipated to begin in FY 2021 and have been included as part of the FY 2021 financial plan.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on February 21, 2020. The Audit Committee recommends that the GLWA Board of Directors [*Pending: approve the Resolution Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds in an Amount Not to Exceed \$75,000,000 as presented.*]

Great Lakes Water Authority
Resolution 2020-067
RE: Authorizing Publication of Notice of Intent
to Issue Sewage Disposal System Revenue Bonds

By Board Member: _____

Whereas The Great Lakes Water Authority (the “Authority”) is authorized to issue revenue bonds pursuant to the provisions of Act 94, Public Acts of Michigan, 1933, as amended (“Act 94”) for the purpose of paying all or part of the costs of purchasing, acquiring, constructing, improving, enlarging, extending and repairing the Sewer System as defined in the Regional Sewage Disposal System Lease, dated June 12, 2015, between the City of Detroit and the Authority; and

Whereas The Authority intends to issue one or more series of revenue bonds for the purposes hereinafter set forth; and

Whereas Section 33 of Act 94 requires the publication of a notice of intent to issue bonds at least 45 days prior to the issuance of such bonds.

Now, Therefore Be It:

Resolved That the Chief Financial Officer is hereby instructed to cause the publication of a notice of intent to issue bonds with respect to the hereinafter-described bonds once in the *Detroit Free Press* or the *Detroit News*, so as to be prominently displayed therein, and it is hereby found that each such newspaper has general circulation in the territory of the Authority; **And Be it Further**

Resolved That the notice of intent to issue bonds shall be in substantially the following form with such necessary or desirable changes as may be approved by the Chief Financial Officer, her approval to be conclusively evidenced by the publication of the notice of intent to issue bonds:

NOTICE OF INTENT TO ISSUE SEWAGE DISPOSAL SYSTEM
REVENUE BONDS BY THE GREAT LAKES WATER AUTHORITY

TO THE ELECTORS OF THE CHARTER COUNTY OF MACOMB, THE COUNTY OF OAKLAND AND THE CHARTER COUNTY OF WAYNE:

NOTICE IS HEREBY GIVEN, that the Great Lakes Water Authority (the "Authority"), a municipal authority organized and existing under the provisions of Act No. 233, Public Acts of Michigan, 1955, as amended, intends to issue its sewage disposal system revenue bonds in one or more series in the aggregate principal amount of not to exceed \$75,000,000 for the purpose of paying all or part of the cost of acquiring and constructing facilities, replacements, extensions, improvements and repairs to the City of Detroit's sewage disposal system (the "Sewer System"), which Sewer System is described and defined in the Regional Sewage Disposal System Lease dated June 12, 2015, between the City of Detroit (the "City") and the Authority (the "Lease"). As set forth in the Lease, the Sewer System consists of (i) the Regional Sewer System, which is that portion of the Sewer System that provides sewer service to wholesale customers thereof and to individual customers within and outside the City ("Retail Sewer Customers") that receive sewer service directly from the hereinafter described Local Sewer System up to the point of connection to the Local Sewer System and (ii) the Local Sewer System, which is that portion of the Sewer System that provides service directly to Retail Sewer Customers. Pursuant to the Lease, the City has leased the Regional Sewer System to the Authority for a period of forty (40) years and the Authority is authorized to issue revenue bonds under Act No. 94, Public Acts of Michigan, 1933, as amended ("Act 94") for the foregoing purposes.

The bonds of each series will mature in not to exceed forty (40) years after the original issuance date of the respective series of bonds, and will bear interest at rates to be determined upon the sale thereof but in no event to exceed such rates as may be permitted by law.

SOURCE OF PAYMENT OF REVENUE BONDS

The bonds will be issued under and pursuant to the provisions of Act 94 and a resolution or ordinance of the Board of Directors of the Authority and will be payable from the net revenues of the Sewer System and any improvements, enlargements and extensions thereto, and a statutory lien on said revenues will be established by said resolution or ordinance. The Authority will covenant and agree to fix and maintain, or cause to be fixed and maintained, at all times while any of the bonds shall be outstanding such rates and charges for service furnished by the Sewer System as shall be sufficient to provide for payment of the necessary expenses of operation, maintenance and administration of the Sewer System and of the principal of and interest on the bonds when due, and to provide for such other expenditures, accounts and funds for the Sewer System as are required by the resolution or ordinance authorizing the issuance of bonds.

RIGHT TO PETITION FOR REFERENDUM

This notice is given, by order of the Board of Directors of the Authority, to and for the benefit of the electors of the Charter County of Macomb, the County of Oakland and the Charter County of Wayne (collectively, the “Authority District”) in order to inform them of their right to petition for a referendum upon the question of the issuance of the aforesaid bonds. The bonds will be issued, without submitting such a question to a vote of the electors, unless within 45 days after the date of publication of this notice, a petition requesting a referendum upon such question, signed by not less than 15,000 of the registered electors residing in the Authority District shall have been filed with the Secretary of the Authority. The address of the Secretary of the Authority is 735 Randolph, Detroit, Michigan 48226. In the event that such a petition is filed, the bonds will not be issued unless and until the issuance thereof shall have been approved by the vote of a majority of the electors of the Authority District qualified to vote and voting thereon at a general or special election.

FURTHER INFORMATION

Further information relative to the issuance of said bonds, the Lease and the subject matter of this notice may be secured at the office of the Chief Financial Officer of the Great Lakes Water Authority, 735 Randolph, Room 1608, Detroit, Michigan 48226.

This notice is given pursuant to the provisions of Section 33 of Act 94.

Nicolette N. Bateson
Chief Financial Officer
Great Lakes Water Authority

And Be it Further

Resolved That it is hereby determined that the foregoing form of notice of intent to issue bonds and the manner of publication so directed are adequate notice to the electors of the constituent public corporations of the Authority and are well calculated to inform them of the intention of the Authority to issue the revenue bonds, the source of payment therefor, and the right of referendum on the revenue bonds; **And Be it Further**

Resolved That all resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution be and the same hereby are rescinded.

Adopted by the Great Lakes Water Authority Board on: _____



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds

Background: Included is the draft Great Lakes Water Authority (“GLWA”) Board letter for the February 26, 2020 Board meeting regarding Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds.

Key Takeaways:

- The not to exceed amount of the Notice of Intent is \$200 million
- The publication of the Notice of Intent to Issue Water Supply System Revenue Bonds is required pursuant to Section 33 of Public Act 94 of 1933 to begin the 45-day referendum period. If the 45-day referendum period expires without a petition requesting a referendum, then the Authority may authorize and issue such bonds.
- The \$200 million not to exceed amount in the notice is anticipated to cover the approved Drinking Water Revolving Fund (DWRFF) bonds which will be closing in 2019 and 2020 for both Great Lakes Water Authority (GLWA) and the Detroit Water and Sewerage Department (DWSD).
- Projects to be funded include the following.
 - GLWA Water Conveyance System – Waterworks Park to Northeast Transmission Main Project- (CIP# 122003) with a second financial funding segment estimated to be \$93 million of the total \$133.7 million total.
 - GLWA 14 Mile Water Transmission Main Loop Project – (CIP# 122013) with a total estimated cost of the project is \$54 million. The requested authorization includes the first phase of this project is estimated to be \$8.4 million.
 - DWSD Water Main Replacement Project with an estimated cost of \$25 million
 - The remaining authorized amount would provide for future projects in the GLWA and DWSD and capital improvement programs.

Proposed Action: The GLWA Audit Committee recommends the approval of the Resolution Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds to the GLWA Board of Directors at its meeting on February 26, 2020.

..Title

Resolution Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds

..Body

Agenda of: February 26, 2020
Item No.: **2020-068**
Amount: Not to Exceed \$200,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: February 26, 2020

RE: Resolution Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds

MOTION

Upon recommendation of Sue McCormick, Chief Executive Officer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approve the Resolution Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds in an Amount Not to Exceed \$200,000,000 as presented**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The publication of the Notice of Intent to Issue Water Supply System Revenue Bonds is required pursuant to Section 33 of Public Act 94 of 1933 to begin the 45-day referendum period. "If within 45 days after the publication of the notice a petition, signed by not less than 10% or 15,000 of the registered electors, whichever is less, residing within the limits of the borrower, is filed with the clerk, or other recording officer, of the borrower, requesting a referendum upon the question of the issuance of the bonds, then the bonds shall not be issued until approved by the vote of a majority of the electors of the borrower qualified to vote and voting on the bonds at a general or special election." If the 45-day referendum period expires without a petition requesting a referendum, then the Authority may authorize and issue such bonds.

Included is a copy of the resolution authorizing the publication of Notice of Intent to issue water supply system revenue bonds. As can be seen from the draft resolution, the not to exceed amount is \$200 million

JUSTIFICATION

The \$200 million not to exceed amount in the notice is anticipated to cover the approved Drinking Water Revolving Fund (DWRF) bonds which will be closing in 2019 and 2020 for both Great Lakes Water Authority (GLWA) and the Detroit Water and Sewerage Department (DWSD). The projects include:

Water Conveyance System – Waterworks Park to Northeast Transmission Main Project (CIP# 122003): The primary purpose of the project is to better align the GLWA water production capacity with long-term system water demands, while improving reliability, water quality protection and reducing future operational and maintenance costs as well as capital improvement costs. The total estimated cost of this project is \$133.7 million, which has been approved by the Michigan Department of Environment, Great Lakes and Energy (EGLE) for funding through its DWRF program. This is the second financial segment of the project is estimated to be \$93 million. This project is currently scheduled to be funded in the fourth quarter of the state of Michigan's FY 2020.

14 Mile Water Transmission Main Loop Project – (CIP# 122013): The project is comprised of design and construction of 6-7 Miles of transmission main from 8 Mile Road to 14 Mile Road along the Halsted/Haggerty Road corridor in order to back-feed the 14 Mile Transmission system during a break in the transmission system along 14 Mile. 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.

These improvements and modifications are detailed in the Project Plan. The total estimated cost of the project is \$54 million. The first phase of this project is estimated to be \$8.4 million and is currently scheduled to be funded in the fourth quarter of the state of Michigan's FY 2020. The second segment of the project will be financed in a future DWRP funding cycle.

DWRP Water Main Replacement Project: The project consists of the excavation of existing water mains, installation of new pipes, replacement of lead service lines between the water main and the water meter, pressure testing, backfill, and right-of-way. The impact of the project will be improved customer satisfaction and safe and reliable service delivery of potable water to customers. The estimated cost of this project is \$25 million, which has been approved by the EGLE for funding through its DWRP program. This project is currently scheduled to be funded in the third quarter of the state of Michigan's FY 2020.

GLWA is the loan applicant on the DWRP loan issued on behalf of DWSD, and DWSD will be the DWRP loan recipient as determined by EGLE. All project costs financed by GLWA, on behalf of DWSD, through the DWRP program and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system. Debt service is anticipated to begin in FY 2021 for this project and is included as part of the FY 2021 financial plan.

The DWRP bonds will be sold to the Michigan Finance Authority in separate series. The current program interest rate is 2.00% and is typically payable over a 20-year term. The water main improvements that are within the City of Detroit will qualify for "disadvantaged community status" and will be payable over a 30-year term.

BUDGET IMPACT

Debt service on the referenced DWRP projects is anticipated to begin in FY 2021 and have been included as part of the FY 2021 financial plan.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on February 21, 2020. The Audit Committee recommend that the GLWA Board of Directors *[Pending: approve the Resolution Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds in an Amount Not to Exceed \$200,000,000 as presented]*.

Great Lakes Water Authority
Resolution 2020-068
RE: Authorizing Publication of Notice of Intent
to Issue Water Supply System Revenue Bonds

By Board Member: _____

Whereas The Great Lakes Water Authority (the “Authority”) is authorized to issue revenue bonds pursuant to the provisions of Act 94, Public Acts of Michigan, 1933, as amended (“Act 94”) for the purpose of paying all or part of the costs of purchasing, acquiring, constructing, improving, enlarging, extending and repairing the Water System as defined in the Regional Water Supply System Lease, dated June 12, 2015, between the City of Detroit and the Authority; and

Whereas The Authority intends to issue one or more series of revenue bonds for the purposes hereinafter set forth; and

Whereas Section 33 of Act 94 requires the publication of a notice of intent to issue bonds at least 45 days prior to the issuance of such bonds.

Now, Therefore Be It:

Resolved That the Chief Financial Officer is hereby instructed to cause the publication of a notice of intent to issue bonds with respect to the hereinafter-described bonds once in the *Detroit Free Press* or the *Detroit News*, so as to be prominently displayed therein, and it is hereby found that each such newspaper has general circulation in the territory of the Authority; **And Be it Further**

Resolved That the notice of intent to issue bonds shall be in substantially the following form with such necessary or desirable changes as may be approved by the Chief Financial Officer, her approval to be conclusively evidenced by the publication of the notice of intent to issue bonds:

NOTICE OF INTENT TO ISSUE WATER SUPPLY SYSTEM
REVENUE BONDS BY THE GREAT LAKES WATER AUTHORITY

TO THE ELECTORS OF THE CHARTER COUNTY OF MACOMB, THE COUNTY OF OAKLAND AND THE CHARTER COUNTY OF WAYNE:

NOTICE IS HEREBY GIVEN, that the Great Lakes Water Authority (the "Authority"), a municipal authority organized and existing under the provisions of Act No. 233, Public Acts of Michigan, 1955, as amended, intends to issue its water supply system revenue bonds in one or more series in the aggregate principal amount of not to exceed \$200,000,000 for the purpose of paying all or part of the cost of acquiring and constructing facilities, replacements, extensions, improvements and repairs to the City of Detroit's water supply system (the "Water System"), which Water System is described and defined in the Regional Water Supply System Lease dated June 12, 2015, between the City of Detroit (the "City") and the Authority (the "Lease"). As set forth in the Lease, the Water System consists of (i) the Regional Water System, which is that portion of the Water System that provides water service to wholesale customers thereof and to individual customers within and outside the City ("Retail Water Customers") that receive water service directly from the hereinafter described Local Water System up to the point of connection to the Local Water System and (ii) the Local Water System, which is that portion of the Water System that provides service directly to Retail Water Customers. Pursuant to the Lease, the City has leased the Regional Water System to the Authority for a period of forty (40) years and the Authority is authorized to issue revenue bonds under Act No. 94, Public Acts of Michigan, 1933, as amended ("Act 94") for the foregoing purposes.

The bonds of each series will mature in not to exceed forty (40) years after the original issuance date of the respective series of bonds, and will bear interest at rates to be determined upon the sale thereof but in no event to exceed such rates as may be permitted by law.

SOURCE OF PAYMENT OF REVENUE BONDS

The bonds will be issued under and pursuant to the provisions of Act 94 and a resolution or ordinance of the Board of Directors of the Authority and will be payable from the net revenues of the Water System and any improvements, enlargements and extensions thereto, and a statutory lien on said revenues will be established by said resolution or ordinance. The Authority will covenant and agree to fix and maintain, or cause to be fixed and maintained, at all times while any of the bonds shall be outstanding such rates and charges for service furnished by the Water System as shall be sufficient to provide for payment of the necessary expenses of operation, maintenance and administration of the Water System and of the principal of and interest on the bonds when due, and to provide for such other expenditures, accounts and funds for the Water System as are required by the resolution or ordinance authorizing the issuance of bonds.

RIGHT TO PETITION FOR REFERENDUM

This notice is given, by order of the Board of Directors of the Authority, to and for the benefit of the electors of the Charter County of Macomb, the County of Oakland and the Charter County of Wayne (collectively, the “Authority District”) in order to inform them of their right to petition for a referendum upon the question of the issuance of the aforesaid bonds. The bonds will be issued, without submitting such a question to a vote of the electors, unless within 45 days after the date of publication of this notice, a petition requesting a referendum upon such question, signed by not less than 15,000 of the registered electors residing in the Authority District shall have been filed with the Secretary of the Authority. The address of the Secretary of the Authority is 735 Randolph, Detroit, Michigan 48226. In the event that such a petition is filed, the bonds will not be issued unless and until the issuance thereof shall have been approved by the vote of a majority of the electors of the Authority District qualified to vote and voting thereon at a general or special election.

FURTHER INFORMATION

Further information relative to the issuance of said bonds, the Lease and the subject matter of this notice may be secured at the office of the Chief Financial Officer of the Great Lakes Water Authority, 735 Randolph, Room 1608, Detroit, Michigan 48226.

This notice is given pursuant to the provisions of Section 33 of Act 94.

Nicolette N. Bateson
Chief Financial Officer
Great Lakes Water Authority

And Be it Further

Resolved That it is hereby determined that the foregoing form of notice of intent to issue bonds and the manner of publication so directed are adequate notice to the electors of the constituent public corporations of the Authority and are well calculated to inform them of the intention of the Authority to issue the revenue bonds, the source of payment therefor, and the right of referendum on the revenue bonds; **And Be it Further**

Resolved That all resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution be and the same hereby are rescinded.

Adopted by the Great Lakes Water Authority Board on: _____



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Water Residential Assistance Program Contract CS-010 Update

Background: The Water Residential Assistance Program (“WRAP”) provides sustainable funding for qualifying low-income residents served by the Great Lakes Water Authority’s (“GLWA”) customers. The program is currently funded by GLWA at an amount equal to 0.5 percent of budgeted revenues with the budgeted FY 2020 funding level of approximately \$5 million combined for water and sewer services.

The scope of funding uses includes payment assistance and water audit and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut off can receive assistance with paying down arrears in an amount not to exceed \$700 per year and receive \$25 toward monthly bill payment assistance annually up to \$300. High volume water users can receive a one-time home audit and home water conservation services up to \$1,000.

To participate in WRAP, an applicant must have household gross incomes at or below 150% of the federal poverty income thresholds. Customers with water usage at or above 120% of the average residential usage are eligible to participate in a water audit and install water conservation measures. WRAP participants are also encouraged to participate in both financial coaching and water conservation workshops as well as other support services.

The WRAP began providing assistance to residents in the GLWA service area on March 1, 2016 and as of October 31, 2019 has committed over \$14.2 million in assistance and conservation funds to over 19,000 qualified WRAP participants. WRAP has the potential to serve over 100 communities within the GLWA service area, but in order to assist qualified households, each community must opt into the program and sign a Memorandum of Agreement (MOA) with the contracted program administrator. To date, 76 communities have opted into WRAP.

Rather than administering the service with clients directly, GLWA has utilized a model of partnering with a nonprofit entity who provides expertise and resources that has resulted in an effective program. Since February 22, 2016, Wayne Metro Community Action Agency (“Wayne Metro”), a nonprofit agency has provided that service. The current contract with

Wayne Metro expires on June 30, 2020. GLWA's procurement policy encourages competitive solicitation of all services and goods on a regular basis. Given that this contract will approach 4.5 years on June 30, 2020, it is recommended that the service would benefit from a competitive procurement. The existing agency and others would be invited to participate in a request for proposal process. Staff is advising the Audit Committee of the intent to solicit proposals as a) this service is unique, b) if another provider is selected, the start-up/transition time may require an extension as summer 2020 may not be ideal given the nature of the client data transfer, and c) identifying a timeline that least impacts WRAP client services.

Justification: The current contract for Water Residential Assistance Program Third Party Administrator (CS-010) with Wayne Metro will expire on June 30, 2020. Below is a summary of the original contract amount and the change orders. To date GLWA has extended the contract twice and has increased the original contract amount by \$1,430,900.

Contract Dates:

Original Start Work Date: March 1, 2016
Current Contract End Date: June 30, 2018
Change Order 1 Contract End Date: June 30, 2018
Change Order 2 Contract End Date: June 30, 2020

Contract Estimate

Original Contract Price: \$825,000.00
Change Order No. 1: \$480,900.00
Change Order No. 2: \$950,000.00
New Contract Total: \$2,255,900.00

Budget Impact: None.

Proposed Action: Receive and file this report.

GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

November 2019

**Presented to the
Great Lakes Water Authority
Audit Committee on February 21, 2020**

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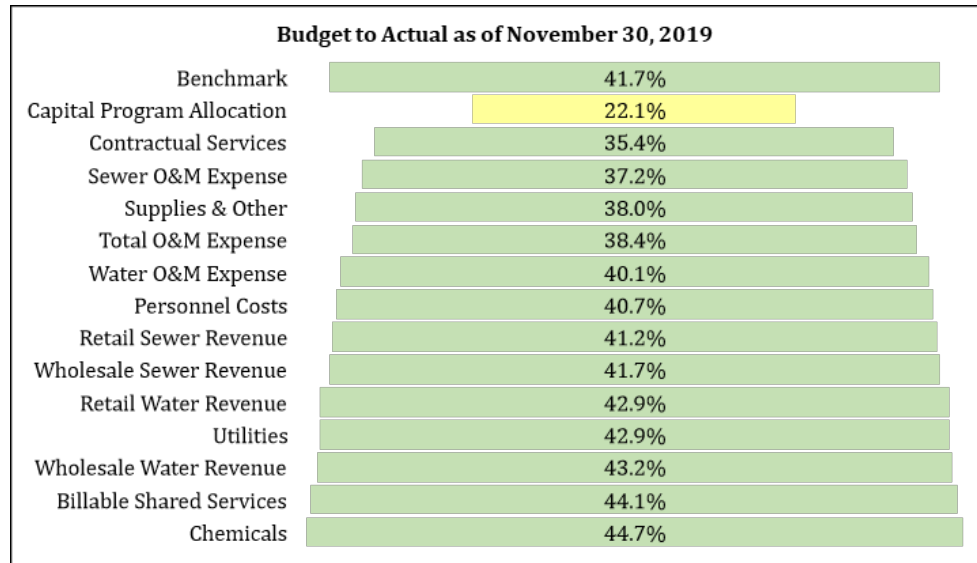
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Revenue and Expense Budget to Actual¹ – Pro-rata Benchmark of 41.7%

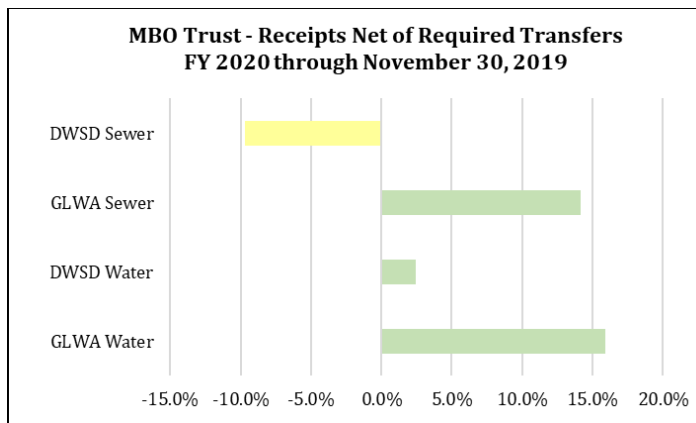
Most revenue and expense reporting categories fall within 7.5% of the pro-rata budget to actual benchmark.

The Capital Program Allocation variation is due to two reasons. Through November 30, 2019, GLWA team member hours



posted to projects is 10% less than the prior year due to increased focus on large maintenance projects versus capital projects. The remaining difference is due to a new element this year which is the AECOM Capital Program Management project. To date, no fees have been incurred that have been identified for capitalization.

Master Bond Ordinance (MBO) Trust Net Receipts



Net cash flow (receipts) is positive for GLWA Water and Sewer. This means that all legal commitments of the MBO Trust and the lease payment are fully funded to date – and that positive cash flow is available for additional capital program funding in subsequent year(s). DWSD Water net cash flows also report positive net cash receipts through November. DWSD Sewer reported negative cash flows of \$6.6

million for November 2019 increasing the cumulative FY 2020 DWSD Sewer shortfall to \$10.7 million, partially attributable to some timing issues. Looking ahead, DWSD proactively addressed the FY 2020 Sewer shortfall in December 2019 with an Operations & Maintenance transfer back to the Sewer Receiving Fund of \$2.6 million, and budgeted, monthly Operations & Maintenance transfer reductions of \$1 million for the rest of FY 2020. They have also experienced an increase in cash flow due to the previously noted timing issues which have resulted in a net shortfall of \$5.3 million as of December 31, 2019.

Questions? Contact the Office of the Chief Financial Officer at CFO@glwater.org

¹ All amounts are GLWA entity-wide unless noted as water, sewer, and/or retail.

The Monthly Budget to Actual Analysis report includes the following three sections.

1. Revenue Requirement Budget Basis Analysis
2. Operations & Maintenance Budget – Major Budget Categories
3. Alignment of Operations & Maintenance Budget Priorities – Expense Variance Analysis

Revenue Requirement Budget Basis Analysis

GLWA's annual revenue requirement represents the basis for calculating Member Partner charges and aligns with the Master Bond Ordinance flow of funds categories. The budget basis is not the same as the full accrual basis used for financial reporting although the revenues and operations and maintenance expense are largely reported on an accrual basis. The primary difference between the revenue requirement budget basis to the financial reporting basis is the treatment of debt service, legacy pension obligations, and lease related activities. The Revenue Requirement Basis is foundational to GLWA's daily operations, financial plan, and of most interest to key stakeholders.

Table 1A – Water Revenue Requirement Budget and **Table 1B – Sewer Revenue Requirement Budget** presents a year-over-year budget to actual performance report. The revenue requirement budget is accounted for in the operations and maintenance fund for each system. Since this report is for November 2019, the pro-rata benchmark is 41.7% (5 of 12 months of the fiscal year).

Items noted below are highlighted in gold on Tables 1A (Water) and 1B (Sewer).

1. **Revenues:** For *both* systems, FY 2020 revenues are either at or above target and are consistent with the prior year (FY 2019) at the same time. Detailed schedules related to revenues are provided in the *Wholesale Billings, Collections, and Receivables* section of this financial report binder.
2. **Investment Earnings:** For *both* systems, investment earnings are below target for FY 2020. July 2019 includes the reversal of the market adjustment from FY 2019 of \$1.6 million for the *water* system and \$0.6 million for the *sewer* system. Without these adjustments both systems would be above target for FY 2020. Detailed analysis of investment earnings activity to date can be found in the *Cash & Investment Income* section of this financial report binder.
3. **Other Revenues:** These are one-time and unusual items that do not fit an established revenue category. Both the *water* and *sewer* systems actual amount will vary from budget due to the nature of the items recorded in this category.

4. **Operations & Maintenance Expense:** Actual expenses¹ for *both* systems have variances from the pro-rata benchmark. The *water* system is slightly under the pro-rata benchmark for FY 2020 at 40.1%. The *sewer* system O&M expenses, at 37.2%, is less than the pro-rata benchmark.
5. **Debt Service:** *Both* systems are less than the pro-rata benchmark for FY 2020; the *water* system is at 39.0%; while the *sewer* system is at 40.1%. The activity is based on the payment schedules adjusted for the State Revolving Fund loans that are still being drawn down. In addition, the monies invested in FY 2019 realized a higher return than projected. This gain was applied to the debt requirements which reduced the payments for July and August.
6. **DWSD Budget Shortfall Pending:** To the extent that the local (DWSD) system experiences budgetary shortfalls as defined by the Water & Sewer Services Agreement, the GLWA budget is impacted.² Steps to proactively detect, and ideally prevent, this shortfall scenario were put into place with the 2018 Memorandum of Understanding (dated June 27, 2018). For FY 2019, DWSD *sewer* had a shortfall through November 30, 2018, of \$228,200 (FY 2019 ended with a small surplus). In order to achieve the goal of positive, net cash flows for FY 2019, DWSD reduced its *sewer* system O&M transfers in May and June. The transfers reduced were \$5,676,792 each for a total of \$11,353,584. For FY 2020, the DWSD *water* system has budgetary surplus of \$1.0 million and the DWSD *sewer* system has a budgetary shortfall of \$10.7 million through November 30, 2019, partially attributable to some timing issues. Looking ahead, DWSD proactively addressed the FY 2020 Sewer shortfall in December 2019 with an Operations & Maintenance transfer back to the Sewer Receiving Fund of \$2.6 million, and budgeted, monthly Operations & Maintenance transfer reductions of \$1 million for the rest of FY 2020. They have also experienced an increase in cash flow due to the previously noted timing issues which have resulted in a net shortfall of \$5.3 million as of December 31, 2019.
7. **Improvement & Extension (I&E) Fund Transfer Pending:** The contribution to the I&E Fund is for improvements, enlargements, extensions or betterment of the Water System. Transfers to the I&E Fund from net revenues typically occur later in the year or after year end close when final net revenue is validated.
8. **Other Revenue Requirements:** The remaining revenue requirements for *both* systems are funded on a 1/12th basis each month in accordance with the Master Bond Ordinance.
9. **Overall:** Total revenue requirements for *both* systems are in line with the benchmark.

¹The tables in this analysis reflect actual amounts spent. If this analysis was on a master bond ordinance (MBO) basis, like that used for calculating debt service coverage, O&M “expense” would equal the pro-rata budget because 1/12 of the O&M budget is transferred monthly outside the MBO trust to an O&M bank account.

² As a reminder, the monthly O&M transfer for MBO purposes are at 1/12 of the budget to a DWSD O&M bank account outside the trust. Actual budget may be less than that amount providing an actual positive variance for DWSD.

Table 1A – Water Revenue Requirement Budget (year-over-year) – (\$000)

	FY2019 AMENDED BUDGET	FY 2019 THRU 11/30/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 11/30/2019	Percent Year-to- Date
Water System							
Revenues							
Suburban Wholesale Customer Charges	\$ 307,383	\$ 136,932	44.5%	\$ 309,285	\$ 309,285	\$ 134,363	43.4%
Retail Service Charges	20,181	8,469	42.0%	21,296	21,296	8,873	41.7%
Investment Earnings	9,425	3,752	39.8%	9,084	9,084	2,349	25.9%
Other Revenues	-	22	0.0%	-	-	-	0.0%
Total Revenues	\$ 336,989	\$ 149,175	44.3%	\$ 339,664	\$ 339,664	\$ 145,585	42.9%
Revenue Requirements							
Operations & Maintenance Expense	\$ 121,563	\$ 51,813	42.6%	\$ 131,491	\$ 131,491	\$ 52,724	40.1%
General Retirement System Legacy Pension	6,048	2,520	41.7%	6,048	6,048	2,520	41.7%
Debt Service	131,242	53,097	40.5%	137,558	137,558	53,612	39.0%
General Retirement System Accelerated Pension	6,268	2,612	41.7%	6,268	6,268	2,612	41.7%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	1,673	697	41.7%	1,698	1,698	708	41.7%
Lease Payment	22,500	9,375	41.7%	22,500	22,500	9,375	41.7%
Operating Reserve Deposit	-	-	0.0%	3,976	3,976	1,657	41.7%
Improvement & Extension Fund Transfer Pending	47,695	19,873	41.7%	30,126	30,126	12,552	41.7%
Total Revenue Requirements	\$ 336,989	\$ 139,987	41.5%	\$ 339,664	\$ 339,664	\$ 135,759	40.0%
Net Difference		\$ 9,188				\$ 9,825	
<i>Recap of Net Positive Variance</i>							
		<i>Revenue Variance</i>	\$ 8,763			\$ 4,058	
		<i>Revenue Requirement Variance</i>	425			5,767	
		<i>Overall Variance</i>	\$ 9,188			\$ 9,825	

Table 1B – Sewer Revenue Requirement Budget (year-over-year) – (\$000)

	FY 2019 AMENDED BUDGET	FY 2019 THRU 11/30/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 11/30/2019	Percent Year-to- Date
Sewer System							
Revenues							
Suburban Wholesale Customer Charges	\$ 271,296	\$ 114,564	42.2%	\$ 272,324	\$ 272,324	\$ 113,804	41.8%
Retail Service Charges	181,159	76,253	42.1%	185,807	185,807	77,420	41.7%
Industrial Waste Control Charges	15,001	3,859	25.7%	13,744	13,744	3,488	25.4%
Pollutant Surcharges	-	2,456	0.0%	-	-	2,518	0.0%
Investment Earnings	6,879	3,674	53.4%	8,731	8,731	3,347	38.3%
Other Revenues	-	255	0.0%	-	-	211	0.0%
Total Revenues	\$ 474,335	\$ 201,061	42.4%	\$ 480,605	\$ 480,605	\$ 200,788	41.8%
Revenue Requirements							
Operations & Maintenance Expense	\$ 191,079	\$ 65,397	34.2%	\$ 187,057	\$ 187,057	\$ 69,536	37.2%
General Retirement System Legacy Pension	10,824	4,510	41.7%	10,824	10,824	4,510	41.7%
Debt Service	208,389	85,481	41.0%	215,739	215,739	86,473	40.1%
General Retirement System Accelerated Pension	11,621	4,842	41.7%	11,621	11,621	4,842	41.7%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	2,374	989	41.7%	2,403	2,403	1,001	41.7%
Lease Payment	27,500	11,458	41.7%	27,500	27,500	11,458	41.7%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending	-	228	0.0%	-	-	10,690	0.0%
Improvement & Extension Fund Transfer Pending	22,548	9,395	41.7%	25,462	25,462	10,609	41.7%
Total Revenue Requirements	\$ 474,335	\$ 182,301	38.4%	\$ 480,605	\$ 480,605	\$ 199,120	41.4%
Net Difference		\$ 18,759				\$ 1,668	
<i>Recap of Net Positive Variance</i>							
		<i>Revenue Variance</i>	\$ 3,421			\$ 536	
		<i>Revenue Requirement Variance</i>	15,338			1,132	
		<i>Overall Variance</i>	\$ 18,759			\$ 1,668	

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of November 30, 2019, is 41.7% (five months). When comparing FY 2020 to FY 2019 in **Table 2 – Operations & Maintenance Budget – Major Budget Categories**, it appears that overall spending is consistent.

In addition to the four major budget categories, an internal charge cost center for employee benefits is shown in the table below. If the number is positive, it indicates that the internal cost allocation rate charges to other cost centers is not sufficient. A negative number indicates a surplus in the internal cost center. A moderate surplus is preferred as it provides a hedge for mid-year benefit program cost adjustments (premiums adjust on January 1 each year) as well as managing risk as the program is partially self-insured. An analysis of the benefits is currently being conducted using updated benefit information. A budget amendment may be needed to increase the budget for the FY 2020 employee benefits.

Table 2 – Operations & Maintenance Budget – Major Budget Categories – (\$000)

Major Budget Categories	FY 2019			FY 2020			FY 2020		
	FY 2019 AMENDED BUDGET	ACTIVITY THRU 11/30/2018	Percent Year-to-Date	BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	ACTIVITY THRU 11/30/2019	Percent Year-to-Date		
Water	\$ 66,596	\$ 27,860	41.8%	\$ 66,021	\$ 66,021	\$ 28,457	43.1%		
Sewer	118,319	44,281	37.4%	115,985	115,985	44,098	38.0%		
Centralized	99,045	36,021	36.4%	106,914	106,914	38,544	36.1%		
Administrative	28,683	10,264	35.8%	29,628	29,628	11,486	38.8%		
Employee Benefits	-	(1,216)	0.0%	-	-	(326)	0.0%		
Total O&M Budget	\$ 312,642	\$ 117,211	37.5%	\$ 318,548	\$ 318,548	\$ 122,260	38.4%		

Alignment of Operations & Maintenance Budget Priorities – Expense Variance Analysis

The purpose of **Table 3 – Operations & Maintenance Expense Variance Analysis** is to evaluate whether the actual spend rate within a natural cost category is in alignment with the budget. Given the effort to develop an accurate budget, a variance is a red flag of a *potential* budget amendment or misalignment of priorities.

Total: In total, the O&M expenses are at 38.4% which is reasonably within the pro-rata benchmark of 41.7%. This positive variance equates to a dollar amount of \$10.5 million. The expense category commentary is provided below for items highlighted on Table 3.

Personnel Costs: The overall category is on target with the pro-rata benchmark; coming in at 40.7% through November 2019.

Utilities: The overall category is higher than the benchmark; coming in at 42.9% through November 2019. This variance is not unexpected as usage varies throughout the year.

- **Electric** is higher than the benchmark, coming in at 46.7%. This increase is primarily due to the pumps being required to run longer than normal as a result of the wet weather that Michigan has been experiencing. In addition, the first three months of GLWA's fiscal year (July, August, and September) are typically peak months for the usage of electricity. June, the last month of GLWA's fiscal year, is typically a peak month as well.
- **Gas** is coming in at 28.7%. While this is lower than the benchmark of 41.7%, it is consistent with the prior year (FY 2019). A review of the accounts has confirmed that the usage is variable throughout the year. It is anticipated that actuals will come in at the anticipated budgeted amount for FY 2020.
- **Water service** is lower than the benchmark, coming in at 30.1%. While usage does vary throughout the year, a review of the accounts has shown that the water service bills are coming in lower for Wastewater Operations. Processing efficiencies through the use of the new chemical building has reduced the use of potable water during wet weather events.

Chemicals: This category is higher than the benchmark; coming in at 44.7% through November 2019. While variances in this category are not unexpected as usage varies throughout the year, the variance for November 2019 continues to be primarily related to the high lake levels which caused the CSO basins to process more flow than is typical. This resulted in higher use of Sodium Hypochlorite.

Supplies & Other: This category is lower than the benchmark; coming in at 38.0% through November 2019. Given that the nature of the items in this category are subject to one-time expenses that do not occur evenly throughout the year, this variance is not a concern at this time.

Contractual Services: The overall category is lower than the benchmark; coming in at 35.4% through November 2019. Variances in this category are not unexpected as the usage of contracts varies throughout the year (projects scheduled to begin during the later half of the year as well as contracts that are on an as needed basis). Budget amendments will be processed for those projects in which the actual start dates have been delayed from that in which they were budgeted.

Capital Program Allocation: This category is lower than the benchmark; coming in at 22.1% through November 2019. The amount in the Capital Program Allocation account is shown as negative as this is a "contra" account which represents an offset to the Personnel Costs section of the Operations & Maintenance (O&M) budget. A new element this year is the addition of contracted AECOM Capital Program Management services. The variance is due to two primary reasons. First, through November 30, 2019, GLWA team member hours posted to projects is 10% less than the prior year. This is due to increased focus on large

maintenance projects versus capital projects. Second, no AECOM fees have been incurred that have been identified for capitalization.

Shared Services: This category is higher than the benchmark; coming in at 44.1% through November 2019. The shared services reimbursement is comprised of both labor (tracked via BigTime) and expenses, such as annual fees for software licensing. Staff from both GLWA and DWSD have been working together to evaluate and refine the budget for the shared services agreements. Based on these evaluations, adjustments have been made to both the billings and accounting accruals to more accurately reflect the forecasted activity for FY 2020. A budget amendment will be entered in December 2019 to adjust the shared services budget to this revised FY 2020 forecast.

Table 3 – Operations & Maintenance Expense Variance Analysis – (\$000)

Expense Categories	FY 2019 AMENDED BUDGET	FY 2019 ACTIVITY THRU 11/30/2018	Percent Year-to-Date at 11/30/2018	FY 2019 ACTIVITY THRU 6/30/2019	Percent Year-to- Date at 6/30/2019	FY 2020 AMENDED BUDGET	FY 2020	FY 2020 ACTIVITY THRU 11/30/2019	Percent Year-to- Date	PRORATED
							PRORATED AMENDED BUDGET (5 MONTHS)			BUDGET LESS FY 2020 ACTIVITY
Entity-wide										
Salaries & Wages	\$ 63,631	\$ 24,794	39.0%	\$ 59,922	41.4%	\$ 68,301	\$ 28,459	\$ 26,878	39.4%	\$ 1,581
Workforce Development	751	302	40.2%	794	38.1%	1,014	423	370	36.5%	53
Overtime	7,612	3,106	40.8%	7,554	41.1%	6,140	2,558	3,082	50.2%	(523)
Employee Benefits	23,656	10,429	44.1%	21,998	47.4%	23,005	9,586	10,594	46.1%	(1,008)
Transition Services	8,572	3,312	38.6%	8,322	39.8%	6,630	2,763	2,213	33.4%	550
Employee Benefits Fund	-	(1,216)	0.0%	-	0.0%	-	-	(326)	0.0%	326
<i>Personnel Costs</i>	<u>104,221</u>	<u>40,727</u>	<u>39.1%</u>	<u>98,589</u>	<u>41.3%</u>	<u>105,091</u>	<u>43,788</u>	<u>42,810</u>	<u>40.7%</u>	<u>978</u>
Electric	39,019	17,686	45.3%	39,103	45.2%	38,386	15,994	17,908	46.7%	(1,914)
Gas	6,631	1,987	30.0%	6,568	30.3%	6,444	2,685	1,851	28.7%	834
Sewage Service	2,491	798	32.0%	2,094	38.1%	1,847	769	847	45.9%	(78)
Water Service	3,648	1,737	47.6%	3,631	47.8%	4,658	1,941	1,401	30.1%	540
<i>Utilities</i>	<u>51,789</u>	<u>22,208</u>	<u>42.9%</u>	<u>51,396</u>	<u>43.2%</u>	<u>51,334</u>	<u>21,389</u>	<u>22,007</u>	<u>42.9%</u>	<u>(617)</u>
Chemicals	13,385	5,732	42.8%	13,276	43.2%	13,899	5,791	6,219	44.7%	(428)
Supplies & Other	36,226	10,220	28.2%	37,121	27.5%	36,392	15,163	13,826	38.0%	1,338
Contractual Services	100,856	42,759	42.4%	101,873	42.0%	115,307	48,045	40,813	35.4%	7,232
Capital Program Allocation	(3,356)	(1,373)	40.9%	(3,381)	40.6%	(5,414)	(2,256)	(1,196)	22.1%	(1,060)
Shared Services	(9,005)	(3,062)	34.0%	(7,139)	42.9%	(5,025)	(2,094)	(2,217)	44.1%	123
Unallocated Reserve	18,524	-	0.0%	-	0.0%	6,965	2,902	-	0.0%	2,902
Total Expenses	<u>\$ 312,642</u>	<u>\$ 117,211</u>	<u>37.5%</u>	<u>\$ 291,734</u>	<u>40.2%</u>	<u>\$ 318,548</u>	<u>\$ 132,728</u>	<u>\$ 122,260</u>	<u>38.4%</u>	<u>\$ 10,468</u>

The Basic Financial Statements report includes the following four tables.

1. Statement of Net Position - All Funds Combined
2. Statement of Revenues, Expenses and Changes in Net Position – All Funds Combined
3. Supplemental Schedule of Operations & Maintenance Expenses -All Funds Combined
4. Supplemental Schedule of Nonoperating Expenses – All Funds Combined

At a macro level GLWA has two primary funds for financial reporting purposes: *Water Fund* and *Sewage Disposal Fund*. These funds represent the combined total of four sub-funds for each system that are used internally to properly account for sources and uses of funds. Those sub-funds for each system are: *Operations & Maintenance Fund, Improvement & Extension Fund, Construction Fund, and Capital Asset Fund*.

The Comparative June 2019 basic financial statements are presented based on final audited figures.

Statement of Net Position – All Funds Combined

Explanatory notes follow the Statement of Net Position shown in Table 1 below.

Table 1 – Statement of Net Position - All Funds Combined
As of November 30, 2019
(\$000)

	Water	Sewage Disposal	Total Business- type Activities	Comparative June 30, 2019
Assets				
Cash (a)	\$ 149,235	\$ 197,531	\$ 346,766	\$ 571,015
Investments (a)	413,924	315,763	729,687	460,078
Accounts Receivable	85,688	78,971	164,660	208,914
Due from (to) Other Funds (b)	4,820	(4,820)	-	2,890
Other Assets (c)	593,346	450,601	1,043,947	1,046,518
Cash Held FBO DWSD Advance (d)	-	10,067	10,067	
Capital Assets, net of Depreciation	1,367,713	2,292,318	3,660,032	3,747,784
Construction Work in Process (e)	460,366	342,510	802,876	786,405
Total assets	3,075,092	3,682,943	6,758,035	6,823,603
Deferred Outflows (f)	92,147	175,539	267,685	273,596
Liabilities				
Liabilities - Short-Term (g)	152,024	183,903	335,928	321,270
Due to (from) Other Funds (b)	-	-	-	2,890
Other Liabilities (h)	2,822	6,387	9,209	9,097
Cash Held FBO DWSD (d)	3,219	-	3,219	2,807
Liabilities - Long-Term (i)	3,029,569	3,740,663	6,770,231	6,853,419
Total liabilities	3,187,634	3,930,953	7,118,587	7,189,483
Deferred Inflows (f)	58,711	46,855	105,566	108,541
Total net position (j)	\$ (79,106)	\$ (119,326)	\$ (198,432)	\$ (200,825)

Totals may be off due to rounding

In general, the Statement of Net Position - Draft reflects a mature organization with no unexpected trends. Cash balances as of November 30, 2019 are lower when compared to June 30, 2019 (highlighted in gold on Table 1). This is because of the high liquidity needs at June 30, 2019 to meet annual debt and interest payments, legacy pension obligation payments, and annual operational requirements whereas more funds are being invested as of November 30, 2019.

An ongoing challenge is the Net Position Deficit. The underlying causes took years to build (largely heavy use of debt to finance capital asset investment versus a strategic blend of debt, state revolving funds, and cash). The effect is reflected in GLWA's high debt interest expense. The GLWA is regularly updating the FY 2030 forecast which helps to provide a pathway to a positive Net Position in the future.

Footnotes to Statement of Net Position

- a. *Cash and Investments* include restricted amounts and are reported at book value. Investments at June 30, 2019 are reported at market value. The November 30, 2019 values differ from the Cash and Investment section of this Financial Report Binder due to timing of certain items recognized on a cash versus accrual basis.
- b. *Due from (to) Other Funds* and *Due to (from) Other Funds* is shown at the gross level for sub-fund activity.
- c. *Other Assets* primarily consists of the contractual obligation receivable from DWSD related to reimbursement of bonded indebtedness for local system improvements.
- d. *Cash Held FBO Advance (for benefit of) DWSD* and *Cash Held FBO DWSD* represents the net difference between DWSD retail cash received from customers and net financial commitments as outlined in the Master Bond Ordinance.
- e. *Construction Work in Process* represents the beginning balance of CWIP plus any construction spending during the fiscal year. The balance will fluctuate based on the level of spend less any capitalizations or write-offs.
- f. *Deferred Inflow* and *Deferred Outflow* relate to financing activity and GLWA's share of the legacy General Retirement System (GRS) pension obligation.
- g. *Liabilities - Short-term* include accounts payable, retainage payable, and certain accrued liabilities. Some items, such as compensated absences and worker's compensation, are reviewed periodically but are only adjusted on an interim basis if there is a material change.
- h. *Other Liabilities* account for the cash receipts set aside for the Budget Stabilization Fund and the Water Residential Assistance Program.
- i. *Liabilities - Long-term* include bonds payable, lease payable, and legacy General Retirement System pension liabilities.
- j. *Net Position Deficit* is defined by accounting standards as the residual of all other elements presented in a statement of financial position. It is the difference between (a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources. A net deficit occurs when the liabilities and deferred inflows exceed assets and deferred outflows. GLWA's net deficit is largely driven by an increase in depreciation

expense as a result of the increase in the acquisition valuation approach for recording capital asset values in the opening Statement of Net Position on January 2016. Efforts are underway to evaluate the net operating effect of this matter over the long term.

Statement of Revenues, Expenses and Changes in Net Position - All Funds Combined

This statement, shown in Table 2, is presented in summary format. The accrual basis of revenues and operations and maintenance expense vary from the revenue requirement basis presented in the *Budget to Actual Analysis* and the *Wholesale Billings, Receivables & Collections* sections of the November 2019 Financial Report Binder. Prior year ending balances are provided in the June 30, 2019 column as a reference for comparative purposes. Explanatory notes follow this statement.

**Table 2 - Statement of Revenues, Expenses and Changes in Net Position
- All Funds Combined
For the Five Months ended November 30, 2019
(\$000)**

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- type Activities	Comparative June 30, 2019
Revenue						
Wholesale customer charges	\$ 137,135	93.9%	\$ 113,804	57.6%	\$ 250,939	\$ 584,172
Local system charges	8,873	6.1%	77,420	39.2%	86,293	201,341
Industrial waste charges	-	0.0%	3,488	1.8%	3,488	9,106
Pollutant surcharges	-	0.0%	2,518	1.3%	2,518	5,933
Other revenues		0.0%	211	0.1%	212	528
Total Revenues	\$ 146,008	100%	\$ 197,441	100%	\$ 343,449	\$ 801,079
Operating expenses						
Operations and Maintenance	52,862	36.2%	70,158	35.5%	123,021	293,863
Depreciation	56,757	38.9%	67,133	34.0%	123,890	309,115
Total operating expenses	109,619	75.1%	137,291	69.5%	246,910	602,978
Operating income	36,389	24.9%	60,150	30.5%	96,539	198,101
Total Nonoperating (revenue) expense	38,613	26.4%	55,533	28.1%	94,146	220,170
Increase/(Decrease) in Net Position	(2,224)	-1.5%	4,617	2.3%	2,393	(22,070)
Net position (deficit), beginning of year	(76,882)		(123,943)		(200,825)	(178,755)
Net position (deficit), end of year	\$ (79,106)		\$ (119,326)		\$ (198,432)	\$ (200,825)

Totals may be off due to rounding

Water Fund

- ✓ The decrease in Water Fund Net Position is \$2.2 million.
- ✓ Wholesale water customer charges of \$137.1 million account for 93.9% of Water System revenues.
- ✓ Operating expenses of \$109.6 million represent 75.1% of total operating revenue. Depreciation is the largest operating expense at \$56.7 million or 51.8% of operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$36.3 million or 24.9% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$37.1 million (this equates to the bonded debt interest expense less the offset from DWSD contractual obligation income).

Sewage Disposal Fund

- ✓ The increase in the Sewage Disposal Fund Net Position is \$4.6 million.
- ✓ Wholesale customer charges of \$113.8 million account for 57.6% of Sewer System revenues. Wholesale customer charges are billed one-twelfth each month based on an agreed-upon historical average “share” of each customer’s historical flows which are formally revisited on a periodic basis. The result is no revenue shortfall or overestimation.
- ✓ Local system (DWSD) charges of \$77.4 million account for 39.2% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$137.3 million represent 69.5% of total operating revenue. Depreciation is the largest operating expense at \$67.1 million or 48.9% of total operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$60.1 million or 30.5% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$48.3 million (this equates to the bonded debt interest expense less the offset from DWSD contractual obligation income).

Supplemental Schedule of Operations & Maintenance Expenses - All Funds Combined

This Supplemental Schedule of Operations & Maintenance Expenses (O&M) schedule is shown below in Table 3. This accrual basis of operations and maintenance expense may vary from the revenue requirement basis presented in the *Budget to Actual Analysis* section of the November 2019 Financial Report Binder. Explanatory notes follow this schedule.

**Table 3 – Supplemental Schedule of Operations & Maintenance Expenses
- All Funds Combined
For the Five Months ended November 30, 2019
(\$000)**

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- type Activities	Percent of Total
Operating expenses						
Personnel						
Salaries & Wages	10,236	19.4%	19,223	27.4%	29,459	23.9%
Overtime	1,841	3.5%	1,241	1.8%	3,082	2.5%
Benefits	6,396	12.1%	3,873	5.5%	10,269	8.3%
Total Personnel	\$ 18,473	34.9%	\$ 24,336	34.7%	\$ 42,810	34.8%
Utilities						
Electric	11,759	22.2%	6,149	8.8%	17,908	14.6%
Gas	214	0.4%	1,636	2.3%	1,850	1.5%
Sewage	121	0.2%	727	1.0%	847	0.7%
Water	1	0.0%	1,400	2.0%	1,401	1.1%
Total Utilities	\$ 12,095	22.9%	\$ 9,912	14.1%	\$ 22,007	17.9%
Chemicals	2,336	4.4%	3,883	5.5%	6,219	5.1%
Supplies and other	4,831	9.1%	8,995	12.8%	13,826	11.2%
Contractual services	17,949	34.0%	23,624	33.7%	41,573	33.8%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(742)	-1.4%	(454)	-0.6%	(1,196)	-1.0%
Shared services allocation	(2,079)	-3.9%	(138)	-0.2%	(2,217)	-1.8%
Operations and Maintenance Expenses	\$ 52,862	100.0%	\$ 70,158	100.0%	\$ 123,021	100.0%

Totals may be off due to rounding.

- ✓ Core expenses for water and sewage disposal systems are utilities (17.9% of total O&M expenses) and chemicals (5.1%).
- ✓ Personnel costs (34.8% of total O&M expenses) include all salaries, wages, and benefits for employees as well as staff augmentation contracts that fill a vacant position (contractual transition services).
- ✓ Contractual services (33.8%) includes:
 - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately \$2.5 million);
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$6.3 million); and
 - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenance, field, planning and other services.

Supplemental Schedule of Nonoperating Expenses – All Funds Combined

The Supplemental Schedule of Nonoperating Expenses – All Funds Combined is shown in Table 4. Explanatory notes follow this schedule.

**Table 4 – Supplemental Schedule of Nonoperating Expenses – All Funds Combined
For the Five Months ended November 30, 2019
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2019
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (9,313)	\$ (7,581)	\$ (16,893)	\$ (40,673)
Interest income DWSD Shortfall	-	(620)	(620)	(1,104)
Investment earnings	(3,039)	(3,385)	(6,425)	(26,518)
Other nonoperating revenue	(8)	(4)	(12)	(420)
Interest expense				-
Bonded debt	46,461	55,925	102,386	250,966
Lease obligation	7,302	8,925	16,226	39,264
Other obligations	2,025	655	2,681	6,368
Total interest expense	55,788	65,505	121,293	296,597
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	6,527
Capital Contribution	-	-	-	-
Amortization, issuance costs, debt	(6,718)	772	(5,946)	(3,995)
Amortization, raw water rights	1,486	-	1,486	3,567
(Gain) loss on disposal of capital assets	(1)	271	270	(81)
Loss on impairment of capital assets	-	-	-	1,025
Water Residential Assistance Program	418	575	993	2,024
Legacy pension expense	-	-	-	(16,778)
Total Nonoperating (Revenue)/Expense	\$ 38,613	\$ 55,533	\$ 94,146	\$ 220,170

Totals may be off due to rounding.

- ✓ Interest income on contractual obligation relates to the portion of the total GLWA debt obligation attributable to DWSD. This interest income offsets the total debt interest expense paid by GLWA on behalf of both entities monthly.
- ✓ Interest income DWSD shortfall represents interest from a budgetary shortfall loan from fiscal years 2016, 2017 and 2018 and is paid in accordance with the 2018 Memorandum of Understanding (MOU).

- ✓ Investment earnings in this report are reflected at book value. Any differences between the Basic Financial report and Cash and Investment section of this Financial Report binder are due to accrued interest and reversal of the market adjustment from FY 2019. FY 2019 market value adjustments for Water and Sewer totaled of \$1.6 million and \$600 thousand, respectively.
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:
 - Bonded debt;
 - Lease obligation for the regional assets from the City of Detroit; and
 - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to assumed DWSD liabilities; acquisition of raw water rights related to the KWA Pipeline.

FY 2019 Items of note:

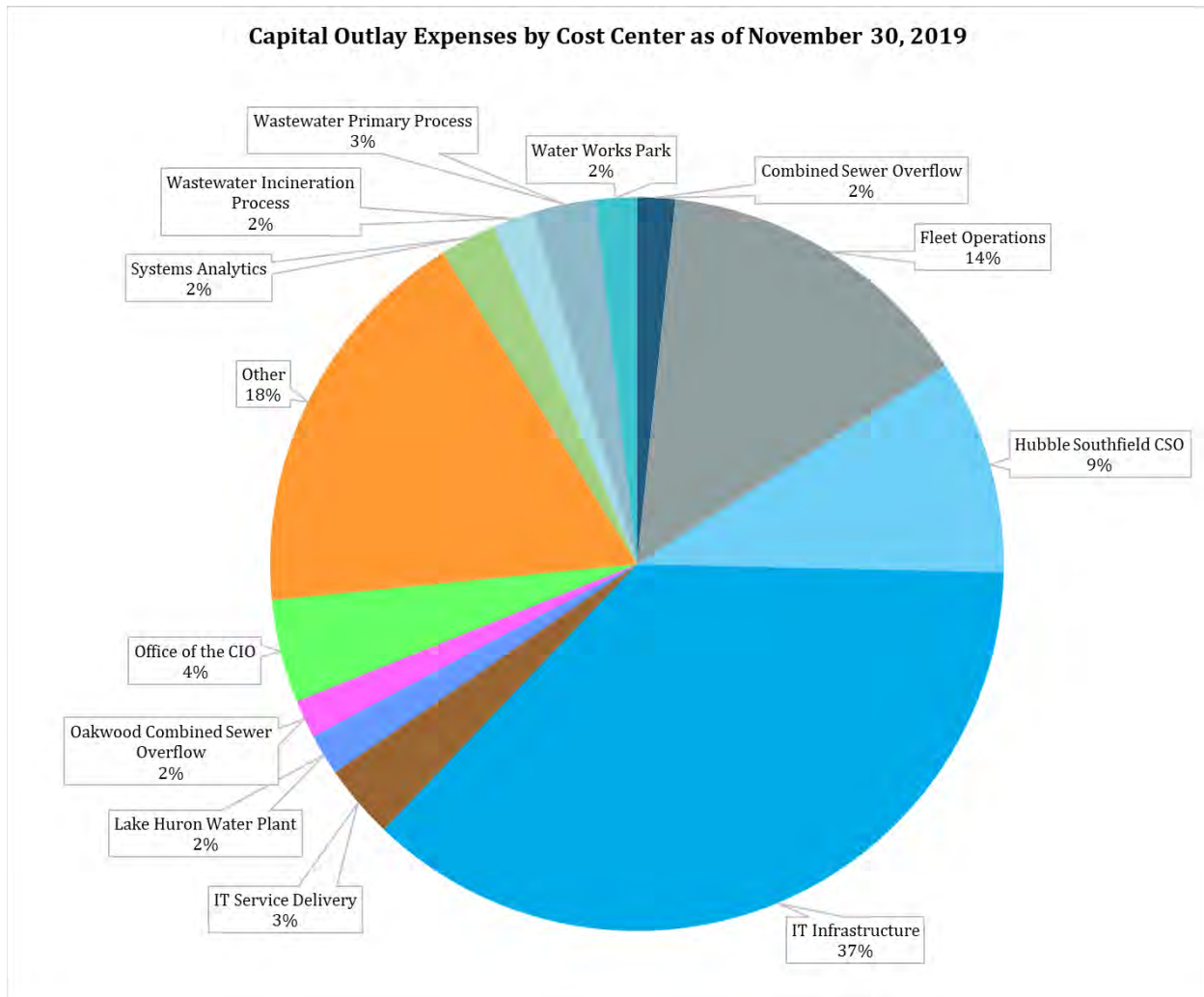
- ✓ Legacy Pension expense is reflected as income due to changes in actuarial assumptions and rates from the June 30, 2018 City of Detroit General Retirement System Component II audited financial statement.
- ✓ Sewer Other Non-operating expense includes the 2018 MOU Item 8a from June 27, 2018 for a final sewer lookback adjustment for DWSD of \$6.5 million.

Financial Activity Charts

Chart 1 – Capital Outlay – Water and Sewer System Combined

Capital Outlay represents purchases of equipment, software, and small facility improvement projects. It *excludes* any capital investment which is included in the monthly construction work-in-progress report related to the Capital Improvement Program. Some items span several months so the entire cost may not have been incurred yet. In addition, items are capitalized only if they meet GLWA’s capitalization policy.

Through November 30, 2019, total capital outlay spend is \$5.7 million. Following this chart is a sample list of projects and purchases from the total spend of \$5.7 million:



Note: Due to rounding totals may not equal 100%.

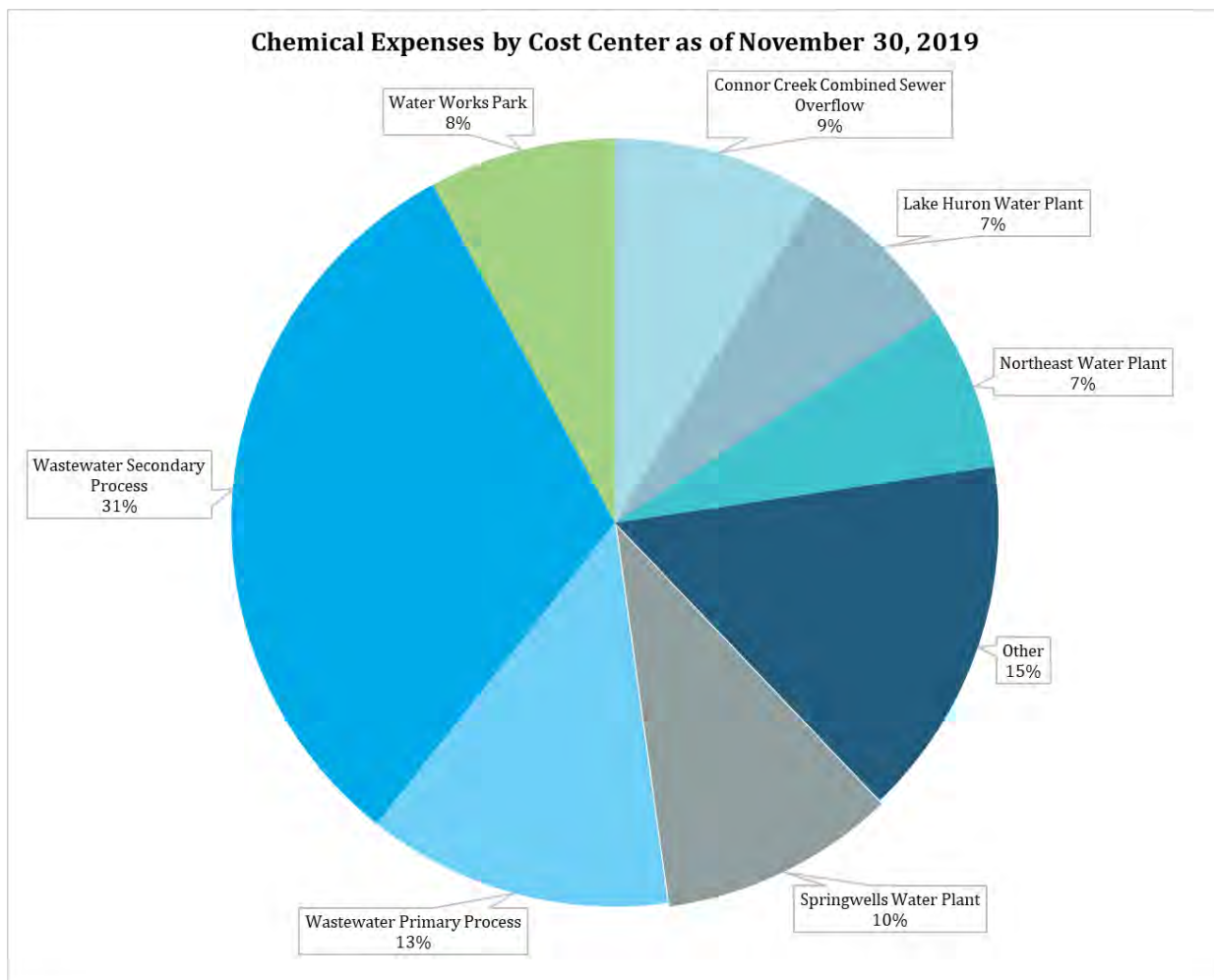
Water Operations: Trucks (225k) and Skid steer loader (\$88k) under ‘other’ for the Southwest Water Plant.

Wastewater Operations: Accusonic flow meters (\$540k); Transformer C structure at Water Resource Recovery Facility (\$99k); chemical feed pump (\$96k); CSO facilities need assessment (\$84k); Flygt pump (\$78k); water heater for Scum building (\$76k); HVAC controls upgrade (\$52k); Boilers (\$50k); Rotork Actuators (\$49k) and loaders (\$44k)

Centralized & Administrative Facilities: Low voltage wiring services (\$1.7m); trucks and vehicles (\$527k); IT software (\$247k); IT & 17th floor renovation and furniture (\$242k); Transmitters (\$72k); Sewer meter support (\$66k); IT Premium hardware support (\$62k); 2nd Floor furniture at CSF (\$49k); IT computers (\$99k); ‘Other’ category expenses include: bathroom renovation (\$72k) for the Logistics and Materials team.

Chart 2 – Chemical Spend – Water and Sewer System Combined

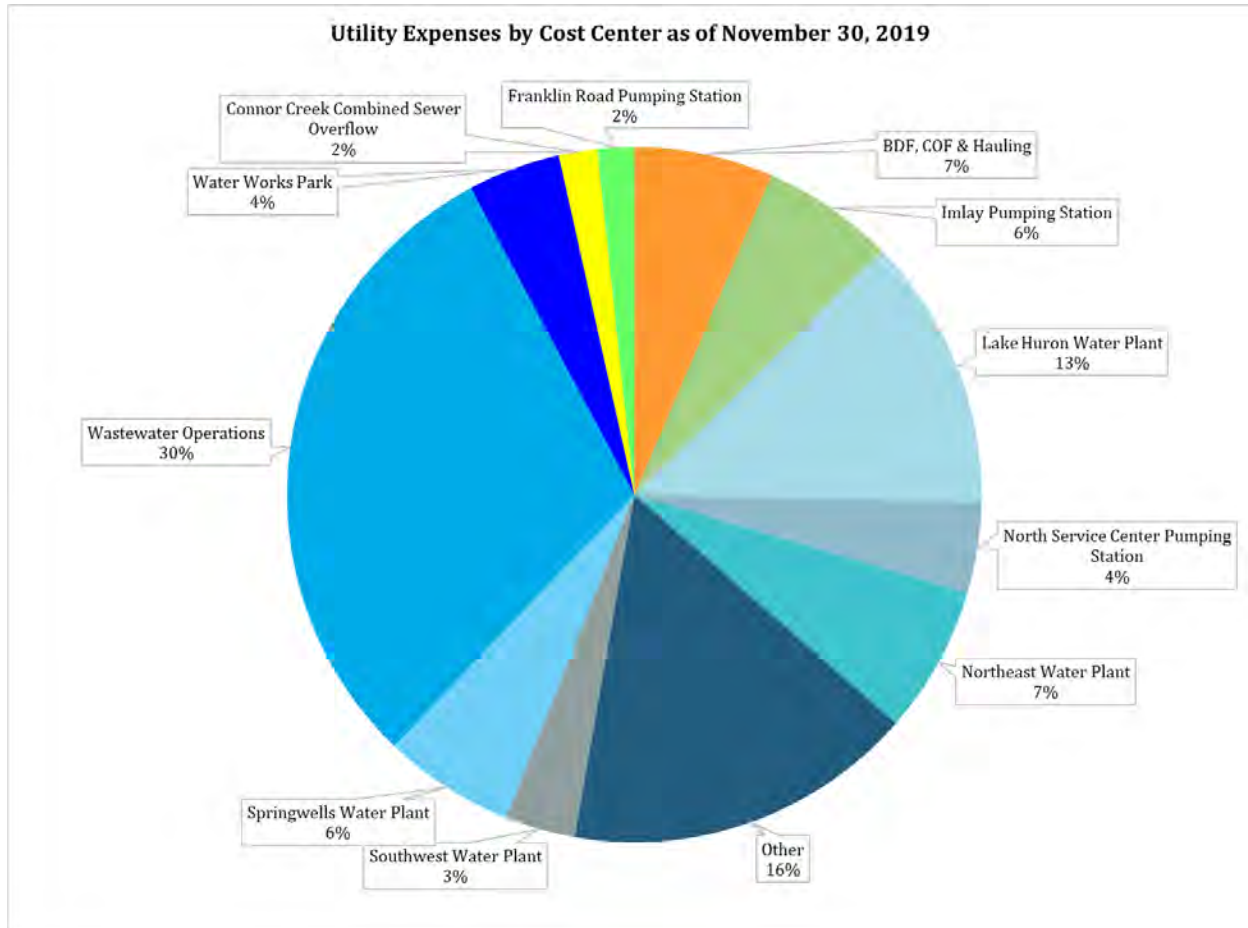
Chemical spend is \$6.2 million through November 30, 2019. The allocation is shown in the chart below and remains consistent with prior periods.



Note: “Other” includes Combined Sewer Overflow (CSO), portions of the Wastewater process and two departments from Water. Due to rounding totals may not equal 100%.

Chart 3 – Utility Spend – Water and Sewer System Combined

Utility spend is \$22.0 million through November 30, 2019. The allocation is shown in the chart below and consistent with prior periods.



Note: Due to rounding totals may not equal 100%.

Financial Operations KPI

This key performance indicator shown in **Chart 1 – Bank Reconciliation Completion Status** below provides a measure of the progress made in the month-end close process which includes bank reconciliations with a completed status at month end.

There were no changes in accounts from October 2019.

Chart 1 – Bank Reconciliation Completion Status

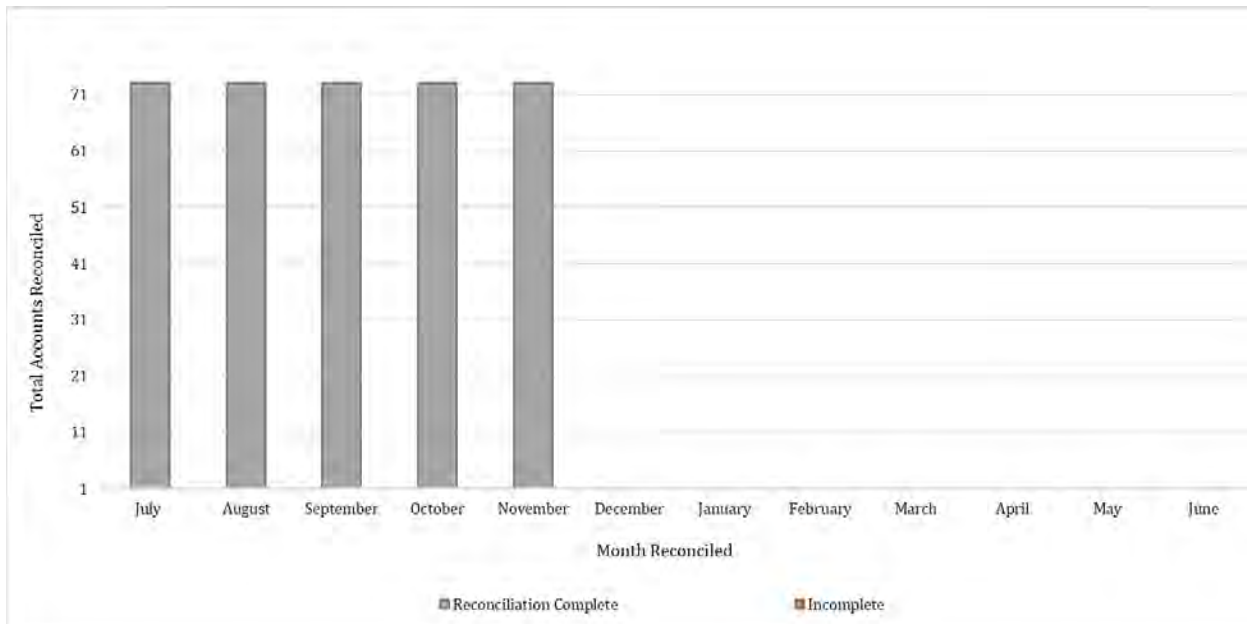


Table 1 – Fiscal Year 2020 GL Cash Account Rollforward

Total GL Cash accounts as of July 1, 2019	71
New GL Cash accounts	2
Inactivated GL Cash accounts	<u>0</u>
Total GL Cash accounts as of November 30, 2019	<u><u>73</u></u>

The monthly Budget to Financial Statements Crosswalk includes the following.

1. Crosswalk Budget Basis to Financial Reporting Basis
2. Explanatory Notes for Crosswalk

Purpose for Crosswalk: The Great Lakes Water Authority establishes a “Revenue Requirements” budget for the purposes of establishing charges for services. The financial report is prepared in accordance with Generally Accepted Accounting Policies for enterprise funds of a local government. Because the budget and the financial statements are prepared using different basis of accounting, the crosswalk reconciles the “Net Revenue Requirement Basis” from the Budget to Actual Analysis (Table 1A and Table 1B) to the “Increase/(Decrease) in Net Position” in Table 2 of the Basic Financial Statements in the monthly Financial Report.

The Authority has a Water Master Bond Ordinance and a Sewer Master Bond Ordinance (MBO). The Ordinances provide additional security for payment of the bonds. All revenues of the system are deposited into Revenue Receipts Funds which are held in trust by a trustee. The cash is moved to multiple bank accounts monthly based on 1/12th of the budget as defined in the MBO (“the flow of funds”) for all revenue requirements except for the Debt Service monthly transfer. The Debt Service monthly requirement is computed by the trustee, U.S. Bank. The cash transfer for debt is net of investment earnings that remain in the debt service accounts to be used for debt service.

The budget is prepared on a modified cash basis. The revenue requirements are determined based upon the cash needed to meet the financial commitments as required by the Master Bond Ordinance.

- Operation & Maintenance (O&M) expenses based on an accrual basis
- O&M Legacy Pension Allocation (includes administrative fee) and Accelerated Legacy Pension Allocation (includes B&C notes obligation) based on a cash basis
- Debt Service Allocation based on a cash set aside basis to provide the cash for the debt payments on the due dates
- Lease payments based on a cash basis
- Water Residential Assistance Program based on a percentage of budgeted revenue
- Regional System Improvement & Extension Fund Allocation on a cash basis

Budget: In Table 1A and Table 1B of the Budget to Actual Analysis the ‘Revenues’ section is the accrual basis revenues that are available to meet the ‘Revenue Requirements’. The “Revenue Requirements’ section budget column indicates the annual cash transfers to be made.

Financial Reporting: The Authority’s financial statements are prepared in conformity with generally accepted accounting principles (GAAP) as applied to government units. The Authority maintains its records on the accrual basis of accounting to conform to GAAP. Revenues from operations, investments and other sources are recorded when earned. Expenses (including depreciation) are recorded when incurred.

Table 1 – Crosswalk Budget Basis to Financial Reporting Basis provides a reconciliation of the “Net Difference” in Table 1A and Table 1B in the Budget to Actual Analysis report to the “Increase/(Decrease) in Net Position” in Table 2 of the Basic Financial Statements in this monthly Financial Report. Explanatory notes follow the Crosswalk shown in Table 1 below.

**Table 1 – Crosswalk Budget Basis to Financial Reporting Basis (\$000)
 For the Five Months Ended November 30, 2019**

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 9,825	\$ 1,668	\$ 11,493
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	4,767	8,531	13,298
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	16,464	38,129	54,593
Accelerated pension B&C notes obligation portion (g)	74	166	240
Lease payment (h)	2,073	2,533	4,606
WRAP (i)	290	426	716
DWSD short term allocation (j)	-	10,690	10,690
Improvement & Extension Fund (j)	14,071	9,987	24,058
Nonbudgeted financial reporting categories adjustments			
Depreciation (k)	(56,757)	(67,133)	(123,890)
Amortization (k)	5,232	(772)	4,460
Other nonoperating income (k)	8	4	12
Other nonoperating expense (k)	-	-	-
Gain(loss) on disposal of capital assets (k)	1	(271)	(270)
Raw water rights (l)	1,038	-	1,038
Investment earnings construction fund (m)	690	659	1,349
Net Position Increase/(Decrease) per Financial Statements (b)	\$ (2,224)	\$ 4,617	\$ 2,393

Table 2- Explanatory Notes for Crosswalk

- (a) Source: Budget to Actual Table 1A and Table 1B in Monthly Financial Binder
- (b) Source: Basic Financial Statements Table 2 in Monthly Financial Binder
- (c) Current year pension payments are an expense for budget purposes but not for financial reporting purposes.
- (d) Prior year pension payments are accounted for in the current year financial statements.

- (e) The administrative fee is part of the O&M Legacy Pension shown as an expense for budget purposes. For financial reporting purposes part of the administrative fee is considered prepaid based on the prior year General Retirement System audit information and therefore not an expense for the current year financial reporting. The prepaid portion is adjusted in June each year.
- (f) Debt service (principal and interest payments) are shown as an expense for budget purposes. Most of the adjustment relates to principal payments which are not an expense for financial reporting purposes. A portion of the adjustment relates to interest expense variances on state revolving fund debt due to the timing of payment draws. The cash set aside basis for interest expense generally is the same as the accrual basis for financial reporting.
- (g) The accelerated pension payment includes the obligation payable for the B&C notes. The pension portion is included in item (c) above. This adjustment relates to the B&C note obligation payments. The principal and interest cash basis payments are treated as an expense for budget purposes. The principal portion is not an expense for financial reporting purposes. For financial reporting purposes interest is expensed on an accrual basis which is different from the cash basis.
- (h) The lease payment is included as an expense for budget and includes both principal and interest payments. Most of the adjustment relates to the principal payments which are not an expense for financial reporting purposes. A portion of the adjustment relates to interest expense which is recorded on an accrual basis for financial reporting which is different from the cash basis.
- (i) WRAP is shown as an expense for budget purposes. For financial reporting purposes the expense is not recognized until the funds have been transferred to the WRAP administrator. The adjustment shown is the amount of current year transfers that have not been transferred to the WRAP administrator. Note that there are funds from the prior year that have not been transferred to the WRAP administrator.
- (j) The DWSD short term allocation and Improvement & Extension Fund transfers are shown as an expense for budget purposes but not for financial reporting purposes. For FY 2020, the Sewer Improvement and Extension Fund adjustments also reflect \$622 thousand in Sewer Improvement and Extension Fund expenses relating to repairs paid for through the Sewer Improvement and Extension Fund. The Water Improvement and Extension Fund also reflects \$138 thousand in Water Improvement and Extension expenses relating to repairs paid for through the Water Improvement and Extension Fund. These are

consolidated expenses for financial reporting purposes but are not reflected in the current Operations and Maintenance budget expenses.

- (k) Certain nonoperating income and expenses are reported in financial statements only.
- (l) The water service contract with Flint includes a license for raw water rights which has been recorded as an asset and liability by the Authority. The contract provides a credit to Flint as Flint satisfies its monthly bond payment obligation to KWA. This KWA credit is treated as a noncash payment of principal and interest on the liability recorded for the raw water rights. For budget, wholesale customer charges are net of the anticipated KWA credits to Flint as that is the cash that will be received and available to meet the budgeted revenue requirements. For financial reporting basis the Flint wholesale charges are recorded at the total amount billed. When the KWA credit is issued, the receivable from Flint is reduced and the principal and interest payments on the liability for the raw water rights are recorded as a noncash transaction. Most of the adjustment shown relates to the principal reduction made for the credits applied which are not an expense for financial reporting basis.
- (m) Investment earnings from the construction fund are not shown as revenue in the budget and are shown as revenue in the financial statements. Construction fund investment earnings are excluded from the definition of revenue for budget purposes as they are used for construction costs and are not used to meet the revenue requirements in the budget.

The Monthly Construction Work in Progress (CWIP) Summary includes the following.

1. Water System Construction Work in Progress costs incurred to date
2. Sewer System Construction Work in Progress costs incurred to date

Construction Work in Progress

Great Lakes Water Authority (GLWA) capital improvement projects generally span two or more years due to size and complexity. Therefore, the GLWA Board of Directors adopts a biennial budget that establishes allowable amounts for construction spending during that period to support a five-year capital improvement plan (CIP). The CIP is a five-year, rolling plan which is updated annually, reviewed, and formally adopted by the GLWA Board of Directors.

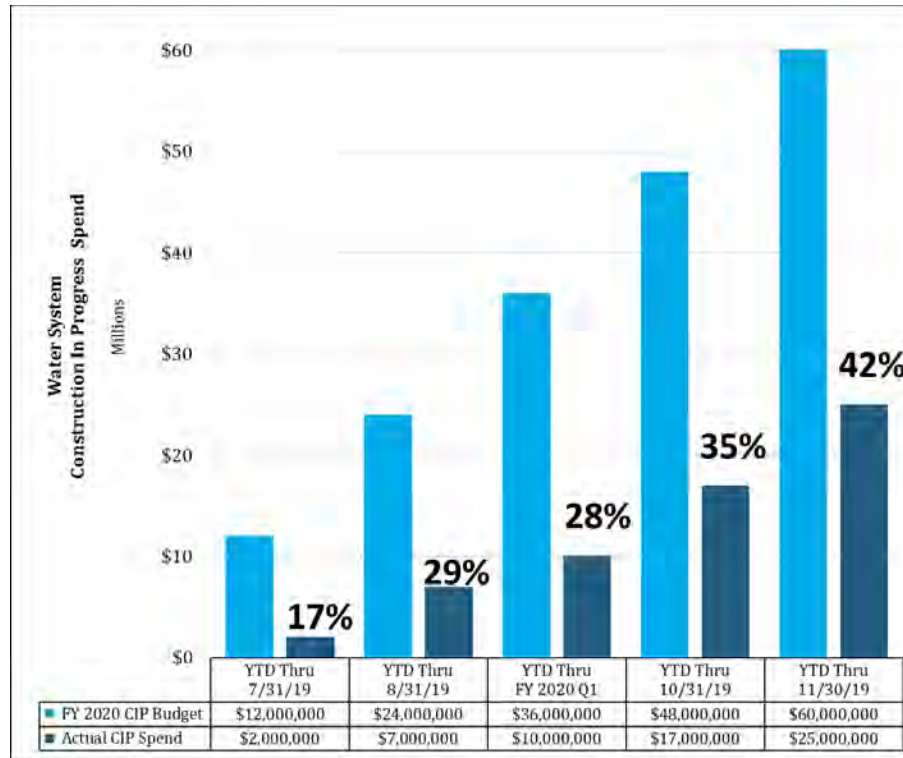
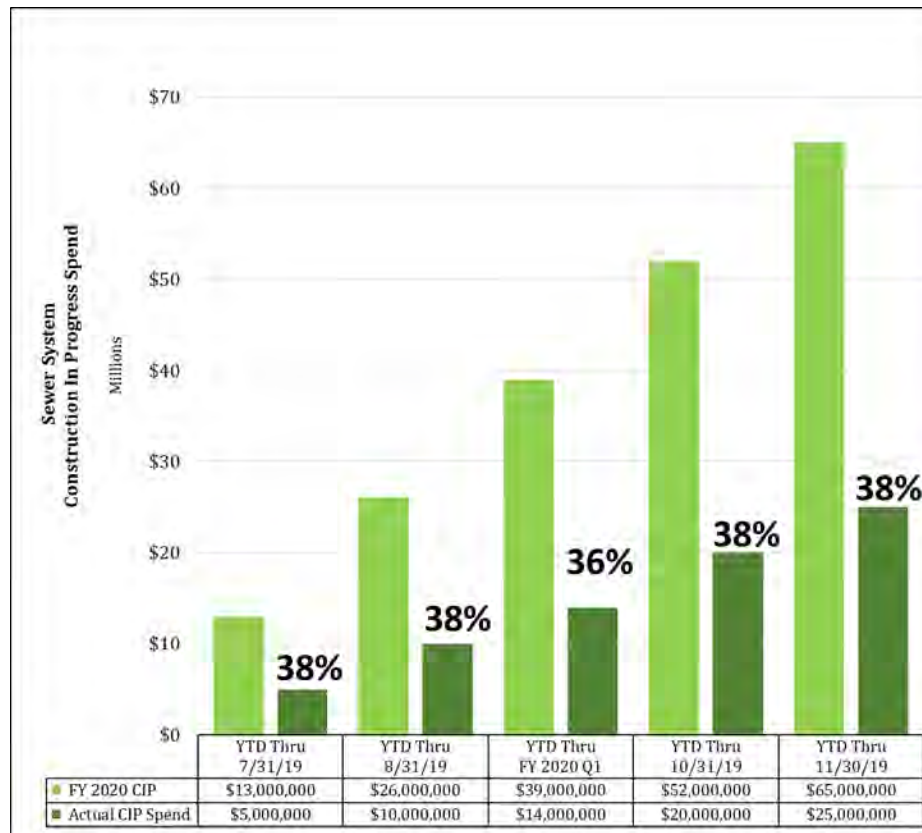
This report presents quarterly and monthly CWIP spending trends against the prorated CIP. The prorated CIP is calculated by dividing the total fiscal year 2020 board-approved CIP plan by twelve equal months. It should be noted that these interim reports are prepared on a modified cash basis. Known expenses, where material in nature, have been accrued.

Chart 1 – Water System Construction in Work in Progress Spend

As of November 2019, the Water system incurred nearly \$25 million of construction costs to date. This is 42% of the fiscal year 2020 prorated CIP through December it is anticipated to increase closer to plan in future months.

Chart 2 – Sewer System Construction in Work in Progress Spend

As of November 2019, the Sewer system incurred nearly \$25 million of construction costs to date. This is 38% of the fiscal year 2020 prorated CIP through December and is anticipated to increase closer to plan in future months.

Chart 1 – Water System Construction Work in Progress Spend

Chart 2 – Sewer System Construction Work in Progress Spend


This report includes the following.

1. Master Bond Ordinance (MBO) Required Transfers to Accounts Held by GLWA
2. Master Bond Ordinance (MBO) Required Transfers to Accounts Held by DWSD

MBO Transfers to Accounts Held by GLWA

GLWA Transfers: The Treasury team completes required MBO transfers on the first business day of each month. These transfers are completed in accordance with the Great Lakes Water Authority (GLWA) and Detroit Water & Sewerage Department (DWSD) budgets as approved and adopted by the GLWA Board of Directors and DWSD Board of Water Commissioners annually.

Monthly transfers for Operations & Maintenance (O&M), Pension, and Water Residential Assistance Program (WRAP) are one-twelfth of the annual, budgeted amount. Budget stabilization should not require additional funding due to new, baseline funding levels established as part of the June 2018 Memorandum of Understanding but is included to reflect historical activity. Transfers to the Extraordinary Repair & Replacement (ER&R) fund are completed annually based on budget and year-end fund status.

Table 1 - GLWA FY 2020 Water MBO Transfers reflects the required transfers for FY 2020 completed through November 1, 2019. MBO transfers for water totaling \$62.6 million have been transferred to GLWA accounts.

Table 2 - GLWA FY 2020 Sewer MBO Transfers reflects the required transfers for FY 2020 completed through November 1, 2019. MBO transfers for sewer totaling \$89.8 million have been transferred to GLWA accounts.

Table 3 - GLWA MBO Transfer History reflects historical transfers for FY 2016 through FY 2020 to date.

Table 1 – GLWA FY 2020 Water MBO Transfers

WATER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWS&D)	Extraordinary Repair & Replacement (ER&R)	Total Water
FY 2020							
July 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
August 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
September 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
October 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
November 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
Total FY 2020	\$54,787,710	\$2,520,000	\$4,456,540	\$825,335	\$0	\$0	\$62,589,585

Table 2 – GLWA FY 2020 Sewer MBO Transfers

SEWER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWS&D)	Extraordinary Repair & Replacement (ER&R)	Total Sewer
FY 2020							
July 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
August 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
September 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
October 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
November 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
Total FY 2020	\$77,940,500	\$4,510,000	\$6,119,795	\$1,203,040	\$0	\$0	\$89,773,335

Table 3 – GLWA MBO Transfer History

GLWA MBO Transfer History							
WATER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWS&D)	Extraordinary Repair & Replacement (ER&R)	Total Water
Total FY 2016	\$71,052,000	\$6,037,100	\$10,297,200	\$1,983,300	\$2,326,900	\$606,000	\$92,302,500
Total FY 2017	111,879,600	6,037,200	10,297,200	2,077,200	360,000	-	130,651,200
Total FY 2018	121,562,604	6,048,000	10,695,696	2,159,400	-	-	140,465,700
Total FY 2019	121,562,604	6,048,000	10,695,696	2,061,000	-	-	140,367,300
Total FY 2020 (5 months)	54,787,710	2,520,000	4,456,540	825,335	-	-	62,589,585
Life to Date	\$480,844,518	\$26,690,300	\$46,442,332	\$9,106,235	\$2,686,900	\$606,000	\$566,376,285
SEWER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWS&D)	Extraordinary Repair & Replacement (ER&R)	Total Sewer
Total FY 2016	\$100,865,600	\$10,838,400	\$14,025,800	\$2,523,400	\$5,591,700	\$779,600	\$134,624,500
Total FY 2017	175,858,800	10,838,400	14,026,800	2,654,400	2,654,400	-	206,032,800
Total FY 2018	191,079,396	10,824,000	14,687,496	2,760,804	-	-	219,351,696
Total FY 2019	191,079,396	10,824,000	14,687,496	2,870,992	-	-	219,461,884
Total FY 2020 (5 months)	77,940,500	4,510,000	6,119,795	1,203,040	-	-	89,773,335
Life to Date	\$736,823,692	\$47,834,800	\$63,547,387	\$12,012,636	\$8,246,100	\$779,600	\$869,244,215

MBO Required and Lease Payment Transfers to DWSD

DWSD Transfers: The GLWA Treasury team completes the required MBO transfers on the first business day of each month. These transfers are completed in accordance with the GLWA and DWSD budgets as approved and adopted by the GLWA Board of Directors and DWSD Board of Water Commissioners annually. Transfers are coordinated with other areas of GLWA Financial Services in advance of the first business day of each month. GLWA Treasury sends confirmation of transfers made to DWSD Treasury.

Monthly transfers for O&M and O&M Pension are one-twelfth of the annual, budgeted amount. The annual lease payment, as stated in the Water & Sewer Lease Agreements, is \$22,500,000 for Water and \$27,500,000 for Sewer. The monthly lease transfer is one-twelfth of the amount as stated in the Lease agreements unless otherwise designated by DWSD. Per Section 3.5 of the Lease, the Lease payment may be used for (a) bond principal and interest for Local System Improvements, (b) bond principal and interest for the City's share of common-to-all System Improvements, and (c) Local System improvements.

Table 4 - DWSD FY 2020 Water MBO Transfers reflects the required transfers for FY 2020 completed through November 1, 2019. MBO transfers for Water totaling \$24.1 million have been transferred to accounts held by DWSD. For FY 2020, DWSD has requested that \$3,548,000 of the lease payment be utilized to offset a portion of debt service of which one-twelfth is applied monthly.

Table 5 - DWSD FY 2020 Sewer MBO Transfers reflects the required transfers for FY 2020 completed through November 1, 2019. MBO transfers for Sewer totaling \$39.4 million have been transferred to accounts held by DWSD. For FY 2020, DWSD has requested that \$5,032,700 of the lease payment be utilized to offset a portion of debt service of which one-twelfth is applied monthly. DWSD has also requested that for December 2019 - June 2020, \$1 million be withheld each month from the Operations & Maintenance transfer to address FY 2020 projected shortfall in retail revenue collections.

Table 6 - DWSD MBO and Lease Payment Transfer History reflects historical transfers for FY 2016 through FY 2020 to date.

Table 4 – DWSD FY 2020 Water MBO Transfers

WATER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Water</u>
FY 2020				
July 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	\$ 4,823,866
August 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	4,823,866
September 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	4,823,866
October 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	4,823,866
November 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	4,823,866
Total FY 2020	\$ 14,442,665	\$ 1,780,000	\$ 7,896,665	\$ 24,119,330

Table 5 – DWSD FY 2020 Sewer MBO Transfers

SEWER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Sewer</u>
FY 2020				
July 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	\$ 7,888,900
August 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	7,888,900
September 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	7,888,900
October 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	7,888,900
November 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	7,888,900
Total FY 2020	\$ 28,893,125	\$ 1,190,000	\$ 9,361,375	\$ 39,444,500

Table 6 – DWSD MBO and Lease Payment Transfer History

Transfers to DWSD				
WATER				
	Operations & Maintenance	Operations & Maintenance Pension	Lease Payment (I&E Fund)	Total Water
FY 2016 *				
MBO/Lease Requirement	\$ 26,185,600	\$ 4,262,700	\$ 22,500,000	\$ 52,948,300
Offset to Debt Service	-	-	(2,326,900)	(2,326,900)
Net MBO Transfer	26,185,600	4,262,700	20,173,100	50,621,400
FY 2017				
MBO/Lease Requirement	33,596,400	4,262,400	22,500,000	60,358,800
Offset to Debt Service	-	-	-	-
Net MBO Transfer	33,596,400	4,262,400	22,500,000	60,358,800
FY 2018				
MBO/Lease Requirement	35,059,704	4,272,000	22,500,000	61,831,704
Offset to Debt Service	-	-	(1,875,000)	(1,875,000)
Net MBO Transfer	35,059,704	4,272,000	20,625,000	59,956,704
FY 2019				
MBO/Lease Requirement	35,484,300	4,272,000	22,500,000	62,256,300
Offset to Debt Service	-	-	(3,972,200)	(3,972,200)
Net MBO Transfer	35,484,300	4,272,000	18,527,800	58,284,100
FY 2020 (5 months)				
MBO/Lease Requirement	14,442,665	1,780,000	9,375,000	25,597,665
Offset to Debt Service	-	-	(1,478,335)	(1,478,335)
Net MBO Transfer	14,442,665	1,780,000	7,896,665	24,119,330
Life-to-Date				
MBO/Lease Requirement	144,768,669	18,849,100	99,375,000	262,992,769
Offset to Debt Service	-	-	(9,652,435)	(9,652,435)
Total Water	\$ 144,768,669	\$ 18,849,100	\$ 89,722,565	\$ 253,340,334
SEWER				
	Operations & Maintenance	Operations & Maintenance Pension	Lease Payment (I&E Fund)	Total Sewer
FY 2016 *				
MBO/Lease Requirement	\$ 19,774,300	\$ 2,861,800	\$ 27,500,000	\$ 50,136,100
Offset to Debt Service	-	-	(19,991,500)	(19,991,500)
Total MBO Transfer	19,774,300	2,861,800	7,508,500	30,144,600
FY 2017				
MBO/Lease Requirement	41,535,600	2,862,000	27,500,000	71,897,600
Offset to Debt Service	-	-	-	-
Total MBO Transfer	41,535,600	2,862,000	27,500,000	71,897,600
FY 2018				
MBO/Lease Requirement	60,517,992	2,856,000	27,500,000	90,873,992
Offset to Debt Service	-	-	(9,166,664)	(9,166,664)
Total MBO Transfer	60,517,992	2,856,000	18,333,336	81,707,328
FY 2019				
MBO/Lease Requirement	56,767,920	2,856,000	27,500,000	87,123,920
Offset to Debt Service	-	-	(4,415,000)	(4,415,000)
Total MBO Transfer	56,767,920	2,856,000	23,085,000	82,708,920
FY 2020 (5 months)				
MBO/Lease Requirement	28,893,125	1,190,000	11,458,333	41,541,458
Offset to Debt Service	-	-	(2,096,958)	(2,096,958)
Total MBO Transfer	28,893,125	1,190,000	9,361,375	39,444,500
Life-to-Date				
MBO/Lease Requirement	207,488,937	12,625,800	121,458,333	341,573,070
Offset to Debt Service	-	-	(35,670,122)	(35,670,122)
Total Sewer	\$ 207,488,937	\$ 12,625,800	\$ 85,788,211	\$ 305,902,948

* Note: FY 2016 lease transfer amounts shown do not include prepayment on the lease amount for the 6 months period before bifurcation.

This report includes the following:

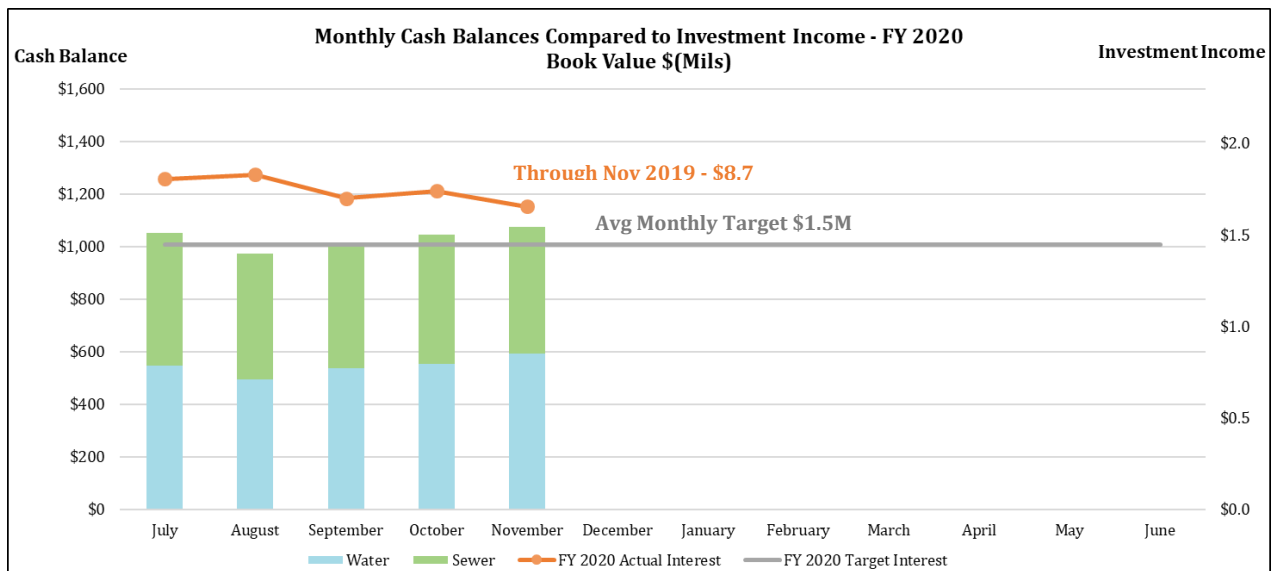
1. Monthly Cash Balances Compared to Investment Income
2. Cash Balance Detail

Monthly Cash Balances Compared to Investment Income

GLWA's investment holdings comply with the requirements of Public Act 20 of 1948, as amended and the GLWA Investment Policy. The cash balances shown in this report include bank deposits, money market funds, a local government investment pool, U.S. Treasuries, Federal Agencies, and commercial paper.

Cash and investment balances change each month based on Master Bond Ordinance (MBO) funding requirements, operational needs, capital spending pace, and mandatory debt payments. Investment income fluctuates monthly based on cash and investment balances as well as market conditions and investment strategy. The cumulative investment earnings through November 2019 of \$8.7 million is 50% of the FY 2020 target of \$17.4 million. As the market environment fluctuates, GLWA will continue to monitor the FY 2020 target.

Chart 1 - Monthly Cash Balances Compared to Investment Income - Through November 2019



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$549	\$494	\$536	\$555	594							
Sewer	\$501	\$479	\$464	\$489	479							
Total	\$1,050	\$973	\$1,000	\$1,044	\$1,073							
Investment Income	\$1.8	\$1.8	\$1.7	\$1.7	\$1.7							

Cash Balance Detail

Funds Held By GLWA: GLWA cash balances are held in accounts as defined by the Master Bond Ordinance. The accounts are funded by monthly transfers, as stipulated in the MBO, on the first business day of each month. The “operations and maintenance” (O&M) fund transfer amounts are based upon the annual O&M budget approved by the GLWA Board of Directors for the regional systems and by the Board of Water Commissioners for the Detroit Water & Sewerage Department (DWSD) local system budgets. The water and sewer funds held by GLWA and their purpose, as defined by the MBO, are listed below.

Funds Held Within Trust:

- Receiving – all retail and wholesale revenues collected which are distributed in subsequent month(s)
- Debt Service – funds set aside for debt service and debt reserve requirements
- Pension Obligation – funds set aside to meet GLWA’s annual funding requirements for the legacy General Retirement System Pension Plan
- Water Residential Assistance Program (WRAP) – funds set aside to be used to provide financial assistance to qualified residents throughout the local and regional water system as directed by program guidelines
- Budget Stabilization – funds held by GLWA on behalf of DWSD that can be applied against shortfalls in retail revenues
- Emergency Repair & Replacement (ER&R) – funds set aside to pay the costs for major unanticipated repairs and replacements of the local and regional systems
- Improvement & Extension (I&E) – funds set aside to be used for the improvements, enlargements and extensions of the regional system

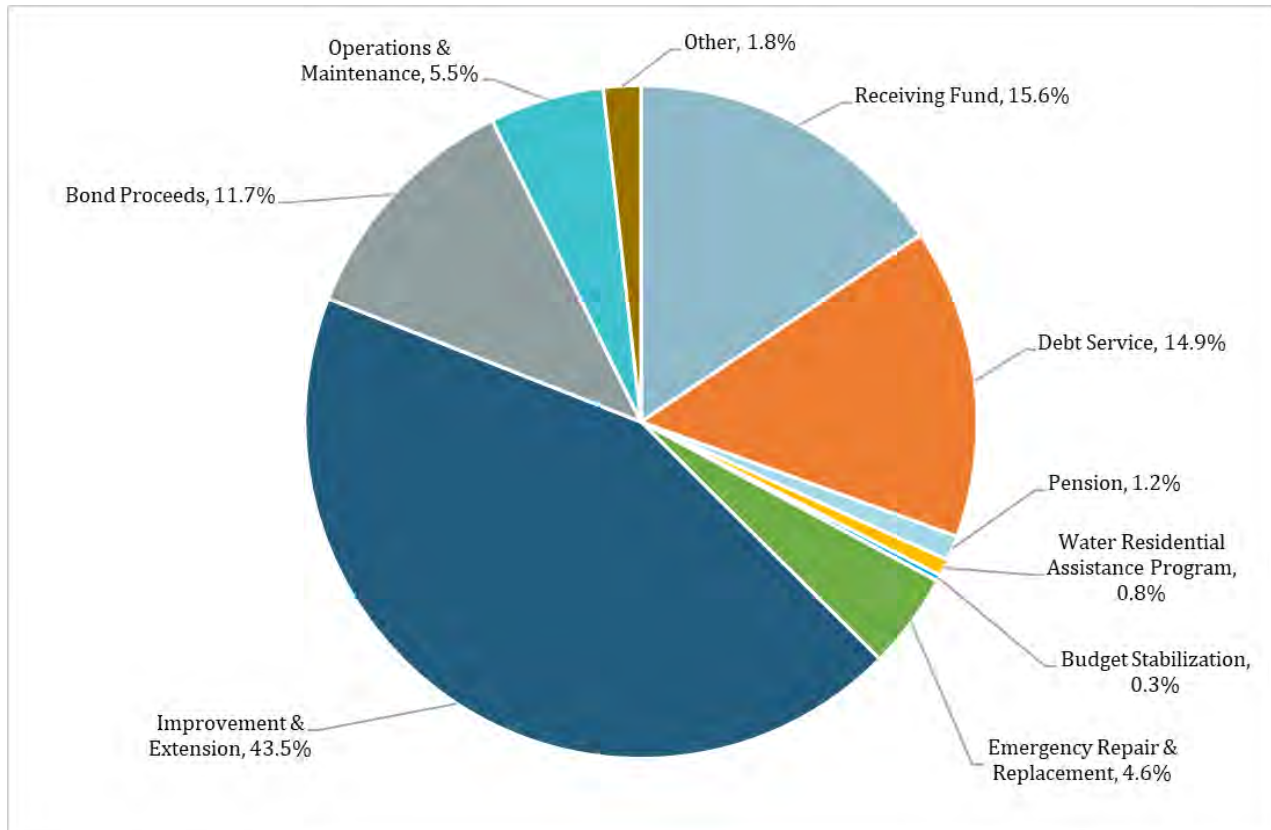
Funds Held Outside Trust:

- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors and security deposit funds held on behalf of the City of Flint

A [chart](#) depicting the follow of funds is online at glwater.org as well as the [MBO](#) documents.

Chart 2 – Cash Balances - Water Funds as of November 30, 2019 - Shows the allocation of the balance among the different categories defined in the section above. The total cash balance for Water Funds as of November 30, 2019 is \$594 million. The allocation of balances among the I&E, bond proceeds, and debt service reserve funds reflects GLWA’s commitment to funding capital improvements and meeting debt reserve requirements while simultaneously increasing I&E resources to fund pay-as-you-go capital funding to reduce long-term debt in the future.

Chart 2 – Cash Balances - Water Funds as of November 30, 2019

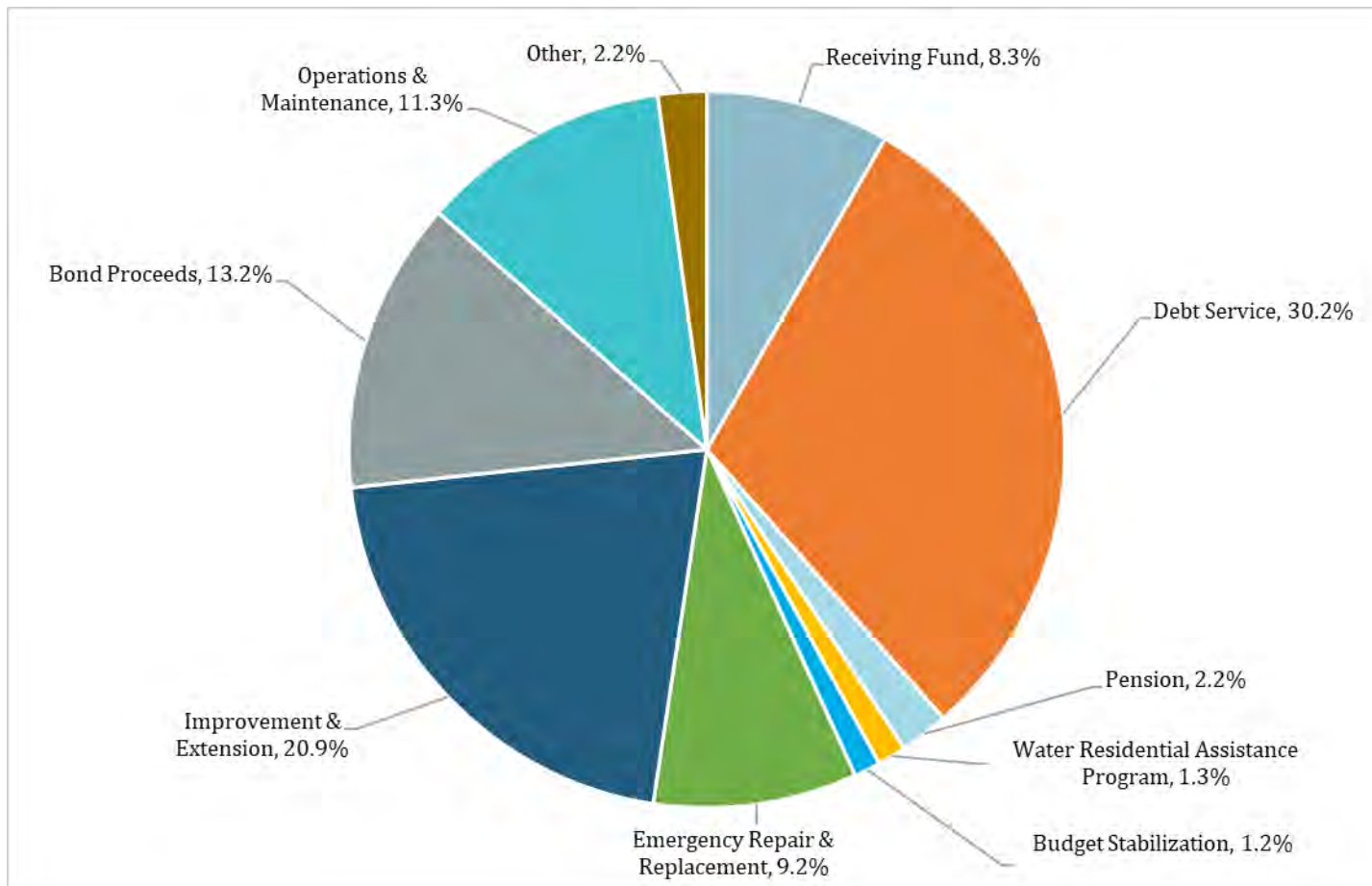


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of November 30, 2019 - Shows the allocation of the balance among the different funds defined in the section above. The total cash balance for Sewer Funds as of November 30, 2019 is \$479 million. Like the Water Funds, the allocation of balances among the I&E, bond proceeds, and debt service reserve funds reflects GLWA’s commitment to funding capital improvements and meeting debt reserve requirements while simultaneously increasing I&E resources to fund pay-as-you-go capital funding to reduce long-term debt in the future.

The pace for Sewer Funds I&E deposits has been less than budget to address a budget shortfall over multiple years by DWSD. Beginning in February 2019, DWSD began making payments which will replenish the I&E Fund.

Chart 3 – Cash Balances - Sewer Funds as of November 30, 2019



Note: Due to rounding totals may not equal 100%.

Retail Revenues, Receivables, and Collections: Pursuant to the terms of the lease agreement between the City of Detroit and the Great Lakes Water Authority (GLWA), the Detroit Water & Sewerage Department (DWSD) serves as GLWA's agent for billing activities for the City of Detroit retail customer class. All water and sewer service collections from DWSD customers are deposited in a trust account and are administered in accordance with the GLWA Master Bond Ordinance.

The Monthly Retail Revenues, Receivables, & Collections Report includes the following.

1. DWSD Retail Water Revenue Billings and Collections
2. DWSD Retail Sewer Revenue Billings and Collections
3. DWSD Retail Water & Sewer System Accounts Receivable Aging Report

Note: Wholesale customer revenues are billed by the Great Lakes Water Authority.

DWSD Retail Water Billings and Collections

Retail Billing Basis: DWSD bills retail customers monthly. Customers are billed throughout the month in cycles based on a meter reading schedule beginning with residential accounts and ending with commercial and industrial customers.

Table 1 - DWSD Retail Billings shows the FY 2020 water usage and billed revenue which are provided by DWSD staff. As of November 30, 2019, the DWSD usage was at 92.40% of the budget and billed revenue was at 98.40% of budget.

DWSD Retail Water Collections: The collections represent payments made by DWSD retail customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA's Master Bond Ordinance.

Table 2 - Retail Water Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods.

Table 1 – FY 2020 DWSD Retail Water Billings Report

RETAIL WATER CUSTOMERS								
Month (1)	FY 2020 - Budget/Goal			FY 2020 - Actual			FY 2020 - Variance	
	Volume	Revenue	Unit Revenue	Volume	Revenue (2)	Unit Revenue	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	286,871	9,909,302	34.54	267,054	9,670,167	36.21	(19,817)	(239,135)
August	288,810	9,698,584	33.58	259,489	9,504,240	36.63	(29,321)	(194,344)
September	246,846	9,159,992	37.11	228,961	8,767,202	38.29	(17,885)	(392,790)
October	228,814	8,288,490	36.22	217,031	8,535,614	39.33	(11,783)	247,124
November	218,154	8,078,402	37.03	200,432	7,937,200	39.60	(17,722)	(141,202)
December	216,372	7,975,070	36.86					
January	228,259	8,282,968	36.29					
February	225,150	8,294,177	36.84					
March	222,601	8,159,386	36.65					
April	215,049	8,120,879	37.76					
May	230,957	8,499,721	36.80					
June	254,554	9,084,129	35.69					
Total	2,862,437	103,551,100	36.18	1,172,967	44,414,423	37.87	(96,528)	(720,347)
Subtotals ytd	1,269,495	45,134,770	35.55	1,172,967	44,414,423	37.87	(96,528)	(720,347)
Achievement of Budget				92.40%	98.40%			

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Retail Revenues include Miscellaneous Revenues and Penalties

Table 2 – DWSD Retail Water Collections

Water				
Month	Current Year	Prior Year	Variance	Ratio
December	7,297,698	8,265,636	(967,938)	-11.71%
January	8,158,817	8,066,448	92,369	1.15%
February	7,927,299	6,432,245	1,495,054	23.24%
March	8,707,578	8,280,635	426,943	5.16%
April	8,475,657	9,226,675	(751,018)	-8.14%
May	8,415,767	8,969,019	(553,252)	-6.17%
June	7,554,457	7,940,939	(386,482)	-4.87%
July	8,093,394	7,858,272	235,122	2.99%
August	8,671,848	8,692,784	(20,936)	-0.24%
September	8,610,801	9,766,449	(1,155,648)	-11.83%
October	9,619,977	9,015,400	604,577	6.71%
November	7,067,667	7,938,517	(870,850)	-10.97%
Rolling, 12-Month Total	98,600,960	100,453,019		
Rolling, 12-Month Average	8,216,747	8,371,085		

DWSD Retail Sewer Billings and Collections

Retail billing basis: DWSD bills retail customers monthly. Customers are billed throughout the month in cycles based on a meter reading schedule beginning with residential accounts and ending with commercial and industrial customers.

Table 3 - DWSD Retail Sewer Billings shows the FY 2020 sewer billed revenue which are provided by DWSD staff. As of November 30, 2019, the DWSD usage was at 94.10% of the budget and billed revenue was at 97.51% of budget.

DWSD Retail Sewer Collections: The collections represent payments made by DWSD retail customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA's Master Bond Ordinance.

Table 4 - DWSD Retail Sewer Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods.

Table 3 – FY 2020 DWSD Retail Sewer Billings Report

RETAIL SEWER CUSTOMERS						
Month (1)	FY 2020 - Budget/Goal		FY 2020 - Actual		FY 2020 - Variance	
	Volume	Revenue	Volume	Revenue (2)	Volume	Revenue
	<i>Mcf</i>	<i>\$</i>	<i>Mcf</i>	<i>\$</i>	<i>Mcf</i>	<i>\$</i>
July	251,738	28,535,420	244,810	27,985,611	(6,928)	(549,809)
August	258,984	28,327,270	246,989	27,871,381	(11,995)	(455,889)
September	255,527	26,788,442	215,119	26,334,145	(40,408)	(454,297)
October	227,141	26,444,548	238,202	25,414,427	11,061	(1,030,121)
November	211,617	25,759,684	188,779	24,861,049	(22,838)	(898,635)
December	195,192	25,905,017				
January	197,099	26,341,264				
February	206,164	26,312,394				
March	200,672	26,467,728				
April	204,606	25,894,612				
May	203,480	27,185,600				
June	218,340	27,376,921				
Total	2,630,560	321,338,900	1,133,899	132,466,613	(71,108)	(3,388,751)
<i>Subtotals ytd</i>	<i>1,205,007</i>	<i>135,855,364</i>	<i>1,133,899</i>	<i>132,466,613</i>	<i>(71,108)</i>	<i>(3,388,751)</i>
<i>Achievement of Budget/Goal</i>			<i>94.10%</i>	<i>97.51%</i>		

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Retail Revenues include Miscellaneous Revenues and Penalties

Table 4 – DWSD Retail Sewer Collections

Sewer				
Month	Current Year	Prior Year	Variance	Ratio
December	19,612,154	19,522,952	89,203	0.46%
January	21,140,835	18,308,458	2,832,377	15.47%
February	20,758,852	17,495,563	3,263,289	18.65%
March	22,111,691	23,015,525	(903,834)	-3.93%
April	20,930,511	16,159,844	4,770,667	29.52%
May	22,807,283	18,341,298	4,465,985	24.35%
June	20,426,151	21,461,926	(1,035,775)	-4.83%
July	20,940,157	27,332,605	(6,392,448)	-23.39%
August	23,175,643	21,746,714	1,428,929	6.57%
September	21,972,754	23,727,505	(1,754,751)	-7.40%
October	26,321,010	23,938,933	2,382,077	9.95%
November	17,546,180	20,624,039	(3,077,859)	-14.92%
Rolling 12-Month Total	257,743,221	251,675,362		
Rolling, 12-Month Average	21,478,602	20,972,947		

DWSD Retail Water and Sewer Accounts Receivable Aging Report

The DWSD detailed accounts receivable aging is categorized by customer category.

Table 5 is a summary of the total, current and non-current Water and Sewer receivables by category as of November 30, 2019 with comparative totals from November 30, 2018.

Table 5 – DWSD Retail Accounts Receivable Aging Report – Water & Sewer Combined

Sales Class	# of Accounts	Avg. Balance	Current	> 30 Days	> 60 Days	> 180 Days	Accounts Receivable Balance
Residential	286,384	\$ 336.47	\$ 14,614,838 15.2%	\$ 7,413,644 7.7%	\$ 18,739,861 19.4%	\$ 55,591,352 57.7%	\$ 96,359,695 100.0%
Commercial	28,386	1,478.44	9,152,221 21.8%	3,622,548 8.6%	8,087,234 19.3%	21,104,949 50.3%	41,966,952 100.0%
Industrial	4,803	4,396.71	6,450,965 30.5%	1,829,419 8.7%	2,754,629 13.0%	10,082,383 47.7%	21,117,395 100.0%
Tax Exempt Entities	7,989	1,759.00	1,884,255 13.4%	1,272,471 9.1%	2,311,812 16.5%	8,584,118 61.1%	14,052,656 100.0%
Government Entities	3,018	2,229.37	1,248,811 18.6%	601,403 8.9%	1,254,781 18.6%	3,623,237 53.9%	6,728,233 100.0%
Subtotal - Active Accounts	330,580	\$ 545.18	\$ 33,351,090 18.5%	\$ 14,739,485 8.2%	\$ 33,148,316 18.4%	\$ 98,986,040 54.9%	\$ 180,224,931 100.0%
Inactive Accounts	272,984	86.92	194,238 0.8%	248,855 1.0%	(160,166) (0.7%)	23,444,889 98.8%	23,727,816 100.0%
Total	603,564	\$ 337.91	\$ 33,545,328 16.4%	\$ 14,988,340 7.3%	\$ 32,988,150 16.2%	\$ 122,430,929 60.0%	\$ 203,952,747 100.0%
% of Total A/R							
Water Fund	233,857	170.76	\$ 7,669,000	\$ 3,049,000	\$ 4,717,000	\$ 24,500,000	\$ 39,934,000
Sewer Fund	293,021	559.75	\$ 25,877,000	\$ 11,939,000	\$ 28,271,000	\$ 97,931,000	\$ 164,019,000
Total November 30, 2019	603,564	337.91	\$ 33,545,000	\$ 14,988,000	\$ 32,988,000	\$ 122,431,000	\$ 203,953,000
Water Fund- Allowance							\$ (27,590,000)
Sewer Fund- Allowance							\$ (96,184,000)
Total November 30, 2019 Bad Debt Allowance							\$ (123,774,000)
Nov 2018 Comparative Totals	584,780	309.58	\$ 29,230,000	\$ 13,116,000	\$ 32,682,000	\$ 106,010,000	\$ 181,038,000

The Monthly Wholesale Billings, Receivables, & Collections Report includes the following.

1. Wholesale Water Billings and Collections
2. Wholesale Sewer Billings and Collections
3. City of Highland Park Billings and Collections
4. Wholesale Water & Sewer Accounts Receivable Aging Report

Wholesale Water Billings and Collections

Wholesale Water Contracts: Great Lakes Water Authority (GLWA) provides wholesale water service to 87 member-partners through a variety of service arrangements.

Service Arrangement Type

Model Contract	82
Emergency	1
Older Contracts	<u>4</u>
Total	<u>87</u>

***Note:** Services are provided to the Detroit Water & Sewerage Department (DWSD) via a Water and Sewer Services Agreement (WSSA). See the “Retail Revenues, Receivables, and Collections Report” section of this monthly report.*

Wholesale Water Billing Basis: Beginning with FY 2016, wholesale water charges were restructured to create a more stable revenue stream by using a historical rolling average to project customer volumes which accounts for 40% of the monthly charges and 60% of the annual customer revenue requirement as a monthly fixed charge.

***Table 1 - Wholesale Water Billings** shows the FY 2020 water billed usage and revenues. As of November 30, 2019, the billed usage was at 94.15% of budget and billed revenue at 97.50% of budget. Billings and usage from the City of Flint are included as they were assumed in the FY 2020 Budget.*

Wholesale Water Collections: The collections represent payments made by wholesale customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA’s Master Bond Ordinance.

***Table 2 - Wholesale Water Collections** shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods. The difference in rolling average from current year to prior year reflects the gentle downward trend in water usage over time.*

Table 1 - FY 2020 Wholesale Water Billings Report

WHOLESALE WATER CUSTOMERS								
Month (1)	FY 2020 - Budget/Goal			FY 2020 - Actual			FY 2020 - Variance	
	Volume	Revenue	Unit Revenue	Volume	Revenue	Unit Revenue	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	1,777,138	32,544,400	18.31	1,545,631	30,356,570	19.64	(231,507)	(2,187,830)
August	1,549,587	30,383,100	19.61	1,554,426	30,501,606	19.62	4,839	118,506
September	1,368,496	28,270,400	20.66	1,257,111	27,278,750	21.70	(111,385)	(991,650)
October	1,066,653	25,351,200	23.77	1,026,086	25,007,145	24.37	(40,567)	(344,055)
November	917,034	24,049,100	26.22	905,016	23,933,012	26.44	(12,018)	(116,088)
December	1,004,420	24,714,000	24.61					
January	1,018,192	24,861,000	24.42					
February	893,007	23,780,800	26.63					
March	1,008,766	24,753,300	24.54					
April	948,751	24,262,000	25.57					
May	1,073,966	25,549,300	23.79					
June	1,383,200	28,595,300	20.67					
Total	14,009,210	317,113,900	22.64	6,288,270	137,077,083	21.80	(390,638)	(3,521,117)
<i>Subtotals ytd</i>	<i>6,678,908</i>	<i>140,598,200</i>	<i>21.05</i>	<i>6,288,270</i>	<i>137,077,083</i>	<i>21.80</i>	<i>(390,638)</i>	<i>(3,521,117)</i>
<i>Achievement of Budget</i>				<i>94.15%</i>	<i>97.50%</i>			

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

Table 2 - Wholesale Water Collections

Water				
Month	Current Year	Prior Year	Variance	Ratio
December	27,720,646	22,125,972	5,594,674	25.29%
January	23,430,974	32,002,334	(8,571,360)	-26.78%
February	26,147,082	21,352,903	4,794,179	22.45%
March	24,967,335	27,715,696	(2,748,361)	-9.92%
April	23,045,654	18,489,754	4,555,900	24.64%
May	20,755,103	30,447,581	(9,692,478)	-31.83%
June	25,676,458	21,815,013	3,861,445	17.70%
July	23,212,979	21,923,590	1,289,389	5.88%
August	28,808,254	31,920,586	(3,112,332)	-9.75%
September	28,336,152	26,037,313	2,298,839	8.83%
October	25,786,774	27,827,722	(2,040,948)	-7.33%
November	29,245,969	29,238,260	7,709	0.03%
Rolling 12-Month Total	307,133,380	310,896,724		
Rolling, 12-Month Average	25,594,448	25,908,060		

Wholesale Sewer Billings and Collections

Wholesale Sewer Contracts: GLWA provides wholesale sewer service to 18 member-partners via multiple service arrangements.

Service Arrangement Type

Model Contract	11
Emergency	0
Older Contracts	<u>7</u>
Total	<u><u>18</u></u>

Note: Services are provided to the Detroit Water & Sewerage Department via a Water and Sewer Services Agreement (WSSA). See the “Retail Revenues, Receivables, and Collections Report” section of the monthly report.

Wholesale Sewer Billing Basis: Beginning in FY 2015, the “sewer rate simplification” initiative was applied which provides for a stable revenue stream and predictability for our member partners. Wholesale sewer customers are billed a fixed monthly fee based upon the annual revenue requirement.

Table 3 - Wholesale Sewer Billings shows the FY 2020 sewer billed revenue. Consistent with expectations as a result of sewer rate simplification, billed revenue is at 100.00% of budget through November 30, 2019.

Wholesale Sewer Collections: The collections represent payments made by wholesale customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA’s Master Bond Ordinance.

Table 4 - Wholesale Sewer Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods. The year-over-year rolling average from FY 2019 to FY 2020 remains consistent.

The shift in wholesale sewer collection patterns is largely attributable to the timing of payments received. There are several large accounts whose payments swing between the end of the current month and the beginning of the next month.

Table 3 – FY 2020 Wholesale Sewer Billings Report

WHOLESALE SEWER CUSTOMERS						
Month (1)	FY 2020 - Budget/Goal		FY 2020 - Actual		FY 2020 - Variance	
	Volume (2)	Revenue	Volume (2)	Revenue	Volume (2)	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$
July	N/A	22,882,500	N/A	22,882,500	N/A	-
August	N/A	22,882,500	N/A	22,882,500	N/A	-
September	N/A	22,882,500	N/A	22,882,500	N/A	-
October	N/A	22,882,500	N/A	22,882,500	N/A	-
November	N/A	22,882,500	N/A	22,882,500	N/A	-
December	N/A	22,882,500	N/A		N/A	
January	N/A	22,882,500	N/A		N/A	
February	N/A	22,882,500	N/A		N/A	
March	N/A	22,882,500	N/A		N/A	
April	N/A	22,882,500	N/A		N/A	
May	N/A	22,882,500	N/A		N/A	
June	N/A	22,882,500	N/A		N/A	
Total		274,590,000		114,412,500		-
Subtotals ytd		114,412,500		114,412,500		-
Achievement of Budget				100.00%		

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Not tracked as part of the wholesale sewer charges.

Table 4 - Wholesale Sewer Collections

Sewer				
Month	Current Year	Prior Year	Variance	Ratio
December	24,440,000	23,643,400	796,600	3.37%
January	26,874,927	22,057,972	4,816,955	21.84%
February	13,895,100	30,280,800	(16,385,700)	-54.11%
March	22,388,600	15,552,000	6,836,600	43.96%
April	23,203,703	27,812,417	(4,608,714)	-16.57%
May	9,284,000	15,342,700	(6,058,700)	-39.49%
June	32,639,436	28,810,500	3,828,936	13.29%
July	27,222,400	16,179,117	11,043,283	68.26%
August	35,153,500	28,384,600	6,768,900	23.85%
September	18,833,257	22,672,400	(3,839,143)	-16.93%
October	29,833,760	16,105,200	13,728,560	85.24%
November	19,428,000	28,633,300	(9,205,300)	-32.15%
Rolling 12-Month Total	283,196,683	275,474,406		
Rolling, 12-Month Average	23,599,724	22,956,201		

City of Highland Park Billings and Collections

The City of Highland Park is provided water service pursuant to an emergency service basis. Sewer service is provided pursuant to a 1982 amended contract which indicates that the parties are guided in their legal relationship by a Michigan Supreme Court decision from 1949.

As of November 30, 2019, Highland Park had a delinquent balance of \$42.8 million, including \$33.2 million for wastewater treatment services, \$1.7 million for industrial waste control services, and \$7.9 million for water supply services.

Table 5 - City of Highland Park Billings and Collections provides a life-to-date balance summary of the billing and collection history for Highland Park with detail provided for fiscal year 2020 through November 30, 2019. Please note the numbers below reflect the month the billing was sent and not the month the service was provided. A life-to-date summary is provided as an appendix to this monthly financial report.

Table 5 - City of Highland Park Billings and Collections

	Water	Sewer	IWC	Total
December 31, 2018 Balance	6,755,496	33,278,011	1,651,474	41,684,981
January 2019 Billing	98,430	467,900	3,961	570,290
January 2019 Payments	-	(2,116,727)	-	(2,116,727)
January 31, 2019 Balance	6,853,926	31,629,183	1,655,435	40,138,544
February 2019 Billing	98,898	467,900	3,932	570,731
February 2019 Payments	-	-	-	-
February 28, 2019 Balance	6,952,824	32,097,083	1,659,368	40,709,275
March 2019 Billing	98,353	467,900	3,881	570,134
March 2019 Payments	-	-	-	-
March 31, 2019 Balance	7,051,177	32,564,983	1,663,248	41,279,409
April 2019 Billing	99,879	467,900	4,101	571,880
April 2019 Payments	-	(1,089,003)	-	(1,089,003)
April 30, 2019 Balance	7,151,056	31,943,880	1,667,350	40,762,286
May 2019 Billing	98,118	467,900	3,963	569,981
May 2019 Payments	-	-	-	-
May 31, 2019 Balance	7,249,174	32,411,780	1,671,312	41,332,267
June 2019 Billing	101,871	467,900	3,931	573,702
June 2019 Payments	-	(1,406,836)	-	(1,406,836)
June 30, 2019 Balance	7,351,045	31,472,844	1,675,243	40,499,132
July 2019 Billing	104,702	467,900	4,121	576,722
July 2019 Payments	-	-	-	-
July 31, 2019 Balance	7,455,747	31,940,744	1,679,363	41,075,854
August 2019 Billing	106,638	472,500	4,026	583,164
August 2019 Payments	-	-	-	-
August 31, 2019 Balance	7,562,385	32,413,244	1,683,389	41,659,018
September 2019 Billing	108,007	472,500	4,014	584,521
September 2019 Payments	-	(656,657)	-	(656,657)
September 30, 2019 Balance	7,670,392	32,229,087	1,687,403	41,586,882
October 2019 Billing	107,422	472,500	3,933	583,855
October 2019 Payments	-	-	-	-
October 31, 2019 Balance	7,777,814	32,701,587	1,691,336	42,170,737
November 2019 Billing	101,003	472,500	3,948	577,451
November 2019 Payments	-	-	-	-
November 30, 2019 Balance	7,878,817	33,174,087	1,695,284	42,748,188

Wholesale Water & Sewer Accounts Receivable Aging Report

The detailed accounts receivable aging is in the Appendix to this monthly report. This report reflects the wholesale receivables only and does not include DWSD.

Table 6 - Wholesale Accounts Receivable Aging Report Summary is a summary of the total, current and non-current receivables by category as of November 30, 2019.

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park is the same summary *without* the past due balances for the City of Highland Park.

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA is a summary *without* the past due balances for the City of Highland Park and net of pending credits for certain Western Township Utilities Authority (WTUA). Credits for billed services are pending receipt of a final agreement from Wayne County to effectuate a transfer retroactive to July 1, 2018.

Table 6 - Wholesale Accounts Receivable Aging Report Summary

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 39,471,478.15	\$ 31,773,611.21	\$ 135,482.59	\$ 106,637.76	\$ 7,455,746.59
Sewer	\$ 40,065,226.23	\$ 7,363,399.50	\$ 472,740.00	\$ 472,500.00	\$ 31,756,586.73
IWC	\$ 3,538,814.76	\$ 647,722.17	\$ -	\$ 78,093.21	\$ 2,812,999.38
Pollutant Surcharge	\$ 753,666.76	\$ 685,042.47	\$ 18,931.70	\$ 1,848.34	\$ 47,844.25
Total	\$ 83,829,185.90	\$ 40,469,775.35	\$ 627,154.29	\$ 659,079.31	\$ 42,073,176.95
	100.00%	48.28%	0.75%	0.79%	50.19%

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 31,592,661.02	\$ 31,565,185.49	\$ 27,475.53	\$ -	\$ -
Sewer	\$ 6,891,139.50	\$ 6,890,899.50	\$ 240.00	\$ -	\$ -
IWC	\$ 1,843,531.26	\$ 639,841.70	\$ -	\$ 70,053.88	\$ 1,133,635.68
Pollutant Surcharge	\$ 753,666.76	\$ 685,042.47	\$ 18,931.70	\$ 1,848.34	\$ 47,844.25
Total	\$ 41,080,998.54	\$ 39,780,969.16	\$ 46,647.23	\$ 71,902.22	\$ 1,181,479.93
	100.00%	96.84%	0.11%	0.18%	2.88%

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 31,592,661.02	\$ 31,565,185.49	\$ 27,475.53	\$ -	\$ -
Sewer	\$ 6,891,139.50	\$ 6,890,899.50	\$ 240.00	\$ -	\$ -
IWC	\$ 571,579.22	\$ 570,683.52	\$ -	\$ 895.70	\$ -
Pollutant Surcharge	\$ 753,666.76	\$ 685,042.47	\$ 18,931.70	\$ 1,848.34	\$ 47,844.25
Total	\$ 39,809,046.50	\$ 39,711,810.98	\$ 46,647.23	\$ 2,744.04	\$ 47,844.25
	100.00%	99.76%	0.12%	0.01%	0.12%

Note: percentages vary from 100% due to rounding.

The Monthly Trust Receipts & Disbursements Report includes the following.

1. GLWA Trust Receipts & Disbursements – Net Cash Flows and Receipts
2. DWSD Trust Receipts & Disbursements – Net Cash Flows, Receipts & Loan Receivable
3. Combined System Trust Receipts & Disbursements – Net Cash Flows

GLWA Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

This report provides an ongoing status of the net cash flow of both organizations (GLWA and DWSD) to fund their allocated share of Master Bond Ordinance requirements in accordance with the leases for the regional systems.

Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for GLWA since inception at January 1, 2016. Fiscal year 2020 reflects five months of activity to date.

Water fund activity exceeded required MBO disbursements by 19% through November 30, 2019 with a historical ratio of cash receipts exceeding MBO disbursements by 16% since January 1, 2016.

Sewer fund cash receipts exceeded disbursements by 16% through November 30, 2019 with a historical ratio of cash receipts exceeding MBO disbursements by 6% since January 1, 2016.

Chart 1 – GLWA 12-Month Net Receipts – Water outlines monthly cash receipt trends across two points of reference for the regional water system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

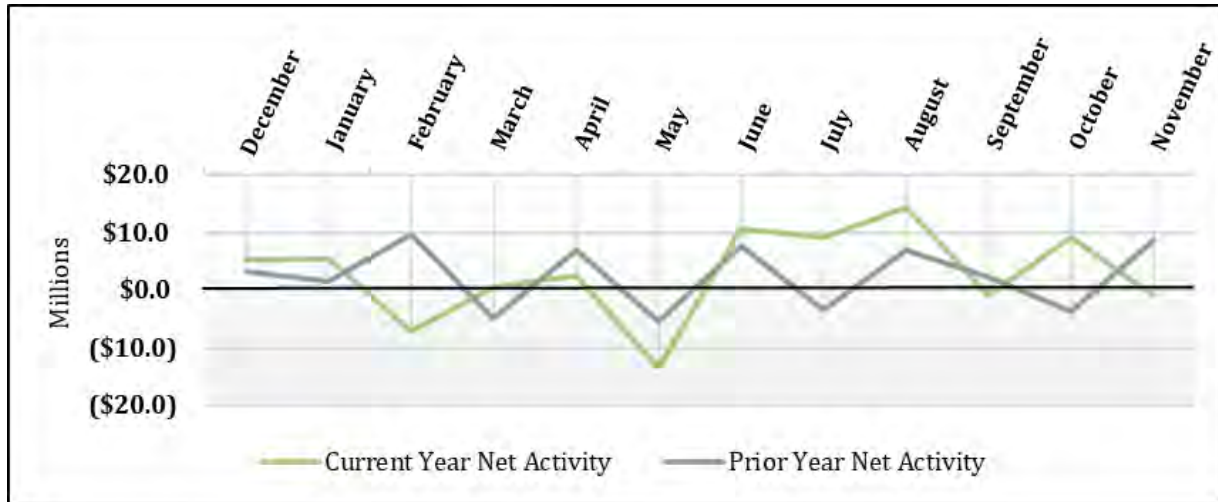
Chart 2 – GLWA 12-Month Net Receipts – Sewer outlines monthly cash receipt trends across two points of reference for the regional sewer system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 to Date	Life-to-Date Total
Water						
1 Receipts	\$ 149,688,711	\$ 352,941,909	\$ 338,452,001	\$ 336,594,234	\$ 146,990,122	\$1,324,666,977
2 MOU Adjustments	-	-	-	-	-	-
3 Adjusted Receipts	149,688,711	352,941,909	338,452,001	336,594,234	146,990,122	1,324,666,977
4 Disbursements	(146,256,185)	(288,777,985)	(297,064,810)	(289,230,481)	(123,614,544)	(1,144,944,005)
5 Receipts Net of Required Transfers	3,432,526	64,163,924	41,387,191	47,363,753	23,375,578	179,722,972
6 I&E Transfer	-	-	(25,739,700)	(47,695,000)	-	(73,434,700)
7 Net Receipts	\$ 3,432,526	\$ 64,163,924	\$ 15,647,491	\$ (331,247)	\$ 23,375,578	\$ 106,288,272
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	102%	122%	114%	116%	119%	116%
Sewer						
9 Receipts	\$ 232,377,715	\$ 469,788,882	\$ 476,269,761	\$ 467,743,744	\$ 216,938,605	\$1,863,118,707
10 MOU Adjustments	-	-	-	-	-	-
11 Adjusted Receipts	232,377,715	469,788,882	476,269,761	467,743,744	216,938,605	1,863,118,707
12 Disbursements	(219,538,325)	(441,443,340)	(458,903,335)	(453,406,636)	(186,225,208)	(1,759,516,844)
13 Receipts Net of Required Transfers	12,839,390	28,345,542	17,366,426	14,337,108	30,713,397	103,601,863
14 I&E Transfer	-	-	(22,698,100)	(22,547,700)	-	(45,245,800)
15 DWSD Shortfall Advance	(1,285,466)	(28,014,534)	(24,113,034)	-	-	(53,413,034)
16 Shortfall Repayment (principal)	-	-	-	9,367,355	7,230,375	16,597,730
17 Net Receipts	\$ 11,553,924	\$ 331,008	\$ (29,444,708)	\$ 1,156,763	\$ 37,943,772	\$ 21,540,759
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	106%	106%	104%	103%	116%	106%
Combined						
19 Receipts	\$ 382,066,426	\$ 822,730,791	\$ 814,721,762	\$ 804,337,978	\$ 363,928,727	\$3,187,785,684
20 MOU Adjustments	-	-	-	-	-	-
21 Adjusted Receipts	382,066,426	822,730,791	814,721,762	804,337,978	363,928,727	3,187,785,684
22 Disbursements	(365,794,510)	(730,221,325)	(755,968,145)	(742,637,117)	(309,839,752)	(2,904,460,849)
23 Receipts Net of Required Transfers	16,271,916	92,509,466	58,753,617	61,700,861	54,088,975	283,324,835
24 I&E Transfer	-	-	(48,437,800)	(70,242,700)	-	(118,680,500)
25 Shortfall Advance	(1,285,466)	(28,014,534)	(24,113,034)	-	-	(53,413,034)
26 Shortfall Repayment	-	-	-	9,367,355	7,230,375	16,597,730
27 Net Receipts	\$ 14,986,450	\$ 64,494,932	\$ (13,797,217)	\$ 825,516	\$ 61,319,350	\$ 127,829,031
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	104%	113%	108%	108%	117%	110%

MOU Adjustments applies to DWSD and is shown here for consistency.

Chart 1 - GLWA 12-Month Net Receipts - Water

Chart 2 - GLWA 12-Month Net Receipts - Sewer


DWSD Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

This report provides an ongoing status of the net cash flow of both organizations (GLWA and DWSD) to fund their allocated share of Master Bond Ordinance requirements in accordance with the leases for the regional systems.

Table 2 – DWSD Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for DWSD since inception at January 1, 2016. Fiscal year 2020 reflects five months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 3% through November 30, 2019 with a historical ratio of 3% since January 1, 2016.

Sewer fund cash receipts fell short of required MBO disbursements by 9% through November 30, 2019 with a historic shortfall of 6% since January 1, 2016. DWSD has recognized this issue and proactively implemented plans in December 2019 to resolve the current shortfall. On December 3, DWSD transferred \$2.6 million from Sewer Operations & Maintenance back to the Sewer Receiving Fund. In addition, beginning December 1, DWSD has formally requested to reduce budgeted, monthly Sewer Operations & Maintenance transfers by \$1 million. These two changes should resolve the current Sewer shortfall to close FY 2020 with positive net receipts.

Table 3 – FY 2017 DWSD Loan Receivable - Sewer provides an activity summary of loan receivable established under the terms of the April 2018 MOU addressing the cash shortfall from FY 2016 and FY 2017.

Table 4 – FY 2017 DWSD Loan Receivable Payments - Sewer provides an activity summary of loan receivable payments to date on the FY 2017 Sewer Loan Receivable including the interest on the loan. This payment is transferred directly to GLWA Sewer Improvement & Extension fund monthly.

The Reconciliation Committee monitors this balance and repayment progress as part of its quarterly meetings.

Table 5 – FY 2018 DWSD Loan Receivable - Sewer provides an activity summary of loan receivable established under the terms of the April 2018 MOU addressing the cash shortfall from FY 2018.

Table 6 – FY 2018 DWSD Loan Receivable Payments - Sewer provides an activity summary of loan receivable payments to date on the FY 2018 Sewer Loan Receivable including the interest on the loan. This payment is transferred directly to GLWA Sewer Improvement & Extension fund monthly.

The Reconciliation Committee monitors this balance and repayment progress as part of its quarterly meetings.

Chart 3 – DWSD 12-Month Net Receipts – Water outlines monthly activity trends across two points of reference for the local water system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Chart 4 – DWSD 12-Month Net Receipts – Sewer outlines monthly activity trends across two points of reference for the local sewer system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Table 2 – DWSD Net Cash Flows from Trust Receipts & Disbursements

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 to Date	Life-to-Date Total
Water						
1 Receipts	\$ 26,201,881	\$ 96,451,105	\$ 101,233,147	\$ 99,868,219	\$ 42,078,960	\$ 365,833,312
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	44,647,981	96,451,105	101,233,147	99,868,219	42,078,960	384,279,412
4 Disbursements	(47,809,552)	(93,066,144)	(93,049,457)	(97,694,600)	(41,042,705)	(372,662,458)
5 Receipts Net of Required Transfers	(3,161,571)	3,384,961	8,183,690	2,173,619	1,036,255	11,616,954
6 I&E Transfer	-	-	-	(8,407,080)	-	(8,407,080)
7 Net Receipts	\$ (3,161,571)	\$ 3,384,961	\$ 8,183,690	\$ (6,233,461)	\$ 1,036,255	\$ 3,209,874
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	93%	104%	109%	102%	103%	103%
Sewer						
9 Receipts	\$ 65,256,734	\$ 233,723,367	\$ 242,104,791	\$ 265,339,797	\$ 109,972,270	\$ 916,396,959
10 MOU Adjustments	55,755,100	-	-	6,527,200	-	62,282,300
11 Adjusted Receipts	121,011,834	233,723,367	242,104,791	271,866,997	109,972,270	978,679,259
12 Disbursements	(122,297,300)	(261,963,973)	(266,217,825)	(271,018,306)	(120,662,260)	(1,042,159,664)
13 Receipts Net of Required Transfers	(1,285,466)	(28,240,606)	(24,113,034)	848,691	(10,689,990)	(63,480,405)
14 I&E Transfer	-	-	-	-	-	-
15 Shortfall Advance from GLWA	1,285,466	28,014,534	24,113,034	-	-	53,413,034
16 Net Receipts (a)	\$ -	\$ (226,072)	\$ -	\$ 848,691	\$ (10,689,990)	\$ (10,067,371)
17 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	99%	89%	91%	100%	91%	94%
Combined						
18 Receipts	\$ 91,458,615	\$ 330,174,472	\$ 343,337,938	\$ 365,208,016	\$ 152,051,230	\$1,282,230,271
19 MOU Adjustments	74,201,200	-	-	6,527,200	-	80,728,400
20 Adjusted Receipts	165,659,815	330,174,472	343,337,938	371,735,216	152,051,230	1,362,958,671
21 Disbursements	(170,106,852)	(355,030,117)	(359,267,282)	(368,712,906)	(161,704,965)	(1,414,822,122)
22 Receipts Net of Required Transfers	(4,447,037)	(24,855,645)	(15,929,344)	3,022,310	(9,653,735)	(51,863,451)
23 I&E Transfer	-	-	-	(8,407,080)	-	(8,407,080)
24 Shortfall Advance from GLWA	1,285,466	28,014,534	24,113,034	-	-	53,413,034
25 Net Receipts	\$ (3,161,571)	\$ 3,158,889	\$ 8,183,690	\$ (5,384,770)	\$ (9,653,735)	\$ (6,857,497)
26 <i>Ratio of Receipts to Required Disbursements (Line 20/Line 21)</i>	97%	93%	96%	101%	94%	96%

(a) The \$226,072 difference in FY 2017 is due to the June IWC payment from DWSD that was not past due at yearend and the \$12,272 rounding difference on the loan receivable.

Note 1: The \$29,300,000 for the DWSD loan receivable balance is calculated as follows.

(1,285,466)	FY 2016 Shortfall
<u>(28,240,606)</u>	FY 2017 Shortfall
<u>(29,526,072)</u>	Subtotal
238,264	June IWC not due until July
<u>(29,287,808)</u>	FY 2017 Shortfall-to-Date

29,300,000 FY 2017 Shortfall-to-Date, Rounded

Table 3 – FY 2017 DWSD Loan Receivable - Sewer

Date	Transaction	Amount	Balance
6/30/2019	Record FY 16 and FY 17 Loan Receivable		29,300,000
2/8/2019	Loan Receivable Payment (for the months of Jul - Dec)	4,635,462	24,664,538
2/22/2019	Loan Receivable Payment (for the months of Jan - Mar)	2,353,768	22,310,770
4/15/2019	Loan Receivable Payment (for the month of Apr)	789,990	21,520,780
5/8/2019	Loan Receivable Payment (for the month of May)	792,705	20,728,075
6/7/2019	Loan Receivable Payment (for the month of June)	795,430	19,932,645
7/5/2019	Loan Receivable Payment (for the month of July)	798,164	19,134,480
8/8/2019	Loan Receivable Payment (for the month of August)	800,908	18,333,572
9/6/2019	Loan Receivable Payment (for the month of September)	803,661	17,529,911
10/2/2019	Loan Receivable Payment (for the month of October)	806,424	16,723,487
11/4/2019	Loan Receivable Payment (for the month of November)	809,196	15,914,291
		13,385,709	15,914,291

Table 4 – FY 2017 DWSD Loan Receivable Payments - Sewer

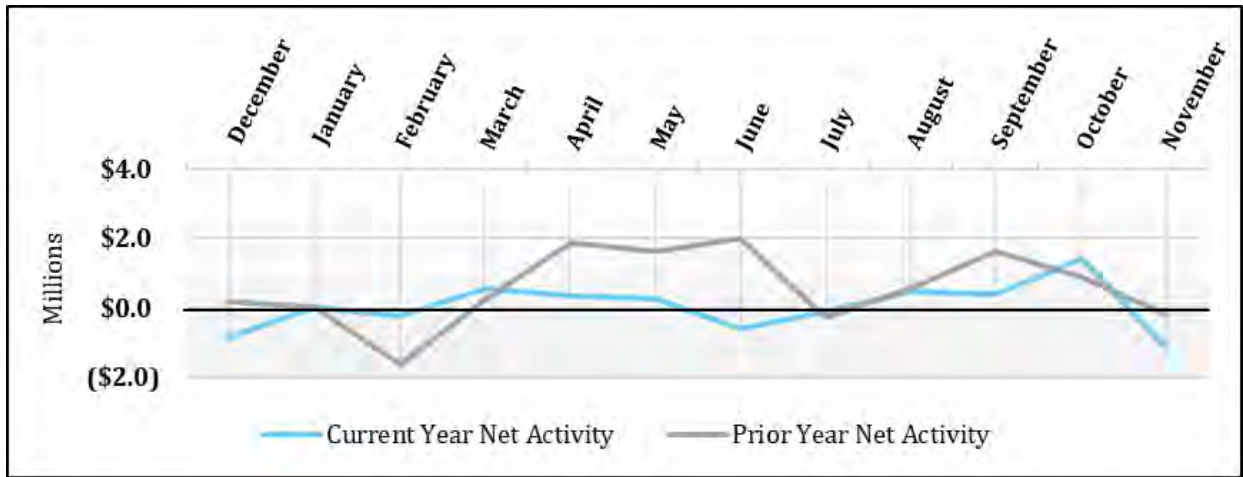
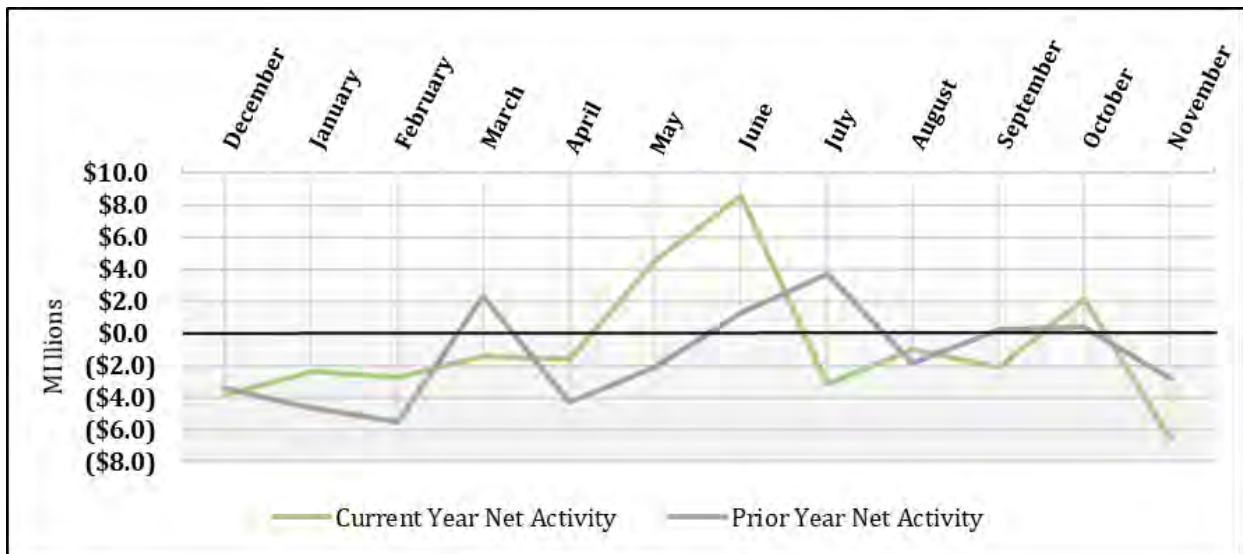
Date	Transaction	Principal	Interest	Total Paid
2/8/2019	Loan Receivable Payment (for the months of Jul - Dec)	4,635,462	564,636	5,200,098
2/22/2019	Loan Receivable Payment (for the months of Jan - Mar)	2,353,768	246,280	2,600,049
4/15/2019	Loan Receivable Payment (for the month of Apr)	789,990	76,693	866,683
5/8/2019	Loan Receivable Payment (for the month of May)	792,705	73,978	866,683
6/7/2019	Loan Receivable Payment (for the month of June)	795,430	71,253	866,683
7/5/2019	Loan Receivable Payment (for the month of July)	798,164	68,518	866,683
8/8/2019	Loan Receivable Payment (for the month of August)	800,908	65,775	866,683
9/6/2019	Loan Receivable Payment (for the month of September)	803,661	63,022	866,683
10/2/2019	Loan Receivable Payment (for the month of October)	806,424	60,259	866,683
11/4/2019	Loan Receivable Payment (for the month of November)	809,196	57,487	866,683
		13,385,709	1,347,901	14,733,610

Table 5 – FY 2018 DWSD Loan Receivable - Sewer

Date	Transaction	Amount	Balance
6/30/2019	Record FY 18 Loan Receivable		24,113,034
7/15/2019	Loan Receivable Payment (for the month of July)	638,978	23,474,056
8/8/2019	Loan Receivable Payment (for the month of August)	640,686	22,833,370
9/6/2019	Loan Receivable Payment (for the month of September)	642,400	22,190,970
10/2/2019	Loan Receivable Payment (for the month of October)	644,118	21,546,852
11/4/2019	Loan Receivable Payment (for the month of November)	645,840	20,901,012
		3,212,022	20,901,012

Table 6 – FY 2018 DWSD Loan Receivable Payments - Sewer

Date	Transaction	Principal	Interest	Total Paid
7/15/2019	Loan Receivable Payment (for the month of July)	638,978	64,482	703,460
8/8/2019	Loan Receivable Payment (for the month of August)	640,686	62,774	703,460
9/6/2019	Loan Receivable Payment (for the month of September)	642,400	61,060	703,460
10/2/2019	Loan Receivable Payment (for the month of October)	644,118	59,342	703,460
11/4/2019	Loan Receivable Payment (for the month of November)	645,840	57,620	703,460
		3,212,022	305,278	3,517,300

Chart 3 - DWSD 12-Month Net Receipts - Water

Chart 4 - DWSD 12-Month Net Receipts - Sewer


Combined System Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

Table 7 – Combined Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for GLWA since inception at January 1, 2016. Fiscal year 2020 reflects five months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 15% through November 30, 2019 with a historical ratio of cash receipts exceeding MBO disbursements by 13% since January 1, 2016.

Sewer fund cash receipts exceeded required MBO disbursements by 7% through November 30, 2019 and with a historical ratio of cash receipts exceeding MBO disbursements by 1% since January 1, 2016.

Table 7 – Combined Net Cash Flows from Trust Receipts & Disbursements

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 to Date	Life-to-Date Total
Water						
1 Receipts	\$ 175,890,592	\$ 449,393,014	\$ 439,685,148	\$ 436,462,453	\$ 189,069,082	\$1,690,500,289
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	194,336,692	449,393,014	439,685,148	436,462,453	189,069,082	1,708,946,389
4 Disbursements	(194,065,737)	(381,844,129)	(390,114,267)	(386,925,081)	(164,657,249)	(1,517,606,463)
5 Receipts Net of Required Transfers	270,955	67,548,885	49,570,881	49,537,372	24,411,833	191,339,926
6 I&E Transfer	-	-	(25,739,700)	(56,102,080)	-	(81,841,780)
7 Net Receipts	\$ 270,955	\$ 67,548,885	\$ 23,831,181	\$ (6,564,708)	\$ 24,411,833	\$ 109,498,146
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	100%	118%	113%	113%	115%	113%
Sewer						
9 Receipts	\$ 297,634,449	\$ 703,512,249	\$ 718,374,552	\$ 733,083,541	\$ 326,910,875	\$2,779,515,666
10 MOU Adjustments	55,755,100	-	-	6,527,200	-	62,282,300
11 Adjusted Receipts	353,389,549	703,512,249	718,374,552	739,610,741	326,910,875	2,841,797,966
12 Disbursements	(341,835,625)	(703,407,313)	(725,121,160)	(724,424,942)	(306,887,468)	(2,801,676,508)
13 Receipts Net of Required Transfers	11,553,924	104,936	(6,746,608)	15,185,799	20,023,407	40,121,458
14 I&E Transfer	-	-	(22,698,100)	(22,547,700)	-	(45,245,800)
15 Shortfall Advance	-	-	-	-	-	-
16 Shortfall Repayment (principal)	-	-	-	9,367,355	7,230,375	16,597,730
17 Net Receipts	\$ 11,553,924	\$ 104,936	\$ (29,444,708)	\$ (7,361,901)	\$ 27,253,782	\$ 11,473,389
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	103%	100%	99%	102%	107%	101%
Combined						
19 Receipts	\$ 473,525,041	\$1,152,905,263	\$1,158,059,700	\$1,169,545,994	\$ 515,979,957	\$4,470,015,955
20 MOU Adjustments	74,201,200	-	-	6,527,200	-	80,728,400
21 Adjusted Receipts	547,726,241	1,152,905,263	1,158,059,700	1,176,073,194	515,979,957	4,550,744,355
22 Disbursements	(535,901,362)	(1,085,251,442)	(1,115,235,427)	(1,111,350,023)	(471,544,717)	(4,319,282,971)
23 Receipts Net of Required Transfers	11,824,879	67,653,821	42,824,273	64,723,171	44,435,240	231,461,384
24 I&E Transfer	-	-	(48,437,800)	(78,649,780)	-	(127,087,580)
25 Shortfall Advance	-	-	-	-	-	-
26 Shortfall Repayment	-	-	-	9,367,355	7,230,375	16,597,730
27 Net Receipts	\$ 11,824,879	\$ 67,653,821	\$ (5,613,527)	\$ (4,559,254)	\$ 51,665,615	\$ 120,971,535
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	102%	106%	104%	106%	109%	105%

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$194,016.51	\$194,016.51	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$67,903.77	\$67,903.77	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$27,704.96	\$27,704.96	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$58,404.49	\$58,404.49	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$284,823.41	\$284,823.41	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$28,808.78	\$28,808.78	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$24,670.24	\$24,670.24	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$808,051.57	\$808,051.57	\$0.00	\$0.00	\$0.00
CENTER LINE	\$38,847.34	\$38,847.34	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$324,705.17	\$324,705.17	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$603,753.45	\$603,753.45	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$275,298.08	\$275,298.08	\$0.00	\$0.00	\$0.00
DEARBORN	\$2,104,965.35	\$2,104,965.35	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$299,823.09	\$299,823.09	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$128,036.44	\$128,036.44	\$0.00	\$0.00	\$0.00
ECORSE	\$120,424.54	\$120,424.54	\$0.00	\$0.00	\$0.00
FARMINGTON	\$80,976.18	\$80,976.18	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$710,117.77	\$710,117.77	\$0.00	\$0.00	\$0.00
FERNDALE	\$160,904.20	\$160,904.20	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$107,001.86	\$107,001.86	\$0.00	\$0.00	\$0.00
FLINT	\$272,847.59	\$272,847.59	\$0.00	\$0.00	\$0.00
FRASER	\$98,748.96	\$98,748.96	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$127,550.23	\$127,550.23	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GIBRALTAR	\$27,627.69	\$27,627.69	\$0.00	\$0.00	\$0.00
GREENWOOD TOWNSHIP	\$77,635.00	\$77,635.00	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$86,157.44	\$86,157.44	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$125,500.65	\$125,500.65	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$53,810.16	\$53,810.16	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$116,465.65	\$116,465.65	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$135,255.79	\$135,255.79	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$86,159.04	\$86,159.04	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$103,762.79	\$103,762.79	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$60,766.59	\$60,766.59	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$7,878,817.13	\$208,425.72	\$108,007.06	\$106,637.76	\$7,455,746.59
HURON TOWNSHIP	\$118,025.93	\$118,025.93	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$142,002.19	\$142,002.19	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP	\$1,225.02	\$1,225.02	\$0.00	\$0.00	\$0.00
INKSTER	\$201,209.99	\$201,209.99	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$24,652.35	\$24,652.35	\$0.00	\$0.00	\$0.00
LAPEER	\$128,818.85	\$128,818.85	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$45,437.73	\$45,437.73	\$0.00	\$0.00	\$0.00
LINCOLN PARK	\$192,101.12	\$192,101.12	\$0.00	\$0.00	\$0.00
LIVONIA	\$910,260.21	\$910,260.21	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$916,693.77	\$916,693.77	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$157,112.33	\$157,112.33	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MAYFIELD TOWNSHIP	\$3,415.30	\$3,415.30	\$0.00	\$0.00	\$0.00
MELVINDALE	\$106,015.30	\$106,015.30	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$29,496.28	\$29,496.28	\$0.00	\$0.00	\$0.00
NOCWA	\$3,718,538.46	\$3,718,538.46	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$70,936.00	\$70,936.00	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$429,945.51	\$429,945.51	\$0.00	\$0.00	\$0.00
NOVI	\$704,878.38	\$704,878.38	\$0.00	\$0.00	\$0.00
OAK PARK	\$117,098.72	\$117,098.72	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$7,253.81	\$7,253.81	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$90,546.33	\$90,546.33	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$350,038.06	\$350,038.06	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$259,350.70	\$259,350.70	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$61,509.55	\$61,509.55	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$72,806.45	\$72,806.45	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$22,734.60	\$22,734.60	\$0.00	\$0.00	\$0.00
ROMEO	\$43,602.66	\$43,602.66	\$0.00	\$0.00	\$0.00
ROMULUS	\$343,251.72	\$343,251.72	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$218,633.97	\$218,633.97	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$16,311.46	\$16,311.46	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$1,056,933.73	\$1,056,933.73	\$0.00	\$0.00	\$0.00
SOCWA	\$3,878,100.99	\$3,878,100.99	\$0.00	\$0.00	\$0.00
SOUTH ROCKWOOD	\$9,433.39	\$9,433.39	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$184,408.44	\$184,408.44	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ST. CLAIR SHORES	\$256,431.00	\$256,431.00	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$1,211,715.95	\$1,211,715.95	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$56,570.07	\$56,570.07	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$18,712.19	\$18,712.19	\$0.00	\$0.00	\$0.00
TAYLOR	\$384,107.09	\$384,107.09	\$0.00	\$0.00	\$0.00
TRENTON	\$135,535.14	\$135,535.14	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,073,176.87	\$1,073,176.87	\$0.00	\$0.00	\$0.00
UTICA	\$93,816.45	\$93,816.45	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$602,580.78	\$575,105.25	\$27,475.53	\$0.00	\$0.00
VILLAGE OF ALMONT	\$18,813.40	\$18,813.40	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$64,656.06	\$64,656.06	\$0.00	\$0.00	\$0.00
WARREN	\$841,167.26	\$841,167.26	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$173,040.74	\$173,040.74	\$0.00	\$0.00	\$0.00
WAYNE	\$344,980.00	\$344,980.00	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,687,816.66	\$1,687,816.66	\$0.00	\$0.00	\$0.00
WESTLAND	\$999,144.97	\$999,144.97	\$0.00	\$0.00	\$0.00
WIXOM	\$197,461.89	\$197,461.89	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$135,436.82	\$135,436.82	\$0.00	\$0.00	\$0.00
YCUA	\$843,193.60	\$843,193.60	\$0.00	\$0.00	\$0.00
TOTAL WATER ACCOUNTS	\$39,471,478.15	\$31,773,611.21	\$135,482.59	\$106,637.76	\$7,455,746.59

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$71,200.00	\$71,200.00	\$0.00	\$0.00	\$0.00
CENTER LINE	\$86,099.50	\$86,099.50	\$0.00	\$0.00	\$0.00
DEARBORN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EVERGREEN-FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$18,300.00	\$18,300.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$33,174,086.73	\$472,500.00	\$472,500.00	\$472,500.00	\$31,756,586.73
MELVINDALE	\$127,800.00	\$127,800.00	\$0.00	\$0.00	\$0.00
OAKLAND COUNTY GWK DD	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OMID	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROUGE VALLEY	\$4,513,500.00	\$4,513,500.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY N.E.	\$2,070,040.00	\$2,069,800.00	\$240.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$4,200.00	\$4,200.00	\$0.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$40,065,226.23	\$7,363,399.50	\$472,740.00	\$472,500.00	\$31,756,586.73

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$1,532.83	\$1,532.83	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O)	\$18,579.86	\$18,579.86	\$0.00	\$0.00	\$0.00
AUBURN HILLS (E-F)	\$348.14	\$348.14	\$0.00	\$0.00	\$0.00
BERKLEY	\$3,004.82	\$3,004.82	\$0.00	\$0.00	\$0.00
BEVERLY HILLS	\$949.78	\$949.78	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$1,008.93	\$1,008.93	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$2,315.30	\$2,315.30	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$10,645.31	\$10,636.86	\$0.00	\$8.45	\$0.00
BLOOMFIELD HILLS	\$1,570.01	\$1,570.01	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$7,197.71	\$7,197.71	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$666,711.04	\$36,253.88	\$0.00	\$36,253.88	\$594,203.28
CENTER LINE	\$3,501.68	\$3,501.68	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$11,593.40	\$11,593.40	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$190.97	\$190.97	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$8,466.90	\$8,466.90	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$3,540.55	\$3,540.55	\$0.00	\$0.00	\$0.00
CLARKSTON	\$263.64	\$263.64	\$0.00	\$0.00	\$0.00
CLAWSON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$24,303.89	\$24,303.89	\$0.00	\$0.00	\$0.00
DEARBORN	\$70,293.86	\$70,293.86	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$9,115.86	\$9,115.86	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$101.40	\$101.40	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$6,136.39	\$6,136.39	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
FARMINGTON	\$3,846.44	\$3,846.44	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$23,281.44	\$23,281.44	\$0.00	\$0.00	\$0.00
FRASER	\$4,715.10	\$4,715.10	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$3,952.91	\$3,952.91	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$1,985.75	\$1,985.75	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$1,123.85	\$1,123.85	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$302.51	\$302.51	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$2,458.95	\$2,458.95	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$3,968.12	\$3,968.12	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$1,884.35	\$1,884.35	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$3,009.89	\$3,009.89	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$3,077.49	\$3,077.49	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,695,283.50	\$7,880.47	\$0.00	\$8,039.33	\$1,679,363.70
HUNTINGTON WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDEPENDENCE	\$4,718.48	\$4,718.48	\$0.00	\$0.00	\$0.00
INKSTER	\$10,572.64	\$10,572.64	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$670.93	\$670.93	\$0.00	\$0.00	\$0.00
LAKE ORION	\$763.88	\$763.88	\$0.00	\$0.00	\$0.00
LATHRUP	\$1,336.79	\$1,336.79	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$309.27	\$309.27	\$0.00	\$0.00	\$0.00
LIVONIA	\$38,308.92	\$38,308.92	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MACOMB TWP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELVINDALE	\$6,901.96	\$6,901.96	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$2,110.81	\$2,110.81	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$159,969.68	\$8,696.74	\$0.00	\$8,696.74	\$142,576.20
NOVI	\$16,607.63	\$16,607.63	\$0.00	\$0.00	\$0.00
OAK PARK	\$6,469.32	\$6,469.32	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$410.67	\$410.67	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$381.94	\$381.94	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$5,244.07	\$5,244.07	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$1,019.07	\$1,019.07	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$1,196.52	\$1,196.52	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$260.26	\$260.26	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$3,707.86	\$3,707.86	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$445,271.32	\$24,207.56	\$0.00	\$24,207.56	\$396,856.20
REDFORD TOWNSHIP	\$10,352.19	\$10,352.19	\$0.00	\$0.00	\$0.00
ROCHESTER HILLS	\$17,496.57	\$17,496.57	\$0.00	\$0.00	\$0.00
ROMULUS	\$880.49	\$880.49	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$14,084.46	\$14,084.46	\$0.00	\$0.00	\$0.00
ROYAL OAK	\$13,068.77	\$13,068.77	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$2,661.75	\$1,774.50	\$0.00	\$887.25	\$0.00
SHELBY TOWNSHIP	\$11,936.47	\$11,936.47	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SOUTHFIELD (E-F)	\$27,060.28	\$27,060.28	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$3,711.24	\$3,711.24	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$11,471.72	\$11,471.72	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$29,860.61	\$29,860.61	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$365.04	\$365.04	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$35,381.84	\$35,381.84	\$0.00	\$0.00	\$0.00
UTICA	\$5,725.72	\$5,725.72	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$1,755.91	\$1,755.91	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$62.53	\$62.53	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$1,331.72	\$1,331.72	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP	\$11,840.14	\$11,840.14	\$0.00	\$0.00	\$0.00
WAYNE	\$4,770.87	\$4,770.87	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$902.46	\$902.46	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$6,048.51	\$6,048.51	\$0.00	\$0.00	\$0.00
WESTLAND	\$21,550.88	\$21,550.88	\$0.00	\$0.00	\$0.00
TOTAL IWC ACCOUNTS	\$3,538,814.76	\$647,722.17	\$0.00	\$78,093.21	\$2,812,999.38

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
3M COMPANY	\$5,901.56	\$5,901.56	\$0.00	\$0.00	\$0.00
A & R PACKING CO., LLC	\$5,349.05	\$5,349.05	\$0.00	\$0.00	\$0.00
AACTRON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACADEMY PACKING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACME RUSTPROOF	\$36.35	\$36.35	\$0.00	\$0.00	\$0.00
AEVITAS SPECIALITY SERVICES	\$10,948.83	\$10,948.83	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$6,536.21	\$6,536.21	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$21,777.78	\$21,777.78	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$1,024.16	\$1,024.16	\$0.00	\$0.00	\$0.00
ALGAL SCIENTIFIC CORPORATION	\$16,533.05	\$0.00	\$0.00	\$0.00	\$16,533.05
ALL CHEM CORP, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALPHA STAMPING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERICAN WASTE TECH INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERITI MFG. CO.	\$10,827.72	\$10,827.72	\$0.00	\$0.00	\$0.00
ATWATER IN THE PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AUTOMOTIVE FINISH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AXLE BREWING COMPANY, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
B. NEKTAR MEADERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BAFFIN BREWING COMPANY	\$470.45	\$121.80	\$0.00	\$10.90	\$337.75
BARON INDUSTRIES	\$1,671.46	\$1,671.46	\$0.00	\$0.00	\$0.00
BARTZ BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$37.51	\$37.51	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BAYS MICHIGAN CORPORATION	\$4.83	\$4.83	\$0.00	\$0.00	\$0.00
BEIRUT BAKERY, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BETTER MADE SNACK FOOD	\$17,151.67	\$17,151.67	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$61.25	\$61.25	\$0.00	\$0.00	\$0.00
BOZEK'S MARKET	\$65.46	\$65.46	\$0.00	\$0.00	\$0.00
BREW DETROIT	\$11,944.80	\$8,002.64	\$3,942.16	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$2.15	\$2.15	\$0.00	\$0.00	\$0.00
BROOKS BREWING, LLC.	\$108.06	\$108.06	\$0.00	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$59.87	\$59.87	\$0.00	\$0.00	\$0.00
CADILLAC STRAITS BREWING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CANTON BREW WORKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAPITAL REPRODUCTIONS	\$3.13	\$1.51	\$0.00	\$1.38	\$0.24
CF BURGER CREAMERY	\$21,071.50	\$21,071.50	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$1,559.40	\$131.90	\$25.74	\$24.13	\$1,377.63
CINTAS CORP. - MACOMB TWP.	\$44,045.56	\$44,045.56	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$23,776.86	\$23,776.86	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$11,924.54	\$11,924.54	\$0.00	\$0.00	\$0.00
CITY LAUNDRY, INC.	\$14.73	\$14.73	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COCA-COLA REFRESHMENTS USA,	\$2,012.72	\$2,012.72	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COUNTRY FRESH DAIRY CO.	\$7,303.99	\$7,303.99	\$0.00	\$0.00	\$0.00
CROSS CHEMICAL COMPANY, INC.	\$305.19	\$305.19	\$0.00	\$0.00	\$0.00
DARLING INGREDIENTS, INC.	\$10,779.24	\$10,779.24	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$40.81	\$40.81	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT BEER	\$128.40	\$128.40	\$0.00	\$0.00	\$0.00
DETROIT LINEN SERVICE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT RIVERTOWN BREWERY CC	\$2,766.89	\$2,766.89	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$28.46	\$28.46	\$0.00	\$0.00	\$0.00
DETRONIC INDUSTRIES, INC.	\$119.79	\$119.79	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$25,900.50	\$25,900.50	\$0.00	\$0.00	\$0.00
DIVERSIFIED CHEM TECH. INC.	\$165.44	\$165.44	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$2,028.36	\$2,028.36	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$814.70	\$814.70	\$0.00	\$0.00	\$0.00
DOWNEY BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$4,712.83	\$4,712.83	\$0.00	\$0.00	\$0.00
EASTERN MARKET BREWING COMPF	\$180.65	\$180.65	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$27,444.06	\$27,444.06	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
EQ DETROIT, INC.	\$1,762.36	\$1,762.36	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$9,685.08	\$9,685.08	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ETON ST BREWERY- GRIFFIN CLF	\$ (0.10)	\$0.00	\$ (0.10)	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$469.44	\$469.44	\$0.00	\$0.00	\$0.00
EXTRUDEHODE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FAYGO BEVERAGES, INC.	\$10,404.73	\$10,404.73	\$0.00	\$0.00	\$0.00
FORD NEW MODEL PROGRAM	\$1,541.87	\$1,541.87	\$0.00	\$0.00	\$0.00
FOUNDERS BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$34.94	\$34.94	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
G2O ENERGY, LLC	\$3,223.48	\$3,223.48	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$15,447.39	\$15,447.39	\$0.00	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$53.43	\$53.43	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$185.02	\$90.90	\$0.00	\$0.00	\$94.12
GREAT BARABOO BREWING CO.	\$110.25	\$110.25	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$2,908.28	\$1,154.23	\$847.94	\$706.15	\$199.96
HENKEL CORPORATION	\$220.21	\$220.21	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
HOME STYLE FOOD INC.	\$5,473.21	\$5,473.21	\$0.00	\$0.00	\$0.00
HOMEGROWN BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOODS CLEANERS	\$211.33	\$0.00	\$0.00	\$0.00	\$211.33
HOUGHTON INTERNATIONAL INC.	\$141.30	\$141.30	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$199.48	\$199.48	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$3,391.08	\$3,391.08	\$0.00	\$0.00	\$0.00
HUNTINGTON CLEANERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
IDP, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDUSTRIAL METAL COATING	\$854.43	\$854.43	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$1,618.13	\$1,618.13	\$0.00	\$0.00	\$0.00
ITALIAN BUTTER BREAD STICKS	\$14.60	\$14.47	\$0.13	\$0.00	\$0.00
J & G FOOD PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
JAMEX BREWING CO.	\$40.38	\$40.38	\$0.00	\$0.00	\$0.00
KAR NUT PRODUCTS	\$1,590.62	\$1,590.62	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$1,063.55	\$1,063.55	\$0.00	\$0.00	\$0.00
KUHNHENN BREWING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$771.37	\$771.37	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$24.61	\$24.61	\$0.00	\$0.00	\$0.00
LEAR CORPORATION DBA EAGLE C	\$4,714.62	\$4,714.62	\$0.00	\$0.00	\$0.00
LIBERTY STREET PROD. BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LILY'S SEAFOOD GRILL & BREWE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MACDERMID, INC.	\$2,585.50	\$2,585.50	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$14,866.57	\$828.01	\$14,038.56	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MCNICHOLS POLISHING & ANODIZ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELLO MEATS INC, - KUBISCH S	\$142.30	\$142.30	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$735.09	\$735.09	\$0.00	\$0.00	\$0.00
MIBA HYDRAMECHANICA CORP.	\$202.01	\$202.01	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$102,448.32	\$102,448.32	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MICHIGAN SOY PRODUCTS CO.	\$635.72	\$635.72	\$0.00	\$0.00	\$0.00
MIDWEST WIRE PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MILANO BAKERY	\$1,347.15	\$1,347.15	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$45.37	\$45.37	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$3,442.51	\$3,442.51	\$0.00	\$0.00	\$0.00
MISTER UNIFORM & MAT RENTALS	\$138.52	\$4.87	\$1.75	\$3.13	\$128.77
MOTOR CITY BREWING WORKS	\$1,135.06	\$178.07	\$0.00	\$175.22	\$781.77
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTH CENTER BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHERN LAKES SEAFOOD & MEA	\$54.65	\$54.65	\$0.00	\$0.00	\$0.00
OAKWOOD BAKERY	\$163.28	\$163.28	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PELLERITO FOODS INC.	\$2,779.75	\$2,779.75	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$77,526.28	\$77,526.28	\$0.00	\$0.00	\$0.00
PERSONAL UNIFORM SERVICE, IN	\$33.28	\$33.28	\$0.00	\$0.00	\$0.00
PETRO ENVIRON TECH, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
PINE TREE ACRES, INC.	\$43,458.21	\$43,458.21	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$2,211.11	\$2,211.11	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$1,143.01	\$1,143.01	\$0.00	\$0.00	\$0.00
RAY'S ICE CREAM CO.	\$85.31	\$85.31	\$0.00	\$0.00	\$0.00
RED SPOT PAINT #409139	\$13.89	\$13.89	\$0.00	\$0.00	\$0.00
RIVER ROUGE BREWING COMPANY	\$781.67	\$781.67	\$0.00	\$0.00	\$0.00
ROAK BREWING CO. LLC	\$757.25	\$757.25	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS BEER COMPANY	\$301.65	\$301.65	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS PROD BREWERY	\$1,543.04	\$1,543.04	\$0.00	\$0.00	\$0.00
RTT	\$27,772.36	\$0.00	\$0.00	\$756.08	\$27,016.28
SEAFARE FOODS, INC.	\$147.47	\$147.47	\$0.00	\$0.00	\$0.00
SHERWOOD BREWING COMPANY	\$934.47	\$100.35	\$0.00	\$98.74	\$735.38
SMITH-WATKINS, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$15.98	\$15.98	\$0.00	\$0.00	\$0.00
SUPERNATURAL SPIRITS & BREWI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$1,789.80	\$167.01	\$75.52	\$72.61	\$1,474.66
THE CROWN GROUP-LIVONIA PLAN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE ROYAL OAK BREWERY	\$(1,031.09)	\$0.00	\$0.00	\$0.00	\$(1,031.09)
TOM LAUNDRY CLEANERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TRAFFIC JAM & SNUG	\$41.66	\$21.00	\$0.00	\$0.00	\$20.66

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$2,969.17	\$2,969.17	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$60,580.67	\$60,580.67	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$1,740.70	\$1,740.70	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$11.95	\$11.95	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$311.83	\$311.83	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
URBANREST BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
US ECOLOGY MICHIGAN	\$427.20	\$427.20	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$4,135.97	\$4,135.97	\$0.00	\$0.00	\$0.00
USHER OIL SERVICES	\$4,527.27	\$4,527.27	\$0.00	\$0.00	\$0.00
VALICOR ENVIROMENTAL SERVICE	\$987.95	\$987.95	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$10,831.48	\$10,831.48	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$1,167.19	\$1,167.19	\$0.00	\$0.00	\$0.00
VERNOR FOOD PRODUCTS	\$ (36.26)	\$0.00	\$0.00	\$0.00	\$ (36.26)
WIGLEY'S MEAT PROCESS	\$318.74	\$318.74	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$976.15	\$976.15	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$159.37	\$159.37	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$8,761.42	\$8,761.42	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$3,753.75	\$3,753.75	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 11/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
WOODWARD AVENUE BREWERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$753,666.76	\$685,042.47	\$18,931.70	\$1,848.34	\$47,844.25

City of Highland Park Billings and Collections

	<u>Water</u>	<u>Sewer</u>	<u>IWC</u>	<u>Cumulative Total</u>
June 30, 2012 Balance	\$ -	\$ 10,207,956	\$ 852,987	\$ 11,060,943
FY 2013 Billings	485,887	4,987,635	154,444	5,627,966
FY 2013 Payments	<u>(65,652)</u>	<u>(2,206,211)</u>	<u>-</u>	<u>(2,271,863)</u>
				-
June 30, 2013 Balance	\$ 420,235	\$ 12,989,380	\$ 1,007,431	\$ 14,417,046
FY 2014 Billings	1,004,357	6,980,442	161,951	8,146,750
FY 2014 Payments	<u>-</u>	<u>(1,612,633)</u>	<u>-</u>	<u>(1,612,633)</u>
				-
June 30, 2014 Balance	\$ 1,424,592	\$ 18,357,189	\$ 1,169,382	\$ 20,951,163
FY 2015 Billings	1,008,032	5,553,123	165,739	6,726,894
FY 2015 Payments	<u>-</u>	<u>(1,444,623)</u>	<u>-</u>	<u>(1,444,623)</u>
				-
June 30, 2015 Balance	\$ 2,432,625	\$ 22,465,689	\$ 1,335,121	\$ 26,233,435
FY 2016 Billings	1,157,178	5,612,167	106,431	6,875,776
FY 2016 Payments	<u>-</u>	<u>(2,022,335)</u>	<u>-</u>	<u>(2,022,335)</u>
				-
June 30, 2016 Balance	\$ 3,589,803	\$ 26,055,521	\$ 1,441,551	\$ 31,086,875
FY 2017 Billings	1,245,267	5,802,000	101,999	7,149,265
FY 2017 Payments	<u>-</u>	<u>(2,309,186)</u>	<u>-</u>	<u>(2,309,186)</u>
				-
June 30, 2017 Balance	\$ 4,835,070	\$ 29,548,335	\$ 1,543,550	\$ 35,926,954
FY 2018 Billings	1,277,179	5,657,101	80,472	7,014,752
FY 2018 Payments	<u>-</u>	<u>(4,108,108)</u>	<u>-</u>	<u>(4,108,108)</u>
				-
June 30, 2018 Balance	\$ 6,112,248	\$ 31,097,327	\$ 1,624,022	\$ 38,833,597
FY 2019 Billings	1,238,797	5,617,100	51,220	6,907,117
FY 2019 Payments	<u>-</u>	<u>(5,241,583)</u>	<u>-</u>	<u>(5,241,583)</u>
				-
June 30, 2019 Balance	\$ 7,351,045	\$ 31,472,844	\$ 1,675,243	\$ 40,499,132
FY 2020 Billings (5 Months)	527,772	2,357,900	20,041	2,905,713
FY 2020 Payments (5 Months)	<u>-</u>	<u>(656,657)</u>	<u>-</u>	<u>(656,657)</u>
				-
Balance as of November 30, 2019	<u>\$ 7,878,817</u>	<u>\$ 33,174,087</u>	<u>\$ 1,695,284</u>	<u>\$ 42,748,188</u>



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Deirdre Henry, Treasury Manager

Re: Quarterly Investment Report through December 31, 2019 (Unaudited)

Background: As stated in section 14 of the Great Lakes Water Authority (GLWA) Investment Policy, quarterly reporting shall be presented to provide a clear picture of the status of the current GLWA investment portfolio. The attached report, prepared and presented by PFM Asset Management LLC, summarizes portfolio information through December 31, 2019 (unaudited).

Analysis: The Quarterly Investment Report complies with the requirements of Public Act 20 of 1948, as amended and the GLWA Investment Policy. GLWA is investing its funds in a diversified portfolio which includes bank deposits, money market funds, a local government investment pool, U.S. Treasuries, Federal Agencies, and commercial paper. All securities in the portfolio are in compliance with the GLWA investment policy. Key metrics are provided below with additional commentary in the attached report.

- Yield to Market at Cost compared to market index:
 - As of December 31, 2019: 1.56% vs 1.51% (3-Month Treasury Index)
 - As of September 30, 2019: 1.81% vs 1.84% (3-Month Treasury Index)

- Portfolio Allocation in Cash/Money Market Securities
 - As of December 31, 2019: 42%
 - As of September 30, 2019: 32%

The Treasury group continues to work with PFM Asset Management LLC to identify strategies to maximize investment returns while meeting the GLWA standards for safety and liquidity.

Proposed Action: Receive and file report.

Great Lakes Water Authority

Investment Performance Report – December 2019



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PORTFOLIO RECAP

- **Safety** – The overall portfolio is diversified amongst cash, bank deposits, U.S. Treasuries, Federal Agencies, commercial paper, SEC-registered money market funds, and a local government investment pool. The total credit profile of the portfolio is strong with over 97% of the assets invested in bank deposits or securities that are rated within the two highest short and long-term rating classifications as established by S&P.
- **Liquidity** – Great Lakes Water Authority (“GLWA”) has continued to monitor its portfolio with the goal of limiting the allocation to cash and bank deposit accounts and maximizing the use of short-term investments to meet liquidity requirements. As of December 31, 2019, 42% of the funds were held in cash and money market accounts maturing overnight.
- **Return** – The overall yield decreased to 1.56% as of December 31, 2019 versus 1.81% as of September 30, 2019. The lower yield is a result of the declining interest rate environment. GLWA earned \$10.5 million (unaudited) in investment income for fiscal year 2020 to date on a book value basis. Based on current market assumptions, the income earned for the previous quarter, and assuming GLWA maintains the same investable balances for the remainder of the fiscal year, we are projecting investment income of approximately \$17.4 million in earnings for fiscal year 2020.

AVAILABLE FUNDS (Unaudited)

Type	Financial Institution	Book Value	Market Value	YTM @ Market (as of 12/31/19)
Deposit Account	Comerica	\$6,967,049	\$6,967,049	0.18%
Deposit Account - Retainage	First Independence	\$17,707,106	\$17,707,106	0.05%
Deposit Account – Flint Security Deposit	Chase	\$3,807,070	\$3,807,070	0.80%
Deposit Account	Chase	\$17,934,869	\$17,934,869	0.80%
Trust Money Market Fund	U.S. Bank	\$274,955,438	\$274,955,438	1.48%
Money Market Fund	JP Morgan	\$45,610,727	\$45,610,727	1.52%
Local Government Investment Pool	GovMIC	\$95,088,997	\$95,088,997	1.75%
Managed Funds	PFM	\$622,653,871	\$625,363,980	1.66%
<u>TOTAL</u>		<u>\$1,084,725,127</u>	<u>\$1,087,435,236</u>	<u>1.56%</u>

The accounts at Comerica Bank get an earnings credit to offset bank fees. The funds and earnings in the Retainage account are held on behalf of the contractors and do not belong to GLWA. The funds and earnings in the Flint Security Deposit account are held on behalf of the City of Flint and do not belong to GLWA. In addition to the above, there also exists surety bonds in the amount of \$324,309,258 as of 12/31/2019.

Investment Strategy

GLWA INVESTMENT STRATEGY

- The portfolio is in compliance with GLWA’s investment policy and Michigan Public Act 20.
- To date, GLWA has continued to invest its funds in a mixture of short and intermediate-term investments to ensure adequate liquidity to cover debt and pension payments.
- The aggregate portfolio was yielding 1.56% at the end of December.*
 - This compares to the 1.51% yield of the Bank of America / Merrill Lynch 3-Month U.S. Treasury Bill Index as of 12/31/2019, which is a comparable market indicator.
- GLWA continues to implement a disciplined investment plan to provide improved safety and diversification and putting every dollar to work.
- For the third quarter of fiscal year 2020, PFM Asset Management LLC (“PFM”), GLWA’s investment advisor, will continue to actively manage long-term portfolios with full discretion and align short-term balances with expected liabilities, subject to GLWA’s investment policy.
- GLWA will continue to work with PFM to identify strategies in the current interest rate environment to maximize future investment income while meeting the objectives of safety and liquidity.
- Assuming GLWA maintains similar investable balances and interest rates remain within the market projected range, we expect to earn approximately \$17.4 million in interest income for fiscal year 2020.

* Current market yield as of December 31, 2019.

Summary Market Overview and Outlook

ECONOMIC HIGHLIGHTS UPDATE

- As investors set sail into the new decade, we reflect on the remarkable decade now behind us. The 2010's overcame upheavals in the geopolitical order, credit and oil shocks, and sovereign meltdowns. Despite these volatile winds, equities had an epic bull market run. Fixed-income bonds also had a bull market run, and the U.S. dollar reigned supreme, enjoying its unique privilege amid unprecedented monetary expansion by major central banks.
- After three consecutive rate cuts, the Federal Reserve kept rates steady at its December meeting, maintaining the Fed Funds target rate at a range of 1.50% to 1.75%. It signaled a view that the economy is solid, and the current policy stance will remain appropriate as long as "incoming data remains broadly consistent with the outlook." Many market strategists and participants expect the Fed to remain on hold for an extended period and to maintain this rate range for the foreseeable future unless new economic developments dictate otherwise as we head into an election year.

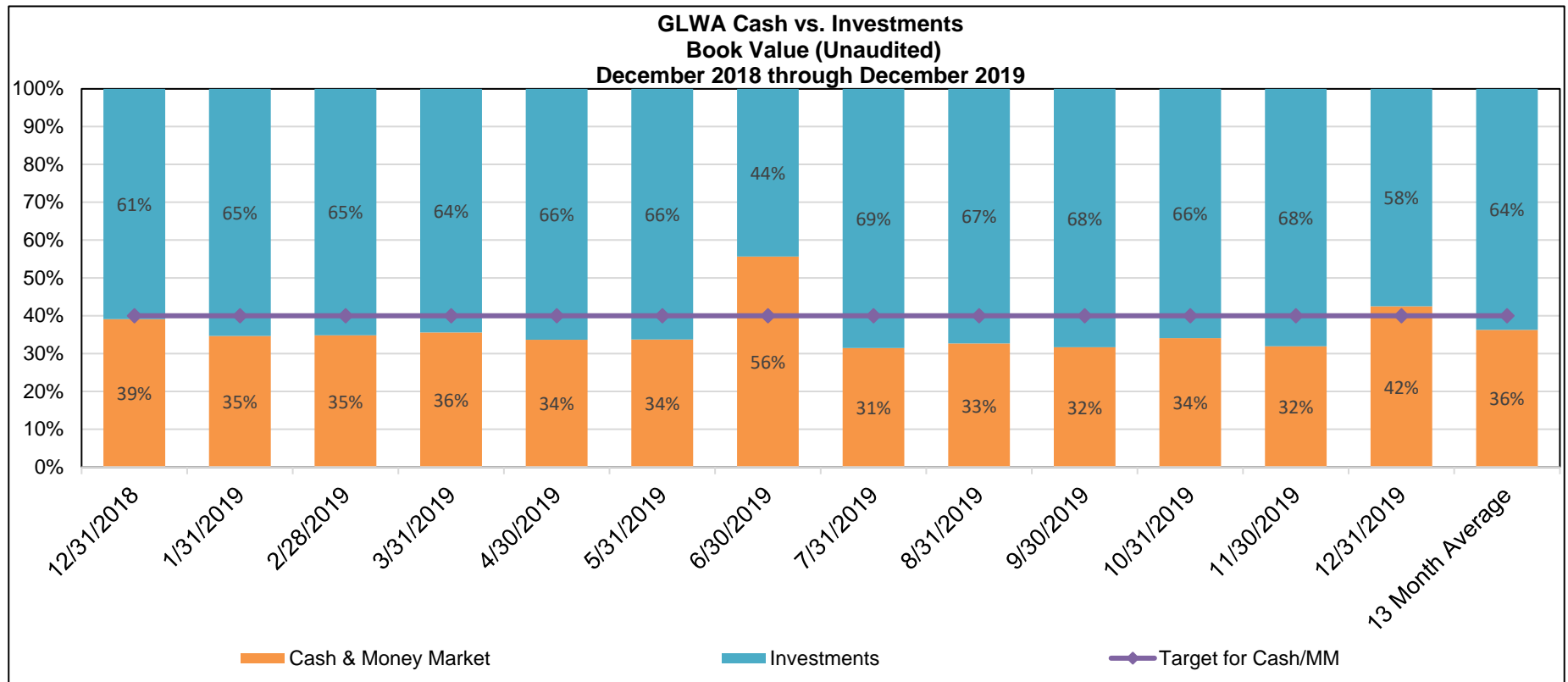
ECONOMIC IMPACT ON PORTFOLIO

- The U.S. Treasury yield curve steepened during December. Ultra-short (less than three months) Treasury yields fell by 15 basis points as the front end of the curve sought equilibrium with the Fed Funds target rate. Yields on maturities between three months and five years were generally flat (plus or minus five basis points), while yields on longer-term Treasuries (greater than seven years) increased by 10 to 20 basis points.
- Buoyed by stable credit fundamentals, accommodative central banks, and modest new supply, credit sectors (i.e., commercial paper) once again generated strong incremental performance. By month-end, high-quality credit spreads had reached historically tight levels, making valuations appear rich.
- Following the Fed's three 2019 "rate adjustment" cuts, and with the economy expanding modestly, we expect interest rates to remain within a tight trading range over the near-term. As a result, we plan to maintain duration neutral positions.
- Shorter-term investors (less than one year) may continue to benefit from widened yield spreads on commercial paper and a return to a more normal, upward sloping yield curve. After the strong bond market returns of calendar year 2019, we expect results in virtually all sectors to be lower this year.

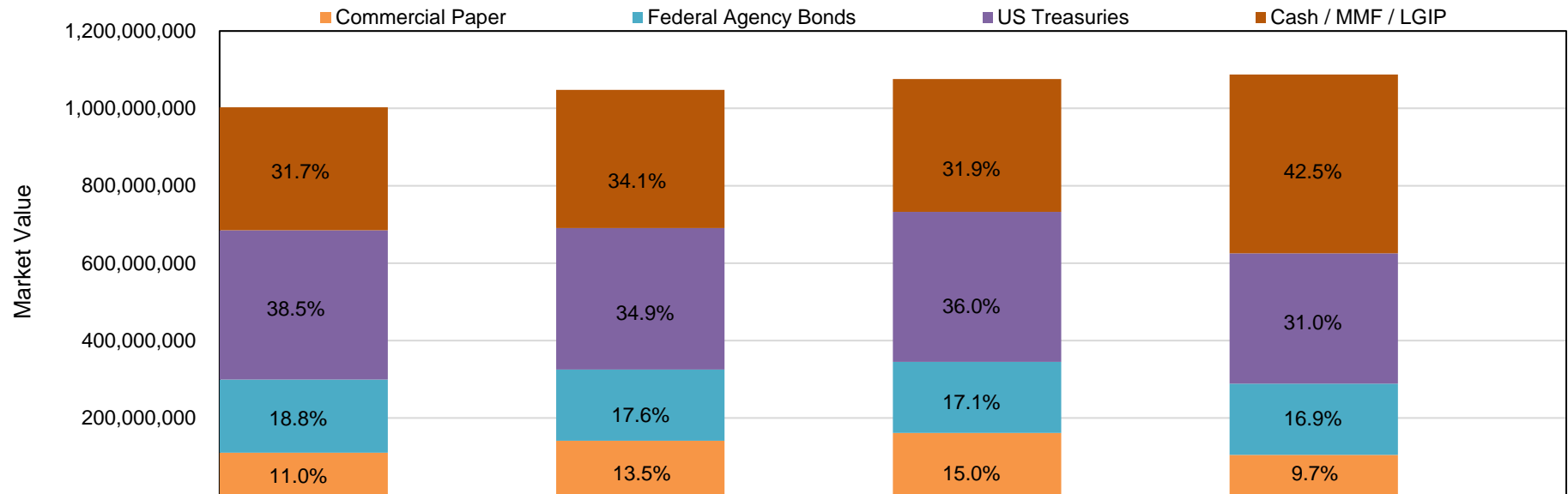
Portfolio Mix

Cash / Money Market vs. Investments

- GLWA’s liquidity requirements fluctuate each month based on operational requirements, capital funding, and debt payments. Based on a review of historical activity and refinement of cash flow projections, GLWA has set a target ratio of 40% cash & money market accounts and 60% investments for the portfolio holdings. The 13-month average at the end of December of 2019 was ahead of the target.
- The chart below compares the monthly allocation of the portfolio holdings to the 13-month average and the target. The allocation between cash and investments will vary each month based on liquidity requirements. For December 2019, 42% of the portfolio was invested in cash & money market accounts. This percentage is higher than September due to liquidity needed for January 1st debt payments.



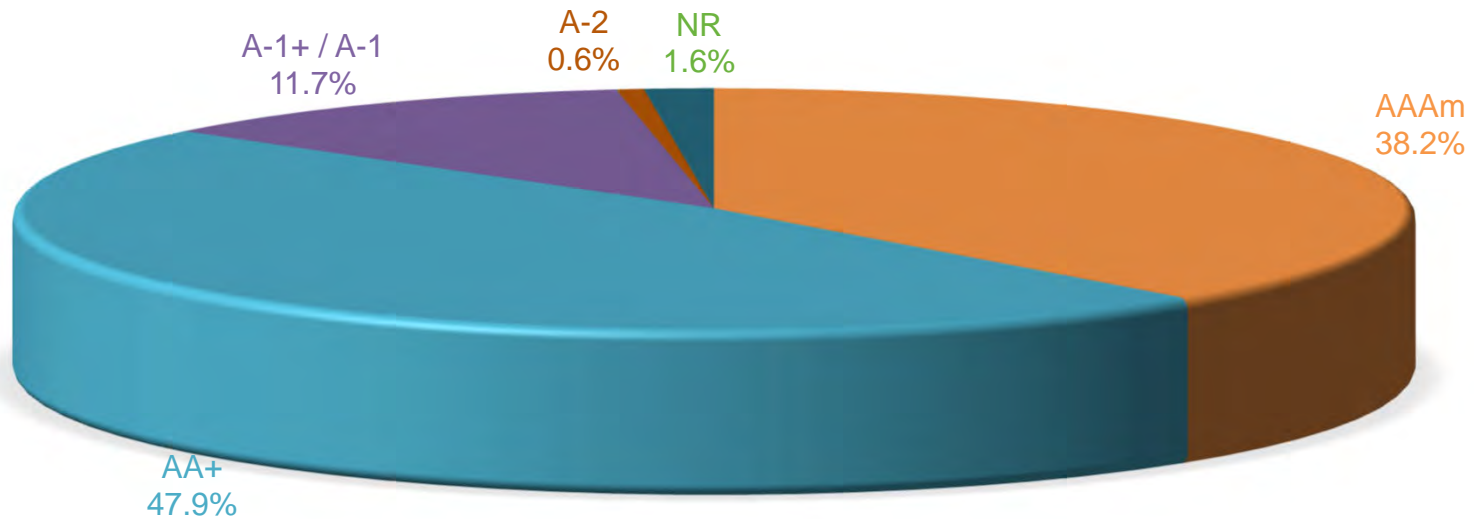
Investments – By Security Type



Security Type	September		October		November		December	
	Market Value	Asset Allocation	Market Value	Asset Allocation	Market Value	Asset Allocation	Market Value	Asset Allocation
Commercial Paper	110,547,317	11.0%	141,262,374	13.5%	161,369,414	15.0%	104,960,206	9.7%
Federal Agencies	188,918,038	18.8%	184,110,405	17.6%	183,779,232	17.1%	183,805,199	16.9%
U.S. Treasuries	385,597,171	38.5%	365,283,934	34.9%	387,250,385	36.0%	336,598,575	31.0%
Cash / MMF / LGIP	317,660,352	31.7%	357,056,935	34.1%	343,398,739	31.9%	462,071,256	42.5%
Total	1,002,722,877	100.0%	1,047,713,647	100.0%	1,075,797,770	100.0%	1,087,435,236	100.0%

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

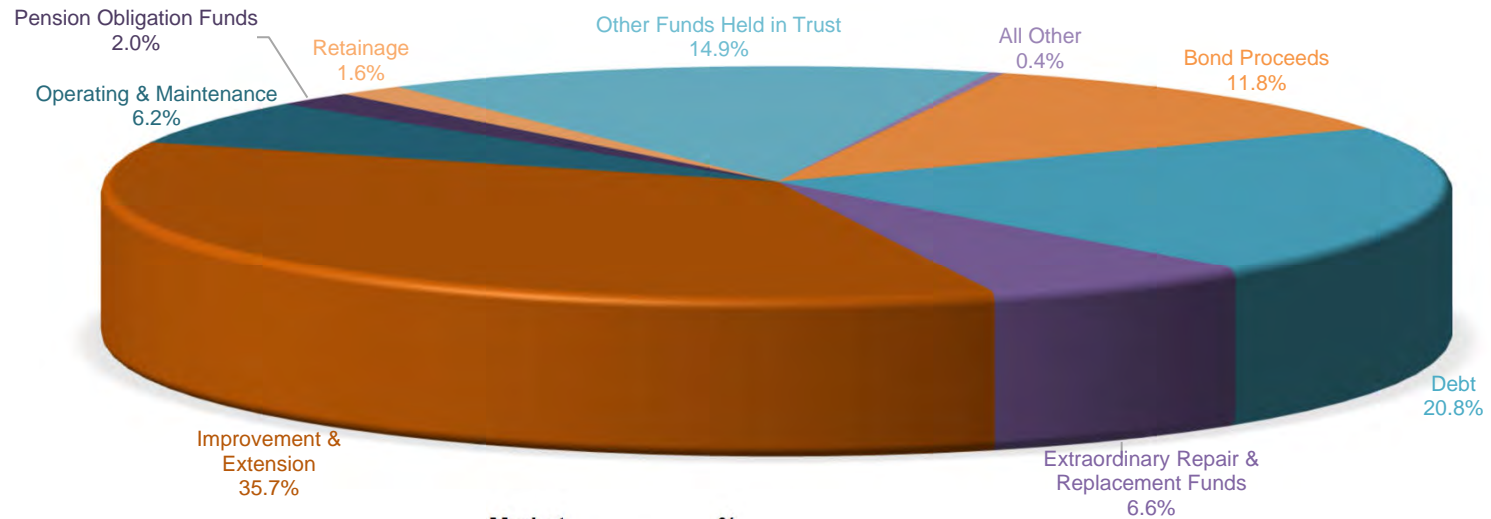
Investments – By Credit Quality



Credit Quality	Market Value	Asset Allocation
Ratings		
AAAm	415,655,162	38.2%
AA+	520,403,774	47.9%
A-1 + / A-1	126,702,145	11.7%
A-2	6,967,049	0.6%
NR	17,707,106	1.6%
Totals	1,087,435,236	100.0%

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

Investments – By Account Purpose



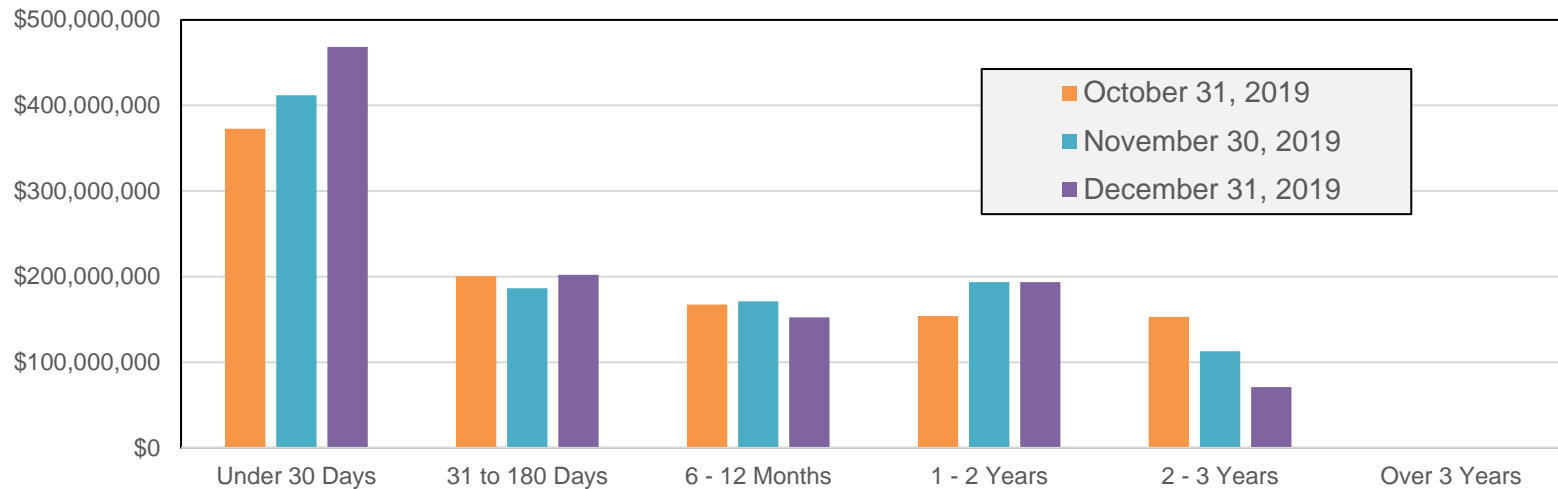
Account Purpose	Market Value	% Allocation
Bond Proceeds	\$ 128,518,871	11.8%
Debt	\$ 226,242,248	20.8%
Extraordinary Repair & Replacement Funds	\$ 71,997,279	6.6%
Improvement & Extension	\$ 388,440,860	35.7%
Operating & Maintenance	\$ 67,518,426	6.2%
Pension Obligation Funds	\$ 21,301,761	2.0%
Retainage	\$ 17,707,106	1.6%
Other Funds Held in Trust	\$ 161,901,616	14.9%
All Other	\$ 3,807,070	0.4%
Total	\$ 1,087,435,236	100.0%

Other Funds Held in Trust	Market Value	% Allocation
Budget Stabilization Funds	\$ 7,593,814	4.7%
Receiving Funds	\$ 145,056,839	89.6%
WRAP Funds	\$ 9,250,963	5.7%
Total	\$ 161,901,616	100.0%

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019. "All Other" funds includes the Flint Security Deposit account which is held on behalf of the City of Flint and do not belong to GLWA.

Investments – By Maturity

Maturity Distribution	October 31, 2019	%	November 30, 2019	%	December 31, 2019	%
Under 30 Days	\$ 372,835,524	35.6%	\$ 411,900,823	38.3%	\$ 468,240,951	43.1%
31 to 180 Days	200,567,894	19.1%	186,415,593	17.3%	202,255,615	18.6%
6 - 12 Months	167,412,356	16.0%	171,144,940	15.9%	152,393,510	14.0%
1 - 2 Years	153,894,486	14.7%	193,548,467	18.0%	193,602,469	17.8%
2 - 3 Years	153,003,387	14.6%	112,787,947	10.5%	70,942,690	6.5%
Over 3 Years	-	0.0%	-	0.0%	-	0.0%
Totals	\$ 1,047,713,647	100.0%	\$ 1,075,797,770	100.0%	\$ 1,087,435,236	100.0%



In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

Investment Accounts – Yield at Cost & Market

	As of December 31, 2019		As of September 30, 2019	
	YTM @ Cost	YTM @ Market	YTM @ Cost	YTM @ Market
Bank Deposits				
Comerica	0.18%	0.18%	0.18%	0.18%
First Independence	0.05%	0.05%	0.05%	0.05%
Flint Deposit Account	0.80%	0.80%	1.08%	1.08%
JP Morgan Chase	0.80%	0.80%	1.10%	1.10%
Sub-Total Bank Deposits	0.42%	0.42%	0.43%	0.43%
Money Market Funds / LGIPs				
GoMIC	1.75%	1.75%	2.15%	2.15%
U.S. Bank - First American MMF	1.48%	1.48%	1.79%	1.79%
JP Morgan Securities - Blackrock MMF	1.52%	1.52%	1.86%	1.86%
Sub-Total MMF / LGIPs	1.55%	1.55%	1.89%	1.89%
Investment Portfolios				
Sewage SR Debt Serv 5403	1.83%	1.84%	2.07%	2.00%
Sewage SR Res 5400	1.69%	1.61%	1.69%	1.73%
Sew 2nd Debt Serv 5403	1.85%	1.79%	2.07%	2.02%
Sewage 2nd Res 5481	1.74%	1.60%	1.74%	1.69%
Sew SRF Debt Serv 5410	1.88%	1.84%	2.01%	1.98%
Sewage ER & R	2.47%	1.63%	2.47%	1.78%
Sewer Improvement & Extension	2.10%	1.63%	2.15%	1.76%
Sewer Pension Obligation	1.75%	1.60%	1.91%	1.89%
Sewer Wrap Fund	1.91%	1.78%	2.19%	2.03%
Sewer Budget Stabilization Fund	2.53%	1.63%	2.53%	1.79%
Sewer Bond Fund	2.06%	1.84%	2.25%	2.05%
Sewer O&M Pension Sub Account	2.00%	1.58%	2.00%	1.87%
Water SR Debt Ser 5503	1.83%	1.83%	2.08%	2.01%
Water SR Reserve 5500	2.19%	1.61%	2.19%	1.70%
Water 2nd Debt Serv 5503	1.83%	1.83%	2.05%	2.00%
Water 2nd Res 5581	1.84%	1.61%	1.84%	1.69%
Water SRF Debt Serv 5575	1.94%	1.85%	2.00%	1.96%
Water ER & R	2.44%	1.62%	2.45%	1.77%
Water Improvement & Extension	2.30%	1.63%	2.35%	1.78%
Water Pension Obligation	1.75%	1.60%	1.90%	1.88%
Water Wrap Fund	1.86%	1.78%	2.11%	2.04%
Water Budget Stabilization Fund	2.53%	1.63%	2.53%	1.79%
Water Bond Fund	2.42%	1.66%	2.33%	1.96%
Water O&M Pension Sub Account	2.00%	1.58%	2.00%	1.87%
Sub-Total Investment Portfolios	2.16%	1.66%	2.23%	1.83%
Grand Total	1.85%	1.56%	2.08%	1.81%

The accounts at Comerica Bank get an earnings credit to offset bank fees. The earnings in the accounts at First Independence Bank is credited to the contractors and not the Authority. The funds in the Flint Security Deposit account are held on behalf of the City of Flint and the earnings do not belong to GLWA. YTM @ Cost is the expected return, based on the original cost, the annual interest receipts, maturity value and the time period from purchase date to maturity, stated as a percentage, on an annualized basis. YTM @ Market is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.

Demonstration of Yield to Maturity vs. Duration

- The comparison agencies included in the list below were selected based on type and/or other non-performance based criteria to show a broad range of water entities/utilities. This peer group list does not represent an endorsement of any of the public agencies or their services. The types of funds (e.g., bond proceeds, debt service, etc.) and duration of the overall portfolios listed below as well as the various differences in permitted investments and allowable credit capacity in state statutes (i.e., the ability or non-ability to invest in long-term corporate credit) will have a direct impact on the corresponding yields at market.
- The overall yield of GLWA's aggregate portfolio compares somewhat favorably to those of other short-term market indices (i.e., the S&P LGIP index and the 3-month U.S. Treasury index), despite the inverted yield curve environment.
- GLWA does not have a potential for a longer duration portfolio when compared to other similar water entities/utilities as the Authority's covenants limits and restricts its ability in managing assets to a longer-term strategy.

As of December 31, 2019

	Market Value	YTM @ Market	Effective Duration	Weighted Average Maturity
GLWA				
Great Lakes Water Authority	\$1,087,435,236	1.56%	0.57 Years	214 Days
Short/Intermediate-Term Indices				
S&P Rated Government Investment Pool Index		1.55%	0.08 Years	30 Days
BoA / ML 3-Month Treasury Index		1.51%	0.15 Years	90 Days
BoA / ML 6-Month Treasury Index		1.56%	0.40 Years	180 Days
BoA / ML 1-Year Treasury Index		1.65%	0.90 Years	365 Days
BoA / ML 1-3 Year Treasury Index		1.60%	1.80 Years	657 Days
BoA / ML 1-5 Year Treasury Index		1.62%	2.55 Years	931 Days
Peer Analysis (Water Entities / Utilities)				
District of Columbia Water & Sewer Authority, DC	\$367,339,823	1.70%	0.94 Years	354 Days
DuPage Water Commission, IL	\$144,171,619	1.75%	2.29 Years	1,228 Days
Fairfax County Water Authority, VA	\$179,407,562	1.66%	1.92 Years	730 Days
Metro Wastewater Reclamation District, CO	\$187,871,236	2.08%	1.75 Years	839 Days
Metropolitan Water District of Southern California, CA	\$648,443,098	1.90%	0.56 Years	238 Days
Philadelphia Water Department, PA	\$207,380,415	1.73%	0.95 Years	356 Days
San Bernardino Valley Municipal Water District, CA	\$358,027,719	1.72%	1.78 Years	673 Days
Tohopekaliga Water Authority, FL	\$151,755,008	1.80%	1.85 Years	976 Days
Truckee Meadows Water Authority, NV	\$111,733,256	1.65%	1.94 Years	738 Days

The BoA / ML indexes are unmanaged indexes tracking on-the-run Treasuries. These indexes are produced and maintained by Bank of America / Merrill Lynch & Co. Yield to maturity is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.

Monthly Investment Income (Book Value)

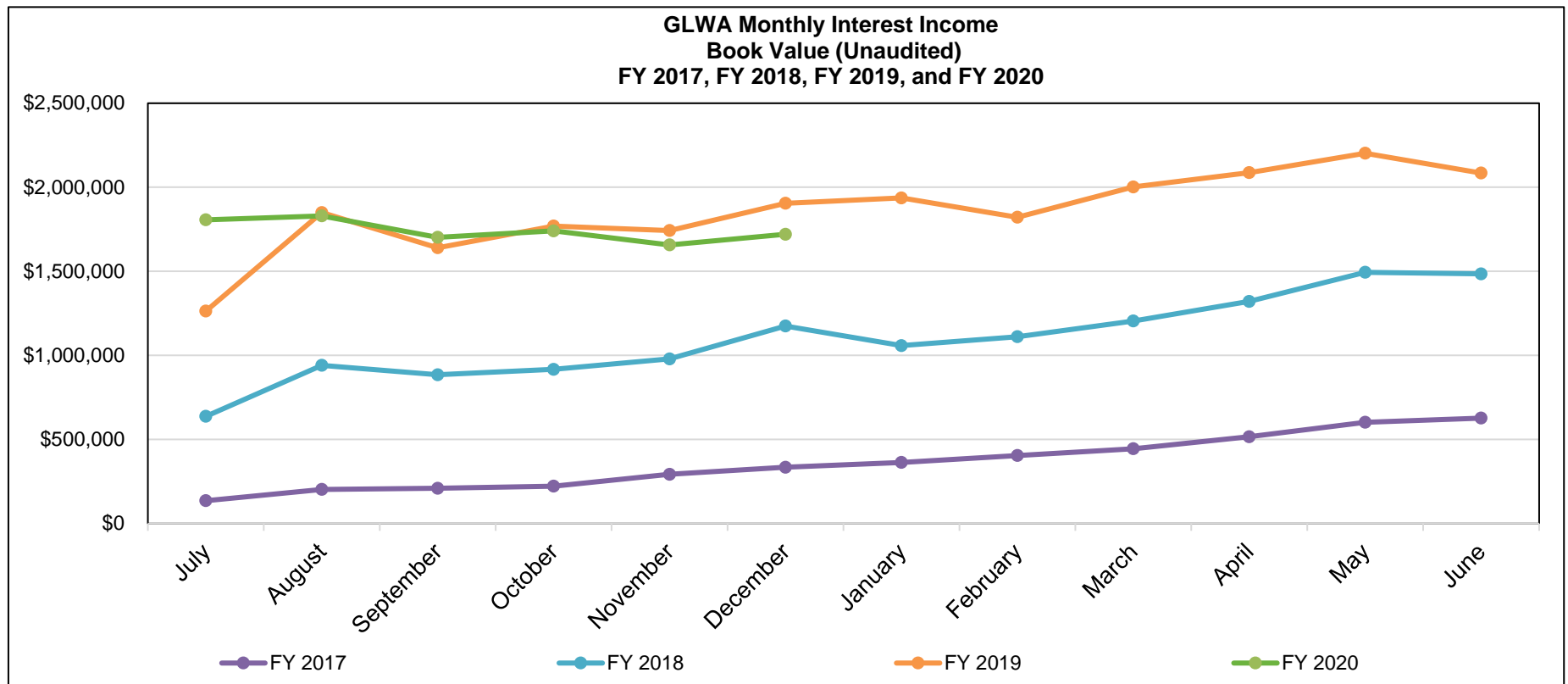
FY 2020 INVESTMENT INCOME BY MONTH (Unaudited)

Month	Interest Earned During Period	Realized Gain / Loss	Investment Income
July 2019	\$1,763,209.65	\$43,136.83	\$1,806,346.48
August 2019	\$1,829,826.44	\$0.00	\$1,829,826.44
September 2019	\$1,700,961.33	\$1,005.57	\$1,701,966.90
October 2019	\$1,740,610.53	\$0.00	\$1,740,610.53
November 2019	\$1,656,964.78	\$0.00	\$1,656,964.78
December 2019	\$1,720,392.03	\$0.00	\$1,720,392.03
<u>FY 2020 Y-T-D</u>	<u>\$10,411,964.76</u>	<u>\$44,142.40</u>	<u>\$10,456,107.16</u>

These figures are based upon actual interest earned and posted to the Authority's various accounts via book value and does not include any earnings credit rate tied to the Authority's bank deposits.

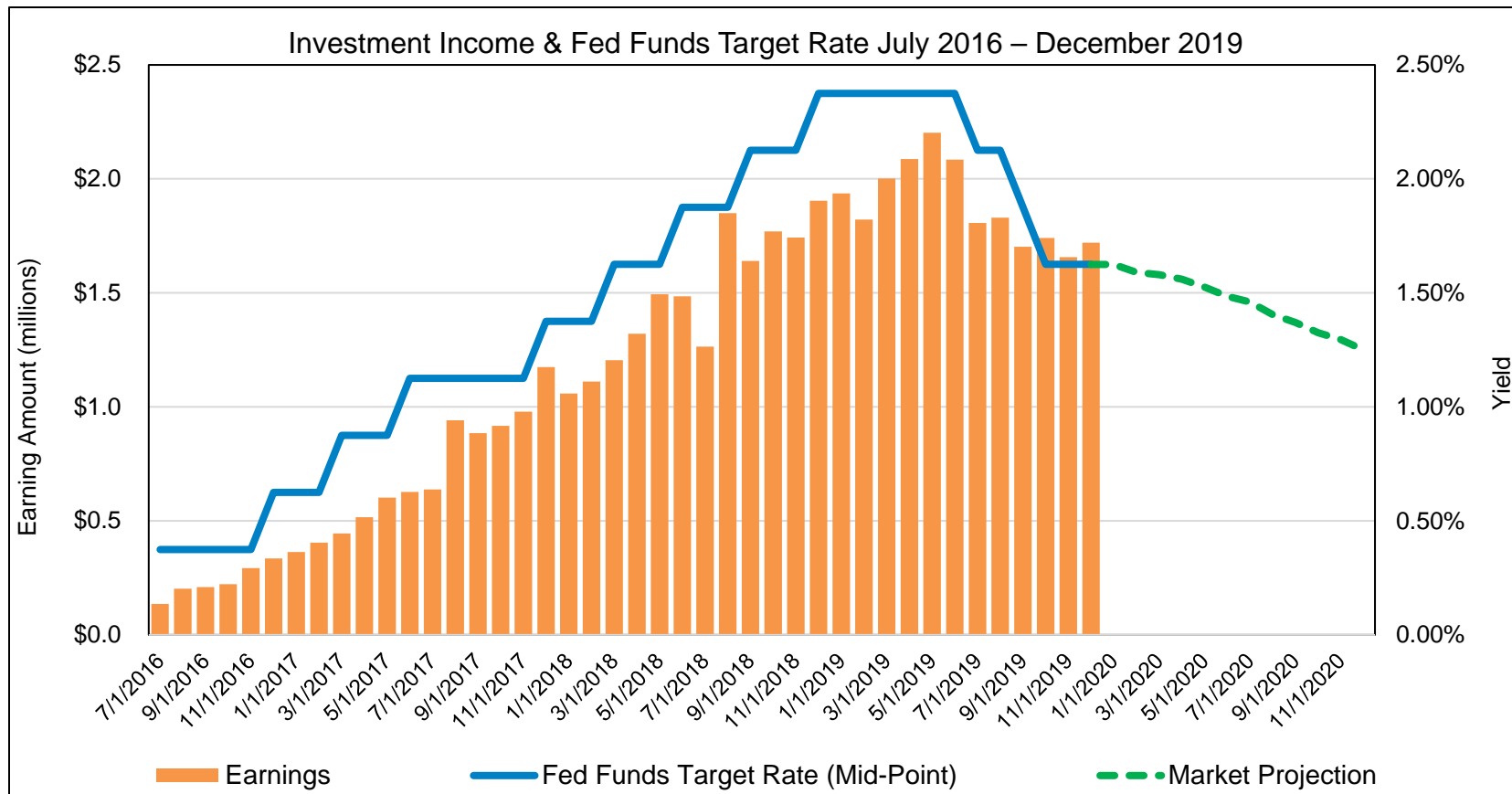
Year-Over-Year Investment Income

- GLWA has earned \$10,456,107 in investment income for fiscal year 2020 on a book value basis compared to \$10,169,274 for the first six months of fiscal year 2019.
- Projected investment income for fiscal year 2020 is \$17.4 million as the market is pricing in expectations for more projected interest rate cuts by the Fed during fiscal year 2020.



Monthly Investment Income Compared to Fed Funds Rate

- As a result of the short-term duration of GLWA's portfolio, it is heavily impacted by Fed Funds changes. The chart below illustrates that GLWA's investment income has consistently followed the trend of the Fed Funds target rate.
- The current market environment is expecting at least one cut in the Fed Funds rate for 2020 and possibly more into 2021.
- Based on the historical trend, another cut in the Fed Funds rate could translate into lower interest earnings for GLWA.



Appendix I: Portfolio Holdings

Portfolio Holdings As of December 31, 2019

DESCRIPTION	CUSIP	PAR AMOUNT	MATURITY DATE	SETTLEMENT DATE	YTM AT COST	ORIGINAL COST	DAYS TO MATURITY	ACCRUED INTEREST	TOTAL VALUE
Short-Term Bank Deposits / MMF / LGIP									
COMERICA BANK		\$ 6,967,049	1/1/2020	12/31/2019	0.18%	\$ 6,967,049	1	\$ -	\$ 6,967,049
FIRST INDEPENDENCE BANK		17,707,106	1/1/2020	12/31/2019	0.05%	17,707,106	1	-	17,707,106
FLINT DEPOSIT ACCOUNT		3,807,070	1/1/2020	12/31/2019	0.80%	3,807,070	1	-	3,807,070
JP MORGAN CHASE		17,934,869	1/1/2020	12/31/2019	0.80%	17,934,869	1	-	17,934,869
GovMIC		95,088,997	1/1/2020	12/31/2019	1.75%	95,088,997	1	-	95,088,997
U.S. BANK - FIRST AMERICAN MMF		274,955,438	1/1/2020	12/31/2019	1.48%	274,955,438	1	-	274,955,438
JP MORGAN SECURITIES - BLACKROCK MMF		45,610,727	1/1/2020	12/31/2019	1.52%	45,610,727	1	-	45,610,727

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.



Portfolio Holdings As of December 31, 2019

DESCRIPTION	CUSIP	PAR AMOUNT	MATURITY DATE	SETTLEMENT DATE	YTM AT COST	ORIGINAL COST	DAYS TO MATURITY	ACCRUED INTEREST	TOTAL VALUE
Commercial Paper									
Toyota Motor Credit 0 1/2/2020	89233GA22-2	\$ 4,150,000	1/2/2020	9/16/2019	2.05%	\$ 4,124,602	2	\$ -	\$ 4,149,610
Toyota Motor Credit 0 1/2/2020	89233GA22-1	1,005,000	1/2/2020	9/6/2019	1.98%	998,510	2	-	1,005,000
Credit Agricole NY 0 1/2/2020	22533TA22	1,000,000	1/2/2020	8/8/2019	2.04%	991,752	2	-	1,000,000
Toyota Motor Credit 0 2/3/2020	89233GB39	1,005,000	2/3/2020	11/20/2019	1.86%	1,001,127	34	-	1,003,503
Toyota Motor Credit 0 2/3/2020	89233GB39	1,010,000	2/3/2020	9/6/2019	1.97%	1,001,794	34	-	1,008,495
Toyota Motor Credit 0 3/2/2020	89233GC20	3,800,000	3/2/2020	9/16/2019	2.07%	3,763,647	62	-	3,787,878
MUFG Bank NY 0 3/2/2020	62479LC29	165,000	3/2/2020	12/16/2019	1.86%	164,347	62	-	164,538
MUFG Bank NY 0 3/2/2020	62479LC29	568,000	3/2/2020	10/10/2019	1.95%	563,615	62	-	566,410
MUFG Bank NY 0 3/2/2020	62479LC29	425,000	3/2/2020	12/16/2019	1.86%	423,318	62	-	423,810
American Honda Finance 0 3/4/2020	02665JC40	525,000	3/4/2020	11/20/2019	1.66%	522,473	64	-	523,425
American Honda Finance 0 3/4/2020	02665JC40	250,000	3/4/2020	11/20/2019	1.66%	248,797	64	-	249,250
Toyota Motor Credit 0 3/13/2020	89233GCD6	410,000	3/13/2020	7/11/2019	2.21%	403,892	73	-	408,594
Toyota Motor Credit 0 3/13/2020	89233GCD6	665,000	3/13/2020	7/11/2019	2.21%	655,094	73	-	662,719
Swedbank 0 3/16/2020	87019RCG9	2,500,000	3/16/2020	8/29/2019	2.08%	2,471,389	76	-	2,490,283
Swedbank 0 3/16/2020	87019RCG9	2,100,000	3/16/2020	8/29/2019	2.08%	2,075,967	76	-	2,091,837
Cooperative Rabobank 0 3/18/2020	21687ACJ0	3,750,000	3/18/2020	9/18/2019	2.04%	3,711,704	78	-	3,735,360
MUFG Bank NY 0 3/20/2020	62479LCL7	209,000	3/20/2020	10/8/2019	1.98%	207,134	80	-	208,212
MUFG Bank NY 0 3/20/2020	62479LCL7	215,000	3/20/2020	11/13/2019	1.91%	213,548	80	-	214,189
MUFG Bank NY 0 3/20/2020	62479LCL7	231,000	3/20/2020	12/6/2019	1.88%	229,740	80	-	230,129
Toyota Motor Credit 0 3/20/2020	89233GCL8	145,000	3/20/2020	9/9/2019	2.00%	143,461	80	-	144,453
MUFG Bank NY 0 3/20/2020	62479LCL7	1,235,000	3/20/2020	8/9/2019	2.05%	1,219,477	80	-	1,230,344
Natixis Bank NY 0 3/20/2020	63873JCL2	5,174,000	3/20/2020	10/8/2019	1.98%	5,127,802	80	-	5,154,494
Natixis Bank NY 0 3/20/2020	63873JCL2	5,140,000	3/20/2020	11/13/2019	1.87%	5,106,007	80	-	5,120,622
Toyota Motor Credit 0 3/20/2020	89233GCL8	5,072,000	3/20/2020	9/9/2019	2.00%	5,018,161	80	-	5,052,879
Credit Agricole NY 0 4/1/2020	22533TD11	1,000,000	4/1/2020	12/16/2019	1.83%	994,591	92	-	995,650
Toyota Motor Credit 0 4/1/2020	89233GD11	1,010,000	4/1/2020	11/20/2019	1.87%	1,003,060	92	-	1,005,607
Credit Agricole NY 0 5/1/2020	22533TE10	1,000,000	5/1/2020	12/16/2019	1.83%	993,074	122	-	994,100
Credit Agricole 0 6/19/2020	22533TFK7	6,897,000	6/19/2020	12/6/2019	1.81%	6,829,785	171	-	6,838,100
JPMorgan Securities 0 6/19/2020	46640PFK4	10,495,000	6/19/2020	10/8/2019	1.85%	10,358,959	171	-	10,405,373
JPMorgan Securities 0 6/19/2020	46640PFK4	4,053,000	6/19/2020	10/8/2019	1.85%	4,000,463	171	-	4,018,387
Natixis Bank NY 0 6/19/2020	63873JFK1	1,208,000	6/19/2020	11/13/2019	1.90%	1,194,185	171	-	1,197,684
Natixis Bank NY 0 6/19/2020	63873JFK1	398,000	6/19/2020	11/13/2019	1.90%	393,448	171	-	394,601
JPMorgan Securities 0 6/19/2020	46640PFK4	11,779,000	6/19/2020	10/8/2019	1.85%	11,626,315	171	-	11,678,407
JPMorgan Securities 0 6/19/2020	46640PFK4	3,886,000	6/19/2020	10/8/2019	1.85%	3,835,628	171	-	3,852,814
Natixis Bank NY 0 6/19/2020	63873JFK1	3,921,000	6/19/2020	11/13/2019	1.90%	3,876,157	171	-	3,887,515
Cooperatieve Rabobank 0 7/1/2020	21687AG15	4,017,000	7/1/2020	12/6/2019	1.79%	3,975,919	183	-	3,980,244
Cooperatieve Rabobank 0 7/1/2020	21687AG15	3,550,000	7/1/2020	12/6/2019	1.79%	3,513,695	183	-	3,517,518
Cooperatieve Rabobank 0 7/1/2020	21687AG15	11,675,000	7/1/2020	12/6/2019	1.79%	11,555,604	183	-	11,568,174

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.



Portfolio Holdings As of December 31, 2019

DESCRIPTION	CUSIP	PAR AMOUNT	MATURITY DATE	SETTLEMENT DATE	YTM AT COST	ORIGINAL COST	DAYS TO MATURITY	ACCRUED INTEREST	TOTAL VALUE
Federal Agencies									
FHLB 2.125 2/11/2020	3130ADN32	\$ 3,750,000	2/11/2020	6/28/2018	2.52%	\$ 3,726,750	42	\$ 30,990	\$ 3,751,976
FHLMC 2.5 4/23/2020	3137EAEM7	3,750,000	4/23/2020	6/28/2018	2.56%	3,746,288	114	17,708	3,759,998
FHLB 2.625 5/28/2020	3130AECJ7	3,750,000	5/28/2020	6/28/2018	2.57%	3,753,825	149	9,023	3,764,655
FHLMC 2.375 2/16/2021	3137EAEL9	3,500,000	2/16/2021	8/8/2018	2.79%	3,465,210	413	31,172	3,529,995
FHLMC 2.375 2/16/2021	3137EAEL9	20,000,000	2/16/2021	8/8/2018	2.79%	19,801,200	413	178,125	20,171,400
FHLMC 2.375 2/16/2021	3137EAEL9	250,000	2/16/2021	8/9/2018	2.78%	247,563	413	2,227	252,143
FHLMC 2.375 2/16/2021	3137EAEL9	685,000	2/16/2021	8/9/2018	2.78%	678,321	413	6,101	690,870
FNMA 2.5 4/13/2021	3135G0U27	3,500,000	4/13/2021	8/8/2018	2.82%	3,471,685	469	18,958	3,540,810
FNMA 2.5 4/13/2021	3135G0U27	20,000,000	4/13/2021	8/8/2018	2.82%	19,838,200	469	108,333	20,233,200
FNMA 2.5 4/13/2021	3135G0U27	250,000	4/13/2021	8/9/2018	2.81%	247,985	469	1,354	252,915
FNMA 2.5 4/13/2021	3135G0U27	3,400,000	4/13/2021	8/8/2018	2.81%	3,372,698	469	18,417	3,439,644
FNMA 2.5 4/13/2021	3135G0U27	685,000	4/13/2021	8/9/2018	2.81%	679,479	469	3,710	692,987
FNMA 2.5 4/13/2021	3135G0U27	5,750,000	4/13/2021	8/8/2018	2.81%	5,703,828	469	31,146	5,817,045
FHLB 2.25 6/11/2021	3130A1W95	10,000,000	6/11/2021	7/11/2019	1.94%	10,058,200	528	12,500	10,087,700
FHLB 2.25 6/11/2021	3130A1W95	25,000,000	6/11/2021	7/11/2019	1.94%	25,145,500	528	31,250	25,219,250
FHLB 1.875 7/7/2021	3130AGLD5	3,715,000	7/7/2021	6/10/2019	1.96%	3,708,982	554	33,667	3,730,937
FHLB 1.875 7/7/2021	3130AGLD5	3,910,000	7/7/2021	6/10/2019	1.96%	3,903,666	554	35,434	3,926,774
FHLMC 2.375 1/13/2022	3137EADB2	10,000,000	1/13/2022	7/11/2019	1.89%	10,118,700	744	110,833	10,154,200
FHLMC 2.375 1/13/2022	3137EADB2	25,000,000	1/13/2022	7/11/2019	1.89%	25,296,750	744	277,083	25,385,500
FHLB 2.125 6/10/2022	313379Q69	10,000,000	6/10/2022	7/11/2019	1.92%	10,059,200	892	12,396	10,115,200
FHLB 2.125 6/10/2022	313379Q69	25,000,000	6/10/2022	7/11/2019	1.92%	25,148,000	892	30,990	25,288,000

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

Portfolio Holdings As of December 31, 2019

DESCRIPTION	CUSIP	PAR AMOUNT	MATURITY DATE	SETTLEMENT DATE	YTM AT COST	ORIGINAL COST	DAYS TO MATURITY	ACCRUED INTEREST	TOTAL VALUE
U.S. Treasuries									
T-Note 2 1/31/2020	9128283S7	\$ 3,750,000	1/31/2020	6/28/2018	2.46%	\$ 3,723,047	31	\$ 31,182	\$ 3,750,994
T-Note 2.25 2/29/2020	9128283Y4	3,500,000	2/29/2020	8/8/2018	2.63%	3,479,902	60	26,394	3,503,220
T-Note 2.25 2/29/2020	9128283Y4	20,000,000	2/29/2020	8/8/2018	2.63%	19,885,156	60	150,824	20,018,400
T-Note 2.25 2/29/2020	9128283Y4	250,000	2/29/2020	8/9/2018	2.62%	248,594	60	1,885	250,230
T-Note 2.25 2/29/2020	9128283Y4	3,400,000	2/29/2020	8/8/2018	2.63%	3,380,477	60	25,640	3,403,128
T-Note 2.25 2/29/2020	9128283Y4	685,000	2/29/2020	8/9/2018	2.62%	681,147	60	5,166	685,630
T-Note 2.25 2/29/2020	9128283Y4	5,750,000	2/29/2020	8/8/2018	2.63%	5,716,982	60	43,362	5,755,290
T-Note 2.25 3/31/2020	9128284C1	3,725,000	3/31/2020	6/28/2018	2.49%	3,709,431	91	21,068	3,730,237
T-Note 2.375 4/30/2020	9128284J6	3,500,000	4/30/2020	4/30/2019	2.40%	3,499,043	121	13,930	3,508,470
T-Note 2.375 4/30/2020	9128284J6	15,000,000	4/30/2020	4/30/2019	2.40%	14,996,484	121	59,701	15,036,300
T-Note 2.5 5/31/2020	9128284Q0	3,500,000	5/31/2020	8/8/2018	2.66%	3,489,883	152	7,411	3,512,005
T-Note 2.5 5/31/2020	9128284Q0	4,750,000	5/31/2020	7/11/2019	2.02%	4,770,039	152	10,058	4,766,293
T-Note 2.5 5/31/2020	9128284Q0	20,000,000	5/31/2020	8/8/2018	2.66%	19,942,188	152	42,350	20,068,600
T-Note 2.5 5/31/2020	9128284Q0	250,000	5/31/2020	8/9/2018	2.66%	249,297	152	529	250,858
T-Note 2.5 5/31/2020	9128284Q0	3,400,000	5/31/2020	8/8/2018	2.66%	3,390,172	152	7,199	3,411,662
T-Note 2.5 5/31/2020	9128284Q0	685,000	5/31/2020	8/9/2018	2.66%	683,073	152	1,450	687,350
T-Note 2.5 5/31/2020	9128284Q0	5,750,000	5/31/2020	8/8/2018	2.66%	5,733,379	152	12,176	5,769,723
T-Note 1.5 6/15/2020	912828XU9-1	635,000	6/15/2020	7/10/2019	2.00%	632,098	167	416	634,776
T-Note 1.5 6/15/2020	912828XU9-2	355,000	6/15/2020	7/10/2019	1.99%	353,391	167	233	354,876
T-Note 1.5 6/15/2020	912828XU9-2	1,784,000	6/15/2020	9/6/2019	1.82%	1,779,679	167	1,170	1,783,376
T-Note 1.5 6/15/2020	912828XU9-2	928,000	6/15/2020	10/10/2019	1.66%	926,985	167	609	927,675
T-Note 1.5 6/15/2020	912828XU9-2	887,000	6/15/2020	11/20/2019	1.58%	886,619	167	582	886,690
T-Note 1.5 6/15/2020	912828XU9-2	922,000	6/15/2020	12/16/2019	1.59%	921,604	167	605	921,677
T-Note 1.5 6/15/2020	912828XU9-1	1,140,000	6/15/2020	7/10/2019	2.00%	1,134,790	167	748	1,139,599
T-Note 1.5 6/15/2020	912828XU9-2	299,000	6/15/2020	7/10/2019	1.99%	297,645	167	196	298,895
T-Note 1.5 6/15/2020	912828XU9-2	2,449,000	6/15/2020	9/6/2019	1.82%	2,443,069	167	1,606	2,448,143
T-Note 1.5 6/15/2020	912828XU9-2	1,267,000	6/15/2020	10/10/2019	1.66%	1,265,614	167	831	1,266,557
T-Note 1.5 6/15/2020	912828XU9-2	1,217,000	6/15/2020	11/20/2019	1.58%	1,216,477	167	798	1,216,574
T-Note 1.5 6/15/2020	912828XU9-2	1,265,000	6/15/2020	12/16/2019	1.59%	1,264,456	167	830	1,264,557
T-Note 1.875 6/30/2020	912828VJ6-1	3,750,000	6/30/2020	6/28/2018	2.52%	3,703,271	182	-	3,754,541
T-Note 1.875 6/30/2020	912828VJ6-2	1,740,000	6/30/2020	7/3/2018	2.54%	1,717,638	182	-	1,742,105
T-Note 1.875 6/30/2020	912828VJ6-2	2,760,000	6/30/2020	10/30/2018	2.81%	2,718,061	182	-	2,763,340
T-Note 1.625 6/30/2020	912828XH8	9,705,000	6/30/2020	10/11/2017	1.61%	9,709,928	182	-	9,705,000
T-Note 1.625 6/30/2020	912828XH8	4,565,000	6/30/2020	2/27/2017	1.54%	4,578,374	182	-	4,565,000

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

Portfolio Holdings As of December 31, 2019

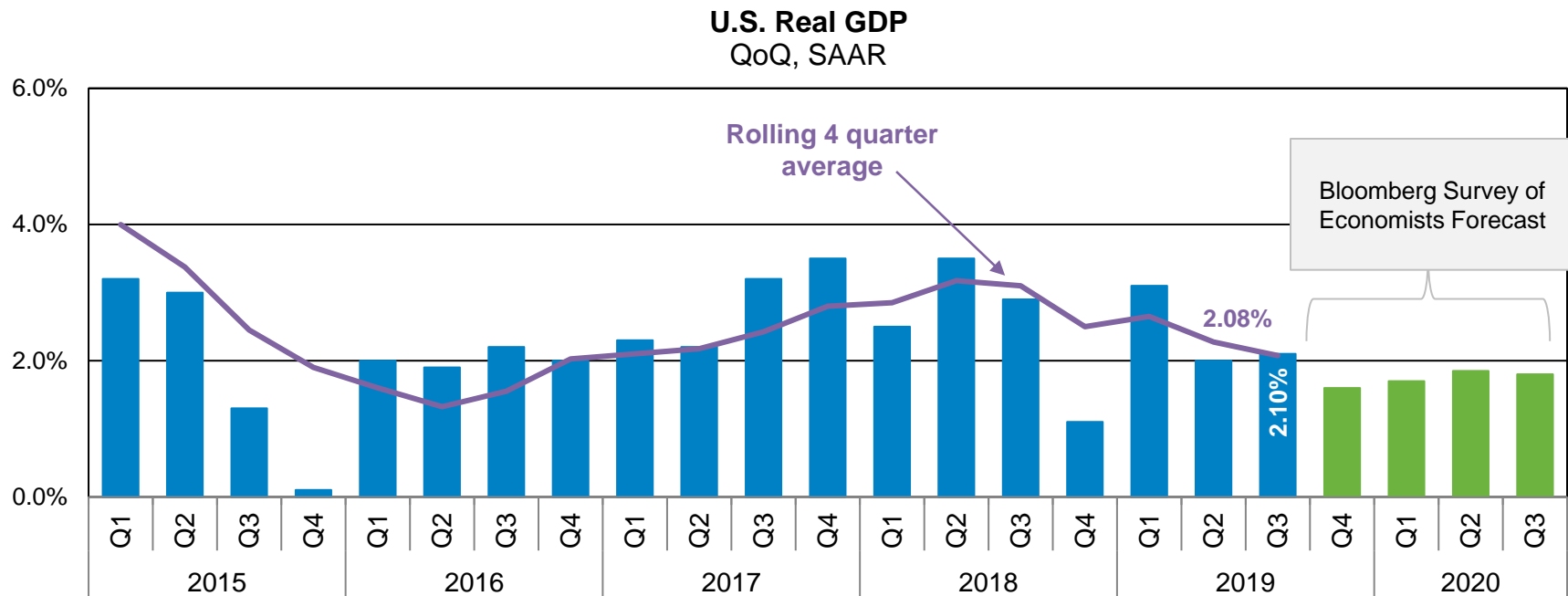
DESCRIPTION	CUSIP	PAR AMOUNT	MATURITY DATE	SETTLEMENT DATE	YTM AT COST	ORIGINAL COST	DAYS TO MATURITY	ACCRUED INTEREST	TOTAL VALUE
U.S. Treasuries									
T-Note 1.625 6/30/2020	912828XH8	6,560,000	6/30/2020	10/11/2017	1.61%	6,563,331	182	-	6,560,000
T-Note 2.125 8/31/2020	912828VV9	3,500,000	8/31/2020	8/8/2018	2.69%	3,460,762	244	24,928	3,510,675
T-Note 2.125 8/31/2020	912828VV9	5,000,000	8/31/2020	7/11/2019	1.95%	5,009,570	244	35,611	5,015,250
T-Note 2.125 8/31/2020	912828VV9	20,000,000	8/31/2020	8/8/2018	2.69%	19,775,781	244	142,445	20,061,000
T-Note 2.125 8/31/2020	912828VV9	250,000	8/31/2020	8/9/2018	2.69%	247,188	244	1,781	250,763
T-Note 2.125 8/31/2020	912828VV9	3,400,000	8/31/2020	8/8/2018	2.69%	3,361,883	244	24,216	3,410,370
T-Note 2.125 8/31/2020	912828VV9	685,000	8/31/2020	8/9/2018	2.69%	677,294	244	4,879	687,089
T-Note 2.125 8/31/2020	912828VV9	5,750,000	8/31/2020	8/8/2018	2.69%	5,685,537	244	40,953	5,767,538
T-Note 1.375 9/15/2020	9128282V1	5,134,000	9/15/2020	12/6/2019	1.62%	5,124,374	259	20,751	5,124,553
T-Note 1.75 10/31/2020	912828WCO	4,915,000	10/31/2020	11/20/2019	1.64%	4,919,992	305	14,414	4,919,030
T-Note 1.75 10/31/2020	912828WCO	13,595,000	10/31/2020	11/20/2019	1.64%	13,608,807	305	39,870	13,606,148
T-Note 2 11/30/2020	912828A42	3,500,000	11/30/2020	8/8/2018	2.72%	3,444,082	335	5,929	3,511,340
T-Note 2 11/30/2020	912828A42	6,100,000	11/30/2020	9/6/2019	1.74%	6,119,539	335	10,333	6,119,764
T-Note 2 11/30/2020	912828A42	20,000,000	11/30/2020	8/8/2018	2.72%	19,680,469	335	33,880	20,064,800
T-Note 2 11/30/2020	912828A42	250,000	11/30/2020	8/9/2018	2.72%	246,006	335	424	250,810
T-Note 2 11/30/2020	912828A42	3,400,000	11/30/2020	9/17/2018	2.81%	3,341,828	335	5,760	3,411,016
T-Note 2 11/30/2020	912828A42	685,000	11/30/2020	8/9/2018	2.72%	674,056	335	1,160	687,219
T-Note 2 11/30/2020	912828A42	5,750,000	11/30/2020	9/17/2018	2.81%	5,651,621	335	9,740	5,768,630
T-Note 1.875 12/15/2020	9128283L2	2,070,000	12/15/2020	7/10/2019	1.91%	2,069,030	350	1,697	2,074,533
T-Note 2.625 5/15/2021	9128284P2	245,000	5/15/2021	2/7/2019	2.49%	245,708	501	813	248,369
T-Note 2.625 5/15/2021	9128284P2	3,455,000	5/15/2021	2/7/2019	2.49%	3,464,852	501	11,461	3,502,506
T-Note 2.625 5/15/2021	9128284P2	700,000	5/15/2021	2/7/2019	2.49%	702,023	501	2,322	709,625
T-Note 2.625 5/15/2021	9128284P2	5,685,000	5/15/2021	2/7/2019	2.49%	5,701,211	501	18,859	5,763,169
T-Note 1.25 10/31/2021	912828T67	10,000,000	10/31/2021	7/11/2019	1.83%	9,870,703	670	20,948	9,939,800
T-Note 1.25 10/31/2021	912828T67	2,500,000	10/31/2021	7/11/2019	1.83%	2,467,676	670	5,237	2,484,950
T-Note 1.25 10/31/2021	912828T67	17,500,000	10/31/2021	9/6/2019	1.55%	17,388,574	670	36,659	17,394,650
T-Note 1.25 10/31/2021	912828T67	270,000	10/31/2021	9/6/2019	1.55%	268,313	670	566	268,375
T-Note 1.25 10/31/2021	912828T67	3,405,000	10/31/2021	9/6/2019	1.55%	3,383,586	670	7,133	3,384,502
T-Note 1.25 10/31/2021	912828T67	730,000	10/31/2021	9/6/2019	1.55%	725,438	670	1,529	725,605
T-Note 1.25 10/31/2021	912828T67	5,765,000	10/31/2021	9/6/2019	1.55%	5,728,744	670	12,076	5,730,295
T-Note 2.625 12/15/2021	9128285R7	2,700,000	12/15/2021	7/10/2019	1.80%	2,752,945	715	3,098	2,753,568
T-Note 2.625 12/15/2021	9128285R7	7,100,000	12/15/2021	7/10/2019	1.80%	7,239,227	715	8,148	7,240,864
T-Note 2.625 12/15/2021	9128285R7	20,350,000	12/15/2021	7/10/2019	1.80%	20,749,051	715	23,352	20,753,744
T-Note 2.625 12/15/2021	9128285R7	10,900,000	12/15/2021	7/10/2019	1.80%	11,113,742	715	12,508	11,116,256

In addition to the totals listed above, there also exists surety bonds in the amount of \$324,309,258 as of December 31, 2019.

Appendix II: Economic Update

Economic Growth Moderate in Third Quarter

- U.S. economic activity experienced moderate growth during the third quarter of 2019
 - The final estimate of U.S. GDP growth for the third quarter held steady at 2.1%, up slightly from the 2.0% pace in the second quarter
 - Upwards revisions to personal spending and fixed investments were offset by a downward revision to inventory investment in the third quarter
- Growth is still projected to steadily decline into 2020, highlighting positive but moderating growth

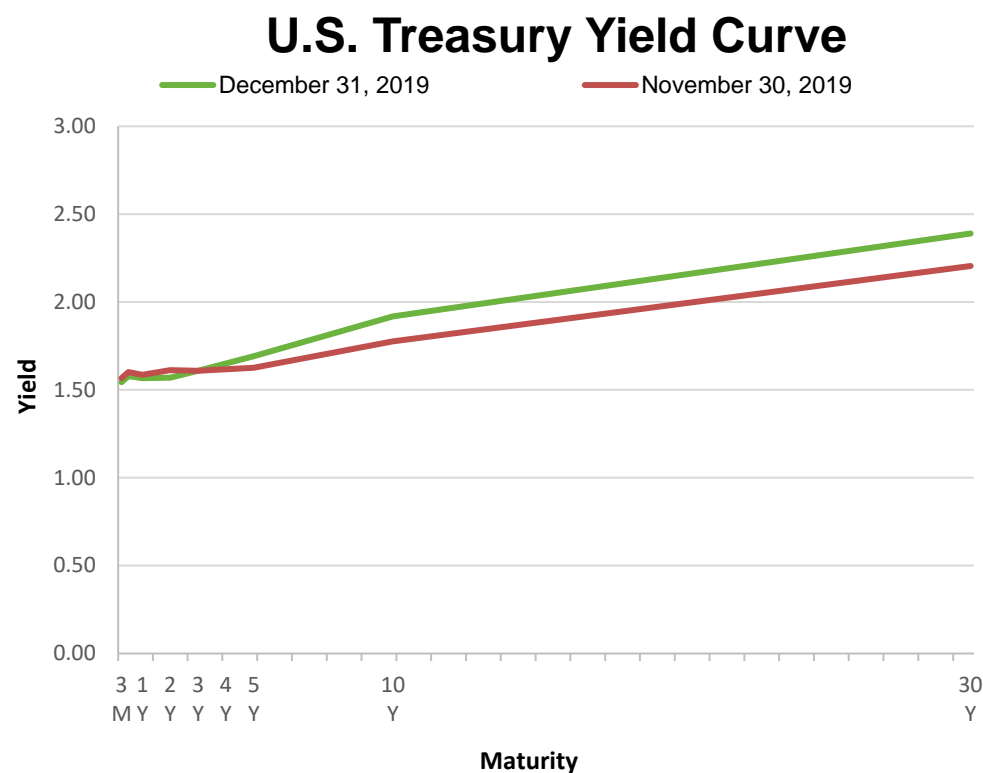


Source: Bloomberg, as of December 31, 2019. SAAR is seasonally adjusted annualized rate. Purple denotes rolling four-quarter averages.

The U.S. Treasury Yield Curve Normalizes

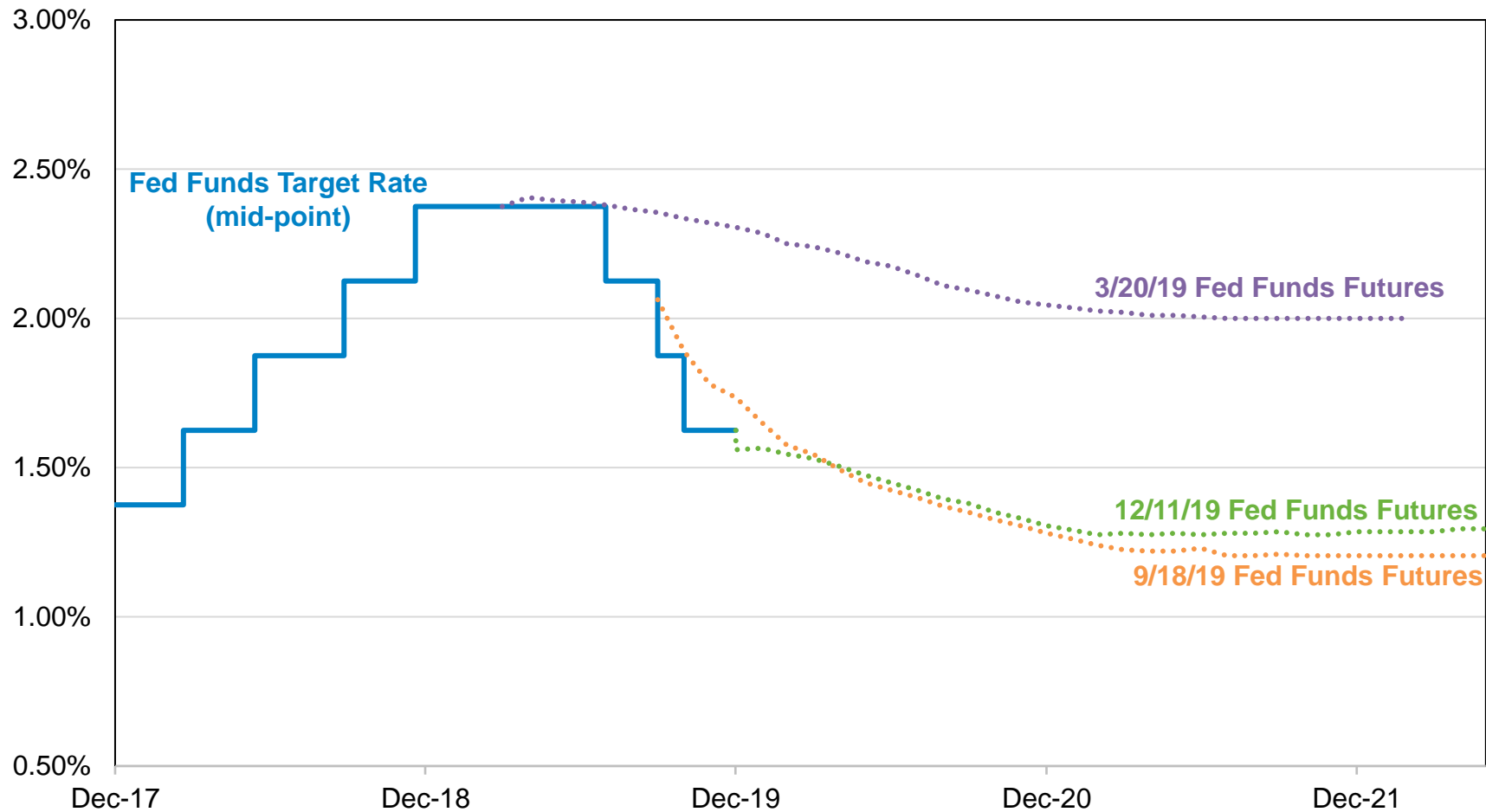
- U.S. Treasury rates rose modestly on the longer end of the curve, while shorter-term rates fell slightly to bring about a normalized yield curve
- As of December 31, 2019, the yield curve normalized to have longer-duration securities provide additional income of those of shorter-duration U.S. Treasuries

	<u>11/30/2019</u>	<u>12/31/2019</u>	<u>Change</u>
3 month	1.57%	1.54%	-0.03%
6 month	1.60%	1.58%	-0.02%
1 year	1.59%	1.57%	-0.02%
2 year	1.61%	1.57%	-0.04%
3 year	1.61%	1.61%	0.00%
5 year	1.63%	1.69%	0.06%
10 year	1.78%	1.92%	0.14%
30 year	2.21%	2.39%	0.18%



Source: Bloomberg, as of December 31, 2019.

The Fed Is On Hold After Cutting Rates For a Third Time



Source: Federal Reserve and Bloomberg. Fed Funds futures as of Fed meeting dates of 3/20/2019 and 9/18/2019 as well as 12/11/2019.

Market Expectations Adjust to Federal Open Market Committee (FOMC) Guidance

2019 Rate Moves Priced into the Futures Market



*"The Committee will closely monitor the implications of incoming information for the economic outlook and will act as **appropriate to sustain the expansion...**"*
- June 2019

*"Information received since the Federal Open Market Committee met in July indicates that the **labor market remains strong and that economic activity has been rising** at a moderate rate... but **uncertainties about this outlook remain.**"*
- September 2019

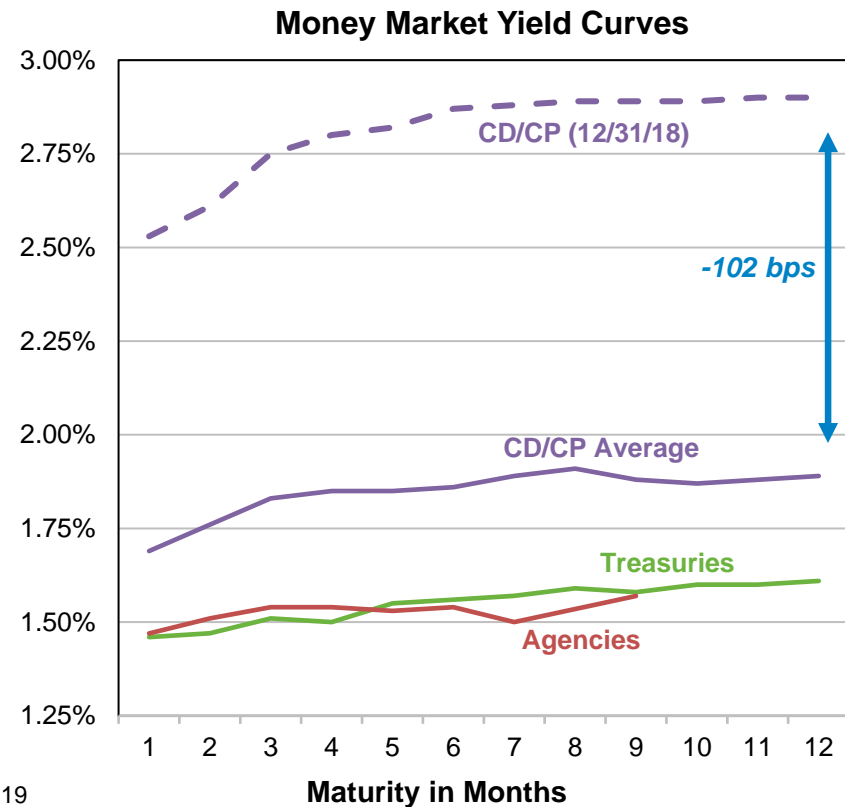
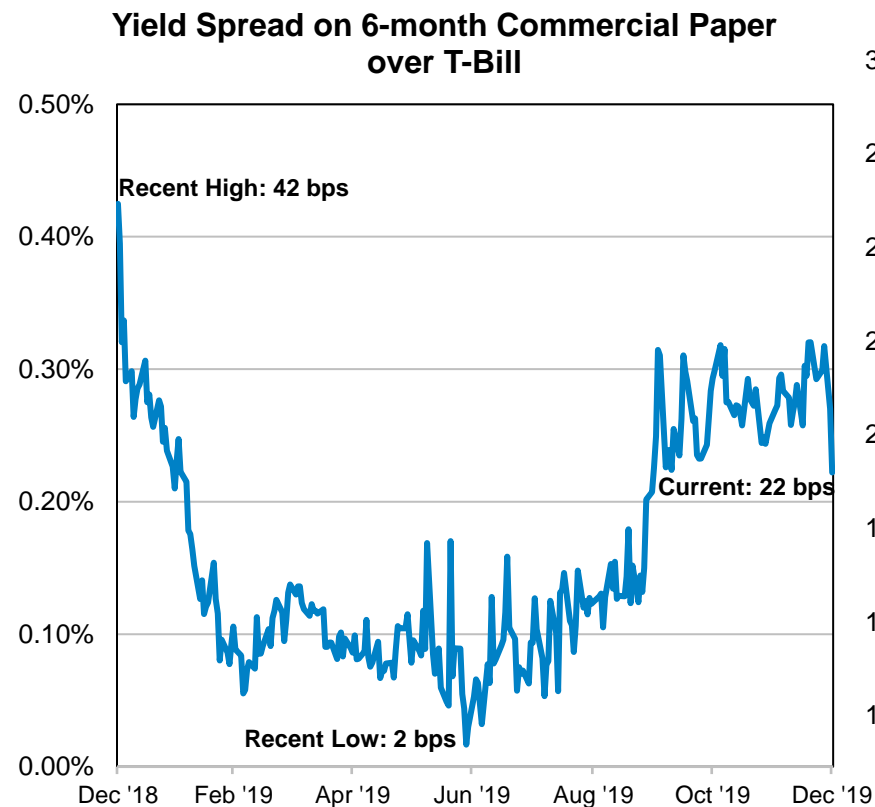
*"In light of the **implications of global developments** for the economic outlooks as well as **muted inflation pressures**, the Committee decided to **lower the target range...** The Committee will continue to monitor the implications of incoming information for the economic outlook as it **assesses the appropriate path of the target range for the Federal Funds rate.**"*
- October 2019

*"... **maintaining the current stance of policy** for a time could be helpful for **cushioning the economy** from the global developments that have been weighing on economic activity and for **returning inflation** to the Committee's symmetric objective of 2.0%."*
- December 2019

Source: Bloomberg, as of December 31, 2019.

Current Short-Term Interest Rate Environment

- In December, commercial paper and bank certificate of deposit (CP / CD) yield spreads continued to trade between 25 and 30 bps over comparable maturity U.S. Treasury Bills; towards the end of the month, spreads compressed towards the low 20's
- Treasuries continue to be relatively attractive versus Agency discount notes



Source: Bloomberg, PFMAM Trading Desk, as of 12/31/19. Not a specific recommendation. Actual yields may vary by issue.

Fixed Income Market Overview and Outlook

FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS

- The U.S. economy was characterized by a strong labor market, range-bound inflation, and stable growth coupled with higher consumer confidence and increasing wealth.
 - December marked the 127th month of domestic economic expansion.

- Following the Fed’s fine-tuning “rate adjustment” cuts in July, September, and October, the market now expects a long-term pause for much of 2020.
 - A stable but still accommodative FOMC along with easing trade tensions helped un-invert the U.S. Treasury yield curve and further catapult equity markets.

- The U.S. Treasury yield curve twisted around a 3-year inflection point in the fourth quarter of 2019.
 - Shorter-term yields declined up to 0.40% as ultra-short rates reset after the three Fed rate cuts
 - On the other hand, longer-term Treasury yields rose by as much as 0.25% to 0.30% on renewed optimism regarding growth and trade.

- As a result of the yield curve twist and steepening, returns for short and intermediate-term fixed income investors benefited, while longer-term investors were negatively impacted.
 - For the calendar year, however, longer was better as every bit of extra duration was additive to performance.

Fixed Income Market Overview and Outlook

FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS

- Our strategy for the fourth quarter of 2019 included the following elements:
 - We maintained broad diversification across all permitted fixed income sectors. Although most sector spread levels were on the tighter end of their recent trading history, the incremental income was nonetheless generally additive to performance in a range-bound interest rate environment in the fourth quarter of 2019.
 - We continued to de-emphasize Agencies, generally reducing allocations in favor of other sectors. Value in Federal Agency issuers remained extremely limited, largely on scarce supply. Spread levels remained near historically tight levels. In some instances, Agencies were trading at yields less than similar maturity Treasuries.
 - Short-term investors found opportunities from wider spreads on money market credit investments (commercial paper). Increased allocations to these sectors at attractive levels helped cushion the impact of a lower Fed overnight target rate.

- U.S. economic fundamentals are stable and firm at the start of the new year and our view is that the U.S. avoids a recession.
 - But, political risks in the U.S. are headed for a crescendo and international geopolitical events remain a significant source of uncertainty and risk for 2020.

- We expect the Fed to remain on hold for an extended period and rates to remain mostly range-bound in the near-term.

- Our outlook for the major investment-grade fixed-income sectors are as follows:
 - Federal Agency yield spreads remain very tight after trading in a tight range for most of 2019. We do not expect this to change. We continue to favor further reductions in Agency holdings as their benefit and upside is limited.
 - In the money market space, a positively sloped yield curve and wide spreads have created opportunities for incremental earnings potential.

Disclosure

This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.



Financial Services Audit Committee Communication

Date: February 21, 2019

To: Great Lakes Water Authority Audit Committee

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

Re: FY 2020 Q1 Construction Work-in-Progress Report through September 30, 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 Q1 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 September 30, 2019

For questions, please contact:

Andrew Sosnoski

Construction Accounting and Financial Reporting Manager

Phone: 313.999.2585

Email: Andrew.Sosnoski@glwater.org

Issued 2.14.2019

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February 21, 2020

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 September 30, 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.

Spending Plan Amendment Summary: The award of CIP contracts and the related execution thereof may result in deviations from the amount and timing of planned spend. Spending plan 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 planned spend 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 September 30, 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.
- ✓ The CIP "budget" for the same biennial budget period above is based on the first two years of the CIP. Funding for these projects are established in the financial plan through a combination of bond proceeds and Improvement & Extension fund reserves
- ✓ 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.

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 September 30, 2019 is 28.6% of the FY 2020 prorated board approved CIP spend and 32.1% of the FY 2020 amended spend. Detailed analysis behind the reasons and projects for which planned spend is amended from \$143,247,000 to \$ 127,758,856 is provided in the subsequent Spending Plan Amendment Summary section of this report.

Water System Projects	FY 2019 Planned Spend	FY 2019 Activity	FY 2019 as a Percentage of Planned Spend	FY 2020 Planned Spend	FY 2020 Prorated (Three Months)	FY 2020 Activity (Unaudited)	FY 2020 as a Percent of Planned Spend (Unaudited)
FY 2019 Board Approved CIP Plan	\$ 66,038,000	\$ 61,583,574	93.3%				
FY 2019 Amended Spend Plan	72,348,044	61,583,574	85.1%				
FY 2020 Board Approved CIP Plan				\$ 143,247,000	\$ 35,811,750	\$ 10,247,260	28.6%
FY 2020 Amended Spend Plan				127,758,856	31,939,714	10,247,260	32.1%

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

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. No capitalization of project cost occurred in the FY 2020 1st quarter, but the following projects are targeted for the FY 2020 2nd quarter:

<u>Project</u>	<u>Contract</u>	<u>Description</u>
112002	CON-215a	Low Lift Pump Plant Caisson Rehab NEWTP
122001	WS-681	42-Inch Parallel Water Main

\$185.3 million is in CWIP as of September 30, 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 September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 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	\$ 401,000	\$ 13,891	\$ 27,974	\$ -	\$ 27,974	0%
111002	LHWTP Backflow Replacement	8,324,000	6,836,980	1,882,000	1,882,000	882,018	7,718,998	155,348	7,874,346	95%
111004	Electrical Tunnel Rehabilitation at Lake Huron WTP	4,749,000	2,768,607	4,296,000	1,275,214	664,229	3,432,837	-	3,432,837	72%
111006	Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake	10,789,000	777,960	3,333,000	3,333,000	156,616	934,576	-	934,576	9%
111007	Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	9,799,000	639,986	4,660,000	3,738,368	37,205	677,191	-	677,191	7%
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	38,463	74,327	-	74,327	0%
112002	Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP	1,565,000	1,134,767	203,000	203,000	9,528	1,144,296	-	1,144,296	73%
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	306,000	1,231	14,587	-	14,587	2%
112006	Northeast Water Treatment Plant Flocculator Replacements	2,718,000	2,891	1,356,000	1,356,000	3,076	5,968	-	5,968	0%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
113002	High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP	5,432,000	2,479,490	2,876,000	3,028,000	1,428,737	3,908,228	-	3,908,228	72%
113003	Replacement of Butterfly Valves Residual Handling Facility's Decant Flow Modifications at Southwest WTP	148,286,000	-	-	-	110	110	-	110	0%
113004	SW WTP Chloring Scrubber	898,000	-	380,000	380,000	-	-	853,219	853,219	95%
113006	Architectural and Building Mechanical	7,032,000	-	-	-	-	-	-	-	0%
113007		37,336,000	-	-	-	-	-	-	-	0%
114001	Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities	97,288,000	73,955,623	-	1,255,609	1,293,602	75,249,225	22,738,455	97,987,680	101%
114002	Springwells Water Treatment Plant - Low Lift and High Lift Pump Station	114,816,000	2,080,861	5,985,000	6,308,877	477,133	2,557,994	-	2,557,994	2%
114003	Water Production Flow Metering Improvements at NE, SW, and SPW WTP	7,105,000	6,331,921	80,000	713,282	418,866	6,750,787	-	6,750,787	95%
114005	Springwells WTP Admin Building Improvements	8,125,000	10,555	413,000	527,664	10,794	21,350	-	21,350	0%
114006	Replacement of Rapid Mix Units at Springwells WTP 1958 Process Train	1,124,000	0	61,000	61,000	-	0	1,021,039	1,021,039	91%
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	296,851	492,495	-	492,495	3%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
114009	Springwells Water Treatment Plant Service Area Redundancy Study	311,000	-	-	-	-	-	-	-	0%
114010	Yard Piping Improvements	110,650,000	3,947	-	-	5,427	9,374	-	9,374	0%
114011	Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP	24,989,000	2,373,087	5,392,000	5,453,373	1,926,136	4,299,223	-	4,299,223	17%
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	236,835	3,066,699	-	3,066,699	65%
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	74	875	-	875	0%
114017	Springwells Water Treatment Plant Flocculator Drive Replacement	2,328,000	-	-	-	-	-	-	-	0%
115001	Yard Piping, Valves and Venturi Meters Replacement at Waterworks Park	53,580,000	1,758,683	17,333,000	17,333,000	258,665	2,017,348	-	2,017,348	4%
115003	Comprehensive Condition Assessment at Waterworks Park WTP	855,000	513,538	153,000	153,000	688	514,227	-	514,227	60%
115004	Waterworks Park WTP Chlorine System Upgrade	8,771,000	6,685,754	2,047,000	2,047,000	101,785	6,787,539	-	6,787,539	77%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
115005	WWP WTP Building Ventilation Improvements	5,071,000	-	507,000	507,000	-	-	-	-	0%
116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	30,090,000	10,200,085	5,467,000	5,467,000	86,565	10,286,650	-	10,286,650	34%
122001	Replacement of Five (5) PRV Pits of Treated Water Transmission System	33,566,000	33,241,721	-	-	-	33,241,721	-	33,241,721	99%
122002	New Waterworks Park to Northeast Transmission Main	2,648,000	-	-	-	-	-	2,785,001	2,785,001	105%
122003	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	133,272,000	2,615,193	871,000	658,233	38,505	2,653,697	-	2,653,697	2%
122004	Replacement Schoolcraft Watermain	132,666,000	1,787,389	5,000,000	5,000,000	4,312	1,791,701	-	1,791,701	1%
122005	Transmission System Water Main Work-Wick Road Parallel Water Main	18,062,000	141,171	8,100,000	2,328,644	3,420	144,591	-	144,591	1%
122006	Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Ch	31,918,000	416,882	18,028,000	8,401,361	9,344	426,225	-	426,225	1%
122007	Water System Improvements in Joy Road from Southfield Road to Trinity	5,239,000	783	-	-	581	1,365	-	1,365	0%
122009		107,000	106,881	-	-	-	106,881	-	106,881	100%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
122011	Park-Merriman Water Main-Final Phase	8,203,000	986,024	4,737,000	3,937,000	98,664	1,084,688	-	1,084,688	13%
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	642,310	1,279,945	-	1,279,945	2%
122016	Downriver Transmission Loop	37,197,000	24,251	297,000	820,965	3,866	28,117	-	28,117	0%
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	41,126	288,880	-	288,880	16%
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	33,185	322,779	-	322,779	11%
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station	2,160,000	97,185	592,000	592,000	7,945	105,130	-	105,130	5%
132008	Needs Assessment Study for all Water Booster Pumping Stations West Service Center/Duval Rd	1,677,000	1,838,406	-	-	-	1,838,406	-	1,838,406	110%
132010	Division Valve Upgrades	37,136,000	607,504	2,620,000	2,620,000	4,578	612,082	-	612,082	2%
132012	Ypsilanti PS Improvements	9,861,000	20,539	585,000	585,000	1,974	22,513	-	22,513	0%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
132014	Adams Road Booster Pumping Improvements	5,674,000	-	-	-	-	-	-	-	0%
132015	Newburgh BPS	12,169,000	2,811	16,000	458,245	1,496	4,307	-	4,307	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	-	-	2,360	361,619	-	361,619	100%
170103	Belle Isle Water Supply Intake and Ice Boom Improvements	-	3,278	-	-	-	3,278	286,596	289,874	100%
170104	Orion and Newburgh Pumping Stations Improvements	-	170,664	-	-	7,104	177,768	1,907,825	2,085,593	100%
170109	Inspection of Raw Water Intakes and Tunnels	-	3,102,765	-	-	12,401	3,115,166	-	3,115,166	100%
170110	Raw Water Sampling Improvements	-	2,926	-	-	-	2,926	-	2,926	100%
170121	Franklin PS Valve Rehab	-	38,681	-	-	56,922	95,603	-	95,603	100%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
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	-	-	(33,749)	29,694	-	29,694	100%
170300	Water Treatment Plant Automation Program	7,740,000	-	1,561,000	1,561,000	-	-	-	-	0%
170301	Water Plant Automation	-	1,657,645	-	-	-	1,657,645	-	1,657,645	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	-	-	11,250	1,654,415	-	1,654,415	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	-	-	787,887	787,887	6,029,544	6,817,431	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	63,007	519,581	-	519,581	100%
170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement Program	43,797,000	-	4,000,000	925,000	-	-	-	-	0%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	-	1,237,565	-	3,075,000	19,020	1,256,584	-	1,256,584	100%
171400	Energy Management Program	5,787,000	-	-	-	-	-	-	-	0%
171500	Roof Replacement - Var Water Facilities Program	6,707,000	-	2,657,000	-	-	-	-	-	0%
171501	Roof Replacement - Var Water Facilities	-	119,283	-	3,031,089	3,235	122,518	-	122,518	100%
331001	Roof Replacement - Var Water Facilities	5,425,000	-	-	-	-	-	-	-	0%
341001	Security Infrastructure Improvements	-	962,673	-	-	3,385	966,059	-	966,059	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%
380401	PMA: As Needed CIP Services	-	-	-	-	2,951	2,951	-	2,951	100%
380600	General Engineering Services Allowance	95,000	-	-	-	-	-	-	-	0%
380601	Alfred Benesh:General Engineer	-	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%

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date	Life to Date	Life to Date
								Capitalization Through September 30, 2019	Activity through September 30, 2019	Activity / Total Project Plan
Grand Total		\$ 1,888,664,000	\$ 175,031,084	\$ 143,247,000	\$ 127,758,856	\$ 10,247,260	\$ 185,278,343	\$ 85,495,597	\$ 270,773,940	14%
				Spending Plan Amendments	(\$15,488,144)					

FY 2020 Spending Plan Amendment Summary

The purpose of the Spending Plan Amendment Summary is to illustrate the amendments to the current fiscal year spend for each project with a spending plan amendment resulting in an amended spend amount or the use of allowance and program funding for a specific project 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, spending plan amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the board approved fiscal year planned spend accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the spending plan amendments prepared for the Capital Reserve, spending plan 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 spending plan amendments to the Capital Reserve will be prepared to amend the planned spend for FY 2020.

\$15.5 million of Capital Reserve return spending plan amendments have been prepared as of September 30, 2019 as shown in the table on the next page along with spending plan 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 Budget Amendment Summary
Unaudited Activity For the Quarter Ending September 30, 2019

Project	Project	Program / Allowance	Capital Reserve	Grand Total
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		140,000	140,000
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)
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		3,031,089	3,031,089
Grand Total		\$ -	\$ (15,488,144)	\$ (15,488,144)

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 Wastewater System spend for the period ending September 30, 2019 is 8.9% of the FY 2020 prorated board approved CIP spend and 8.8% of the FY 2020 amended spend. Detailed analysis behind the reasons and projects for which planned spend is amended from \$161,480,000 to \$ 163,038,000 is provided in the subsequent Spending Plan Amendment Summary section of this report.

Wastewater System Projects	FY 2019 Planned Spend	FY 2019 Activity	FY 2019 as a Percentage of Planned Spend	FY 2020 Planned Spend	FY 2020 Prorated (Three Months)	FY 2020 Activity (Unaudited)	FY 2020 as a Percent of Planned Spend (Unaudited)
FY 2019 Board Approved CIP Spend	\$ 105,183,000	82,133,532	78.1%				
FY 2019 Amended Spend Plan	100,264,934	82,133,532	81.9%				
FY 2020 Board Approved CIP Spend				\$ 161,480,000	40,370,000	14,351,580	8.9%
FY 2020 Amended Spend Plan				163,038,000	40,759,500	14,351,580	8.8%

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

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. No capitalization of project cost occurred in the FY 2020 1st quarter, but the following projects are targeted for the FY 2020 2nd quarter:

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

\$188 million is in CWIP as of September 30, 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 September 30, 2019**

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
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	\$ 2,614,985	\$ 47,983,702	\$ -	\$ 47,983,702	87%
211002	Pump Station No. 2 Pumping Improvements	3,812,000	1,911,850	1,222,000	1,222,000	18,177	1,930,027	-	1,930,027	51%
211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	27,198,000	26,502,582	869,000	869,000	540,785	27,043,367	-	27,043,367	99%
211005	Pump Station No. 2 Improvements	21,599,000	1,002	-	-	525	1,528	-	1,528	0%
211006	Pump Station No. 1 Improvements	22,315,000	6,307	1,803,000	1,803,000	3,815	10,122	-	10,122	0%
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	154,078	354,126	-	354,126	3%
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	-	-	13,451	16,370,239	-	16,370,239	98%
212004	Project Chlorination/Dechlorination Process Equipment Improvements	5,045,000	192,917	2,345,000	2,903,000	1,495	194,412	-	194,412	4%
212006	PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	48,033,000	41,691,377	4,583,000	4,583,000	165,946	41,857,323	-	41,857,323	87%

**Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019**

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
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%
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	2,816,895	13,626,090	-	13,626,090	68%
213008	Rehabilitation of the Wet and Dry Ash Handling Systems	18,505,000	85	111,000	111,000	87	171	-	171	0%
213009	Phosphorous Recovery Facility at the WWRF	-	(99)	-	-	-	(99)	-	(99)	100%
214001	Relocation of Industrial Waste Division and Analytical Laboratory Operations	10,968,000	17,017	7,567,000	7,567,000	3,405	20,422	2,282,260	2,302,682	21%
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	207,491	1,021,858	-	1,021,858	18%
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	-	2,194,169	543,500	2,737,669	37%

**Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019**

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	24,948,000	-	1,091,000	1,091,000	-	-	-	-	0%
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	10,000,000	2,199,622	12,811,266	-	12,811,266	26%
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	351	4,597	-	4,597	0%
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	30,442,000	3,475,448	18,000,000	18,000,000	903,529	4,378,976	-	4,378,976	14%
232002	Freud and Connor Creek Pump Station Improvements	162,429,000	5,573,334	17,029,000	17,029,000	165,622	5,738,956	57,734	5,796,691	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%
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	2,134,892	6,945,008	9,176,553	16,121,560	100%

Wastewater System Construction Work-in-Progress Quarterly Report As of September 30, 2019

**Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019**

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 2019	Life to Date Activity / Total Project Plan
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	519	652	-	652	100%
260500	CSO Outfall Rehab	89,188,000	-	15,102,000	12,102,000	-	-	-	-	0%
260503	Collection System Backwater Gates	-	760	-	-	-	760	-	760	100%
260504	Rehabilitation of Outfalls - Phase II	-	-	-	3,000,000	-	-	-	-	100%
260600	CSO Facilities Improvements	63,591,000	-	5,604,000	5,604,000	-	-	-	-	0%
260601	Oakwood Drain Valve Improvements	-	539,857	-	-	51,794	591,651	-	591,651	100%
260602	CSO Fire Alarm System Improvements	-	812,407	-	-	167,656	980,063	-	980,063	100%
260603	Conner Creek CSO Basin Rehab	-	4,404,704	-	-	675,015	5,079,720	-	5,079,720	100%
260605	CSO Facilities CA	-	16,914	-	-	(16,914)	-	-	-	100%
260606	Puritan Fenkell Roof Replacement	-	1,944	-	-	333,796	335,740	-	335,740	100%
260607	Lieb SDF Electrical Improvements	-	241,513	-	-	475,617	717,130	-	717,130	100%
260608	Seven Mile RTB - Roof Replacement	-	12,451	-	-	3,328	15,779	-	15,779	100%
260609	Seven Mile RTB - Parking Lot / Sitework	-	23,197	-	-	2,211	25,408	-	25,408	100%
260610	Baby Creek MAU Replacement	-	1,773	-	-	241,884	243,657	-	243,657	100%
260611	HVAC Improvements At Lieb SDF	-	5,283	-	-	8,912	14,195	-	14,195	100%
260613	Baby Creek HVAC Improvements	-	76	-	-	293	369	-	369	100%
260614	CSO Facilities Structural Improvements	-	335,143	-	-	123,843	458,987	-	458,987	100%
260615	PF & Lieb CSO Facilities Site & Drainage Improvements	-	-	-	-	215	215	-	215	100%

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2020 Rollforward
Unaudited Activity For the Fiscal Quarter Ended September 30, 2019

Project	Project Name	Total Project Plan Estimate From FY 2020 - 2024 CIP	CWIP Balance July 1, 2019	FY 2020 Board Approved CIP Spend Plan	FY 2020 Amended Spend Plan	FY 2020 Activity through September 30, 2019	CWIP Balance September 30, 2019 (Unaudited)	Life to Date Capitalization Through September 30, 2019	Life to Date Activity through September 30, 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	Alfred Benesh:General Engineer	-	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	\$ 163,038,000	\$ 14,351,580	\$ 207,698,568	\$ 188,046,324	\$ 395,744,892	32%
					Spending Plan Amendments \$ 1,558,000					

FY 2020 Spending Plan Amendment Summary

The purpose of the Spending Plan Amendment Summary is to illustrate the amendments to the current fiscal year spend for each project with a spending plan amendment resulting in an amended spend amount or the use of allowance and program funding for a specific project 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, spending plan amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the board approved fiscal year planned spend accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the spending plan amendments prepared for the Capital Reserve, spending plan 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 spending plan amendments to the Capital Reserve will be prepared to amend the planned spend for FY 2020.

\$1.6 million of Capital Reserve spending plan amendments have been prepared as of September 30, 2019 as shown in the table on the next page along with spending plan 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
Wastewater System Budget Amendment Summary
Unaudited Activity For the Quarter Ending September 30, 2019

Project	Project	Program / Allowance	Capital Reserve	Grand Total
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
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	(3,000,000)		(3,000,000)
260504	Rehabilitation of Outfalls - Phase II	3,000,000		3,000,000
Grand Total		\$ -	\$ 1,558,000	\$ 1,558,000



Welcome to the February edition of *The Procurement Pipeline*, a monthly newsletter designed to bring you informative updates on doing business with the Great Lakes Water Authority.

Tip of the Month: GLWA Procurement Methods

There are several approaches, or methods, that are GLWA Procurement team members are authorized to utilize to obtain goods and services.

Small Purchases are for goods and services that are under \$50,000. A formal bid or proposal is not required. To demonstrate best value, at least three quotes or competitive sources are obtained when possible.

Request for Bid (RFB) – RFBs are used when the specifications are clear and concise. RFBs are awarded based on the lowest responsive and responsible bid. This means that the bid met all criteria (responsive) and the vendor is qualified (responsible).

Request for Proposal (RFP) – RFPs are used when there are technical and qualitative aspects to the solicitation that merit evaluation by a panel. Typically, engineering, architectural, and information technology services are procured through an RFP. The evaluation criteria are outlined in the RFP and provide insight into GLWA's priorities in selecting the recommended vendor. After the proposals are evaluated, additional meetings are held with the vendor to clarify scope and to negotiate the final cost proposal to ensure a fair outcome for the vendor and best value for GLWA.

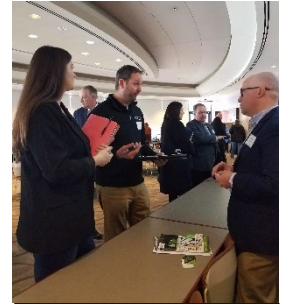
Cooperative/Piggyback Procurement – GLWA may award a procurement to a vendor that was selected through a competitive procurement process by another public entity. The caveat is that the other public and the vendor agree to extend the same terms, conditions and pricing to GLWA. GLWA reciprocates to other public entities as well.

Emergency Procurement – As with all utilities, emergencies occur. GLWA has a process and procedures in place to procure very quickly in these situations based on the operational needs.

Specialized Procurement – In some instances, there are is one vendor who possesses the unique ability or capability to meet the operational requirements. The most common example is proprietary software. Procurement and operational team members work together to ensure that best value is obtained.

Small Business Initiative Advisory Meeting

GLWA's Small Business Initiative (SBI) Advisory Meeting was held on January 23, 2020 at Macomb Community College. This event was a collaboration with the Macomb Procurement Technical Assistance Center (PTAC) and the U.S. Small Business Administration. A key objective of this event was networking between the small and large firms. Thank you to Ric-Man Construction, Weiss Construction, and PMA Consultants for their informative presentations on how to become a subcontractor with their respective company - including GLWA projects!



Scott Worth (pictured right) from PMA Consultants answers questions from meeting attendees.

We would also like to extend our appreciation to attendees who completed a post-event survey. The responses were very positive. The feedback also helps us to plan future events.

What's Coming Down the Pipe?

Current Solicitations: Be sure to register in [Bonfire](#) to monitor new solicitations and contract awards.

Upcoming Procurements: Next Three to Nine Months -See page 2

Keeping Up With GLWA

Our [CEO's monthly report](#) provides a wealth of information and news about important initiatives within the Authority that impact GLWA, its member partners, and the public.

Where to Meet GLWA

- ❖ [MDOT](#) 40th Annual DBE Small Business Development Conference – March 23, 2020 – March 24, 2020
- ❖ [MPPOA](#) Reverse Trade Fair – April 24, 2020
- ❖ Fifth Annual GLWA Vendor Outreach – May 12, 2020, DoubleTree by Hilton Detroit/Dearborn, 5801 Southfield Freeway, Detroit, Michigan. Look for registration information in an upcoming edition of The Procurement Pipeline.

Visit us online! See the Vendors page at www.glwater.org or contact us via email at procurement@glwater.org.

Proposed Upcoming Solicitations February 2020

Category	Description	Budget Estimate
Water System (next three months)		
Maintenance Services	5-Year Sludge Removal and Disposal Services at Northeast, Springwell's & Southwest Water Plants	\$55,000,000
Engineering	2000279 - Flocculator Drive Replacement – Springwells Water Treatment Plant (CIP #114017)	\$1,852,000
Construction	2000610 - Water Works Park Yard Piping, Valves and Venturi Meters Replacement (CIP #115001)	\$69,500,000
Construction	1904231 - Flocculator Improvements - Northeast Water Treatment Plant (CIP #112006)	\$2,700,000
Wastewater System (next three months)		
Progressive Design Build	Baby Creek Outfall Improvements Projects (CIP #277001)	TBD
Design	1903598 - Assessment and Rehabilitation of Yard Piping and Underground Utilities (CIP #216006)	\$25,000,000
Design	1904337 - Pump Station #2 Bar Racks Replacement and Grit Collection System (CIP #211007)	\$15,501,000
Water System (next four to nine months)		
Design Build	7 Mile/Nevada Water Transmission Main Rehab and Flow Control Station (CIP #122017)	\$5,000,000
Construction	Rehabilitation of GLWA Outfalls - Phase IV (CIP #260500)	\$9,800,000
Engineering	North Service Center Pumping Station Improvements (CIP #132016)	\$10,000,000
Wastewater System (next four to nine months)		
Design	Oakwood HVAC Improvements	TBD
Design	St. Aubin Chemical Disinfection & Screening Improvements	TBD
Design	Control System Upgrade – St. Aubin, Lieb, and 7 Mile CSO Facilities	TBD
Maintenance	Crane Services	TBD
Services	Actuator Maintenance	TBD
Maintenance	UPS Maintenance and Repair Services (CSO/WRRF)	TBD
Asset Management (next four to nine months)		
Consultant	1902659 - Linear System Integrity Program	\$25,000,000
Enterprise (next four to nine months)		
IT	Project Management Information System	TBD

Acronyms - Facilities	
WRRF	Water Resource Recovery Facility
CSO	Combined Sewer Overflow



Financial Services Audit Committee Communication

Date: February 21, 2020

To: Great Lakes Water Authority Audit Committee

From: Nicolette Bateson, CPA, Chief Financial Officer & Treasurer

Re: Government Finance Officers Association Budget Award

Background: The Government Finance Officers Association (GFOA) established the Distinguished Budget Presentation Awards Program encourage and assist state and local governments to prepare budget documents of the very highest quality that reflect both the guidelines established by the National Advisory Council on State and Local Budgeting and the GFOA's best practices on budgeting and then to recognize individual governments that succeed in achieving that goal.

Documents submitted to the Budget Awards Program are reviewed by selected members of the GFOA professional staff and by outside reviewers with experience in public-sector budgeting.

Analysis: The GLWA Financial Services Area (FSA) submitted the FY 2020 & FY 2021 Biennial Budget and related FY 2020 through FY 2024 five-year financial plan to the GFOA for review and consideration for the Distinguished Budget Presentation Awards Program. Recently, the GLWA team was advised that this inaugural submittal received the award (see attached).

GLWA is honored to be recognized in this way since achieving the highest level of financial management and transparency throughout the organization is critical to long-term sustainability.

Proposed Action: None.



Government Finance Officers Association

203 North LaSalle Street, Suite 2700
Chicago, Illinois 60601-1210
312.977.9700 fax: 312.977.4806

January 2, 2020

Nicolette Bateson
Chief Financial Officer & Treasurer
Great Lakes Water Authority
735 Randolph Suite 1608
Detroit, MI 48226

Dear Ms. Bateson:

We are pleased to inform you, based on the examination of your budget document by a panel of independent reviewers, that your budget document has been awarded the Distinguished Budget Presentation Award from Government Finance Officers Association (GFOA) for the current fiscal period. This award is the highest form of recognition in governmental budgeting. Its attainment represents a significant achievement by your organization.

The Distinguished Budget Presentation Award is valid for two years. To continue your participation in the program, it will be necessary to submit your next biennial budget document to GFOA within 90 days of the proposed budget's submission to the legislature or within 90 days of the budget's final adoption. A Distinguished Budget Program application is posted on GFOA's website. This application must be completed and accompany your next submission. (See numbers 12 and 13 on page 2 of the application for fee information and submission instructions.)

Each program participant is provided with confidential comments and suggestions for possible improvements to the budget document. Your comments are enclosed. We urge you to carefully consider the suggestions offered by our reviewers as you prepare your next budget.

When a Distinguished Budget Presentation Award is granted to an entity, a Certificate of Recognition for Budget Presentation is also presented to the individual(s) or department designated as being primarily responsible for its having achieved the award. Enclosed is a Certificate of Recognition for Budget Preparation for:

Financial Services Area

Continuing participants will find a brass medallion enclosed with these results. First-time recipients will receive an award plaque that will be mailed separately and should arrive within eight to ten weeks. Also enclosed is a camera-ready reproduction of the award for inclusion in your next budget. If you reproduce the camera-ready image in your next budget, it should be accompanied by a statement indicating continued compliance with program criteria.

The following standardized text should be used:



Government Finance Officers Association

203 North LaSalle Street, Suite 2700

Chicago, Illinois 60601-1210

312.977.9700 fax: 312.977.4806

Nicolette Bateson

January 2, 2020

Page 2

Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to **Great Lakes Water Authority, Michigan**, for its Biennial Budget for the biennium beginning **July 1, 2019**. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as a financial plan, as an operations guide, and as a communications device.

This award is valid for a period of two years only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

A press release is enclosed.

Upon request, GFOA can provide a video from its Executive Director congratulating your specific entity for winning the Budget Award.

We appreciate your participation in this program, and we sincerely hope that your example will encourage others in their efforts to achieve and maintain excellence in governmental budgeting. The most current list of award recipients can be found on GFOA's website at www.gfoa.org. If we can be of further assistance, please contact the Technical Services Center at (312) 977-9700.

Sincerely,

A handwritten signature in black ink that reads "Michele Mark Levine". The signature is written in a cursive, flowing style.

Michele Mark Levine
Technical Services Center

Enclosure

Washington, DC Office

Federal Liaison Center, 660 North Capitol Street, NW, Suite 410 • Washington, DC 20001 • 202.393.8020 fax: 202.393.0780

www.gfoa.org



Government Finance Officers Association

203 North LaSalle Street, Suite 2700

Chicago, Illinois 60601-1210

312.977.9700 fax: 312.977.4806

FOR IMMEDIATE RELEASE

January 2, 2020

For more information, contact:

Technical Services Center

Phone: (312) 977-9700

Fax: (312) 977-4806

E-mail: budgetawards@gfoa.org

(Chicago, Illinois)--Government Finance Officers Association is pleased to announce that **Great Lakes Water Authority, Michigan**, has received GFOA's Distinguished Budget Presentation Award for its budget.

The award represents a significant achievement by the entity. It reflects the commitment of the governing body and staff to meeting the highest principles of governmental budgeting. In order to receive the budget award, the entity had to satisfy nationally recognized guidelines for effective budget presentation. These guidelines are designed to assess how well an entity's budget serves as:

- a policy document
- a financial plan
- an operations guide
- a communications device

Budget documents must be rated "proficient" in all four categories, and in the fourteen mandatory criteria within those categories, to receive the award.

When a Distinguished Budget Presentation Award is granted to an entity, a Certificate of Recognition for Budget Presentation is also presented to the individual(s) or department designated as being primarily responsible for having achieved the award. This has been presented to **Financial Services Area**.

There are over 1,600 participants in the Budget Awards Program. The most recent Budget Award recipients, along with their corresponding budget documents, are posted quarterly on GFOA's website. Award recipients have pioneered efforts to improve the quality of budgeting and provide an excellent example for other governments throughout North America.

Government Finance Officers Association (GFOA) advances excellence in government finance by providing best practices, professional development, resources and practical research for more than 20,500 members and the communities they serve.

Washington, DC Office

Federal Liaison Center, 660 North Capitol Street, NW, Suite 410 • Washington, DC 20001 • 202.393.8020 fax: 202.393.0780

www.gfoa.org



The Government Finance Officers Association
of the United States and Canada

presents this

CERTIFICATE OF RECOGNITION FOR BUDGET PREPARATION

to

**Financial Services Area
Great Lakes Water Authority, Michigan**

The Certificate of Recognition for Budget Preparation is presented by the Government Finance Officers Association to those individuals who have been instrumental in their government unit achieving a Distinguished Budget Presentation Award. The Distinguished Budget Presentation Award, which is the highest award in governmental budgeting, is presented to those government units whose budgets are judged to adhere to program standards.

Executive Director

Christopher P. Morill

Date

January 02, 2020





GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Great Lakes Water Authority
Michigan**

For the Biennium Beginning

July 1, 2019

Christopher P. Morrill

Executive Director