



Audit Committee

Thursday, December 19, 2019 at 3:30 p.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. December 6, 2019 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. Independent Sewer Charges Methodology Consultant (Page 7)
Report Closeout
7. NEW BUSINESS
 - A. Overview – Proposed FY 2021 & FY 2022 Biennial Budget and (Page 35)
Five-Year Financial Plan
8. REPORTS
 - A. Monthly Financial Report for September 2019 (Page 64)
9. LOOK AHEAD
 - Next Audit Committee Meetings
 - A. Regular Meeting January 17, 2020 at 8:00 a.m.
10. INFORMATION
11. OTHER MATTERS
12. ADJOURNMENT

Note: PDF pages 59-66 are 11x17



Great Lakes Water Authority

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

Meeting Minutes - Draft

Audit Committee

Friday, December 6, 2019

8:00 AM

Water Board Building 5th Floor

Special Meeting

1. Call To Order

Chairman Baker called the meeting to order at 8:12 a.m.

2. Quorum Call

Present: 2 - Director Gary Brown, and Chairman Brian Baker

Note: Director Brown's attendance via teleconference until 8:27 a.m., and joined the meeting at the table under Item 6C.

3. Approval of Agenda

Chairman Baker requested a Motion to approve the Agenda.

Motion By: Brian Baker

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

4. Approval of Minutes

A. [2019-431](#) Audit Committee Minutes October 18, 2019

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [4A October 18, 2019 Audit Committee Meeting Minutes.pdf](#)

Chairman Baker requested a Motion to approve the October 18, 2019 Audit Committee Meeting Minutes.

Motion By: Brian Baker

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

B. [2019-432](#) Special Audit Committee Minutes October 31, 2019

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [4B October 31, 2019 Special Audit Committee Meeting Minutes.pdf](#)

Chairman Baker requested a Motion to approve the October 31, 2019 Special Audit Committee Meeting Minutes.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

6. Old Business**A.** [2019-433](#) FY 2021 Charges Rollout Update

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6A FY 2021 Charges Rollout Update.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

B. [2019-434](#) Shared Services Update

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6B FY 2018 True Up Status Memo 12.6.2019.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

C. [2019-435](#) Annual Financial Audit Update

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6C1 Annual Audit and FYE June 2019 Update.pdf](#)
[GLWA Audit Committee Binder 2 12.6.19.pdf](#)
[GLWA Audit Committee Binder 3 12.6.19.pdf](#)

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

7. New Business**A.** [2019-436](#) Ethics and Compliance Hotline

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7A1 Ethics and Compliance Hotline Memo 11.27.2019.pdf](#)
[7A2 Ethics and Compliance Hotline Procurement Report.pdf](#)
[7A3 Ethics and Compliance Hotline Fee Proposal Summary.pdf](#)

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

B. [2019-437](#) Proposed Underwriting Team Selection for 2020 Refunding and Potential New Money Transaction

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7B1 Underwriter Team Selection.pdf](#)
[7B2 GLWA Board Resolution Underwriter Team Selection.pdf](#)
[7B3 Appendix A Underwriter Selection Procurement Report.pdf](#)
[7B4 Appendix B Comparable Transaction Takedowns.pdf](#)

Motion By: Gary Brown
Support By: Brian Baker
Action: Referred to the Board of Directors Workshop Meeting without Recommendation
Agenda of December 11, 2019
The motion carried by a unanimous vote.

C. [2019-438](#) October Reconciliation Committee

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7C1 October 2019 Reconciliation Committee Cover Memo.pdf](#)
[7C2 October 2019 DRAFT Reconciliation Committee Summary.pdf](#)
[7C3 GLWA DWSD Quarterly Reconciliation thru June 30 2019.pdf](#)
[7C4 DWSD-GLWA SOP Tracking.pdf](#)
[7C5 IT Shared Service Status Memo 10.16.2019.pdf](#)

Motion By: Gary Brown
Support By: Brian Baker
Action: Received and Filed
The motion carried unanimously.

D. [2019-439](#) Consultant Selection Timeline

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7D Consultant Selection Timeline.pdf](#)

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

E. [2019-440](#) Proposed Calendar Year 2020 Audit Committee Meeting Dates

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7E1 FY 2020 Audit Committee Meeting Calendar.pdf](#)
[7E2 Audit Committee Proposed FY 2020 Meeting Schedule Notice.pdf](#)

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

8. Reports

A. [2019-441](#) Monthly Financial Report for August 2019

Sponsors: Nicolette Bateson

Indexes: Finance

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

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

B. [2019-443](#) Quarterly Construction Work-in-Progress Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8C1 CWIP FY 2019 Q4 Memo.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

C. [2019-442](#) Quarterly Investment Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8B1 Quarterly Investment Report Cover Memo September 2019.pdf](#)

[8B2 GLWA Quarterly Report September 2019 November 2019 meeting.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

D. CFO Updates

There were no CFO updates.

9. Look Ahead

A Special Audit Committee Meeting will be held on Thursday, December 19, 2019 at 3:30 p.m.

The December 20, 2019, 8:00 a.m. regular Audit Committee Meeting is cancelled.

10. Information

None

11. Other Matters

None

12. Adjournment

Chairman Baker requested a Motion to adjourn.

Motion By: Brian Baker

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 10:44 a.m.



Financial Services Audit Committee Communication

Date: December 19, 2019

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Independent Sewer Charges Methodology Consultant Report Closeout

Background: On April 26, 2019 the Great Lakes Water Authority (GLWA) engaged Raftelis Financial Consultants, Inc. (Raftelis) as an independent charges methodology consultant. The scope of the engagement was to accomplish the following objectives as it relates to sewer charges.

- 1) Review GLWA's existing cost allocation methodologies, including the units of service;
- 2) Meet with the sewer system member partners individually to identify their cost allocation concerns and create a list all concerns resulting from these meetings;
- 3) Prioritize the issues to be addressed as a part of this study and present the list to the member partners through the Sewer Shares Workgroup;
- 4) Identify which issues can be addressed before the next Sewer Shares update and which issues may require an extended time in which to transition those cost allocation solutions and participate in a member partner outreach meeting to develop a list of alternate solutions to the issues identified; and
- 5) Review each identified issue from the member partner interviews and provide alternative solutions or methodologies to address the concerns from the priority list and provide a final report with recommendations for potential cost allocation methodologies.

The recommendations in the Raftelis report informed member partners and was a key element that lead to the member partner discussions in the small SHAREs "Think Tank" group. A memo dated October 16, 2019 from the Think Tank was shared with the GLWA Board which presented a path forward for the Sewer Shares Methodology. The path presented embraces simplicity and stability consistent with recommendations from Raftelis. The Raftelis final report attached to this memo is a result of one-on-one meetings with 13 of the 19 sewer member partners and the list of concerns gathered in those meetings, four Sewer Shares Workgroup meetings, and meetings with GLWA management and staff.

Budget Impact: None.

Proposed Action: Receive and file the final Raftelis Report.



Great Lakes Water Authority

Sewer Cost of Service Methodology Review

Final Report / December 6, 2019

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INTRODUCTION

The methodology used to allocate wholesale service costs in the greater Detroit area has been continually evolving for the past half century. A series of agreements between the City of Detroit and surrounding suburbs in the late 1970's laid the groundwork for today's charge methodology. The current process distributes costs between wholesale customers of the Great Lakes Water Authority (GLWA) based on their estimated use of the system, measured by estimates of flow volume and amount of pollutants contributed.

The process of determining charges begins with a total revenue requirement. Each component of the requirement is allocated to a function of providing service, and each function is allocated to a cost driver as a way of distributing those costs to customers based on their unique usage characteristics.

GLWA has engaged Raftelis, in conjunction with HDR, to assist both GLWA and the Member Partner Communities in review the existing methodology for recovering costs, provide expertise and assistance in proposing potential changes to the methodology, and determine the steps necessary to move forward with such proposed changes.

This report summarizes our findings for this engagement. The major sections of this report are in chronological order as they have been developed through this engagement, we began by reviewing and documenting the existing methodology and provided our perspective on areas for consideration based on preliminary direction from GLWA staff. We next conducted member interviews with Member Partner Communities and have documented the feedback we received in those meetings. We then discuss potential charge approaches that currently are or could be incorporated into the sewer charge methodology for GLWA moving forward. This report then discusses how the proposed 'Path Forward' that was presented on May 3, 2019 relates to those potential charge approaches. We then propose a methodology based on our discussions with the Member Partner Communities. Based on our proposal and discussion a smaller 'Think Tank' consisting of GLWA and Member Partner representatives was formed and held multiple meetings culminating in a presentation to the Sewer SHARES Work Group on October 18, 2019. That presentation set forth key principles for a path forward, which is discussed in the final section of this report.

REVENUE REQUIREMENT

At a basic level, the total revenue requirement includes operating expenses, debt service, and charge financed capital. After GLWA develops a detailed financial plan forecasting these expenses, they conduct a cost of service study to determine how much each Member Partner pays for service.

ALLOCATION OF REVENUE REQUIREMENT TO FUNCTIONS

The first step in the cost of service process is to allocate the revenue requirement to functions. The WRRF functions currently used by GLWA are:

WRRF:

1. Primary Pumping
2. Rack and Grit

3. Primary Treatment
4. Aeration
5. Secondary Treatment
6. Dewatering
7. Sludge Disposal
8. WRRF General

Wastewater Collections:

9. Lift Stations
10. Combined Sewer Overflow (CSO) Facilities
11. Interceptors
12. Industrial Waste Control
13. Master Meters
14. GLWA Sewer General

Operations and Maintenance Expense

The Operations & Maintenance (O&M) revenue requirement is divided into seven departments:

1. Wastewater Operations
2. Wastewater Process Control
3. Wastewater Primary Processing
4. Wastewater Secondary Processing
5. Wastewater Dewatering Process
6. Wastewater Incinerations Process
7. Biosolids Dryer Facility

Each of these departments are subdivided into Personnel, Electricity, Chemicals, Other Utilities, and Other. The resulting 35 categories plus Wastewater Engineering and Analytical Laboratory costs are allocated to the functions listed above based on judgement and experience. Figure 1 presents an example allocation of FY 2019 Personnel Costs¹. In addition, costs associated with lift stations, CSO facilities, and Industrial Waste Control, are separated from the seven departments and allocated 100% to their respective functions.

Administrative and centralized costs are allocated proportionally based on the results of an annual analysis of those departments which considers resource allocation and specific identification of certain costs for assignment to water or sewer. In total, approximately 54% of the total GLWA budgets for Centralized Services and Administrative Services are allocated to the sewer utility. The sewer portion of Centralized Services is allocated between WRRF General and Wastewater Collection functions, while administrative services are allocated 100% to GLWA Sewer General.

Costs allocated to WRRF General are allocated to the other seven WRRF functions based on the proportions of directly allocated non-commodity costs (Personnel, Other, Support Services). GLWA Sewer General costs

¹ All cost allocation examples based on FY 2019 Cost of Service Study and may no longer be applicable to the FY 2020 Study. Figures may be different than published TFG figures due to rounding.

are allocated among the other 12 functions based on the proportions of all previously allocated non-commodity costs.

Capital Expenses

GLWA Debt Service, transfers to Improvement & Extension (I&E) and Repair & Replacement (R&R), and non-charge revenues are allocated to functions in the same proportion as existing assets plus construction work-in-progress (CWIP). Once all assets are allocated to functions, total annual depreciation and current net book value for each function are used to determine a utility basis capital revenue requirement. The return and depreciation components are added to obtain a total capital revenue requirement by function.

ALLOCATION OF FUNCTIONAL COSTS TO COST DRIVERS

The second step in the Cost of Service is to allocate functionalized costs to cost drivers.

The current allocation factors are based on the 1979 and 1980 Settlement Agreements. The functions are allocated to ten cost drivers:

1. Flow
2. BOD (Biochemical Oxygen Demand)
3. TSS
4. PHOS (Phosphorous)
5. FOG (Fats, Oils, and Grease)
6. Suburban
7. Oakland=Macomb Interceptor Drain Drainage District (OMID)
8. CSO
9. Industrial Waste Control
10. Detroit Only

Figure 2 shows the current O&M cost allocation factors in use. Different factors are used for O&M and capital.

Final cost pools are determined using the proportions of each cost driver developed in this step (for total O&M, non-commodity O&M, and capital) to allocate all budget elements as shown in Figure 3.

- » O&M and Contribution to Operating Reserves are allocated on the O&M basis.
- » Pension Obligations are allocated on the non-commodity O&M basis
- » Debt Service and transfers to I&E and R&R are allocated on the capital basis
- » WRAP, Lease Payment, and non-charge revenues are allocated proportionally to everything else.

UNITS OF SERVICE

The SHARES process introduced a simplified method of distribution costs among all customers. At a basic level, it determines what “share” of common to all costs each customer should be responsible for based on a four-year average (currently FY13 to FY16) of contributed volume and estimated pollutant strengths. This average is then used for distributing costs in the next three fiscal years.

FLOW BALANCE

The first step of developing SHARES is conducting a flow balance to determine total flows for suburban customers (M), the Detroit+ (D+) group, and common inflow and infiltration (Z).

Suburban Customers

The process begins with error-corrected meter readings for each of the suburban customers to measure their total volume contribution. This total is then corrected for known factors; the amount of inflow and infiltration (I&I) from GLWA water mains, referred to as Net Non-Revenue Non-Local Water (NNNW), is estimated based on known non-revenue water from the system and proportionally subtracted from M customers based on inch-miles of GLWA water mains within their sewer service area.

Historic M flows for appropriate customers are also corrected for the OMID diversion in 2016 and Western Township Utilities Authority (WTUA) flows being sent to Ypsilanti Communities Utility Authority (YCUA) beginning in FY 2018. The net amount for each customer represents their total flows into the WRRF.

Detroit+

The D+ area includes Detroit, Hamtramck, Highland Park, and a few small parts of other communities. Flow from D+ is not directly metered, however there are 13 system meters covering areas referred to as D+ Direct. Data from these meters are used to estimate total flows from the Direct districts in a similar manner as the M customers.

Districts within the D+ area that do not contain a system meter are referred to as D+ Incremental. Total flows in the D+ Incremental area are built up from three components: sanitary (discussed below), dry weather inflow and infiltration (DWII) and wet weather inflow and infiltration (WWII). DWII and WWII are estimated through a process that considers WWII or DWII per unit of impervious area within the D+ Direct areas relative to impervious area in D+ Incremental areas, an estimate of interceptor DWII, and an estimate of DWII related to non-revenue water.

D+ Direct and D+ incremental are added for a total estimate of D+ flow, which is then adjusted for NNNW.

CSO Discharges

During extreme wet weather events, wet weather flows can exceed WRRF treatment capacity and CSO basin storage capacity. The excess amount is discharged into the Detroit River and is not treated. 11.3% of this excess is subtracted from M flows in proportion to their CSO cost allocation, and the remaining 88.7% is subtracted from D+ flows. The sum of the final M and D+ flows are referred to as Total Wastewater Toward Treatment.

Common Flow

However, total WRRF influent (after historic OMID and WTUA adjustments) is not equal to Total Wastewater Towards Treatment. The portion of this difference that is not attributable to recycled flows used in the treatment process is considered common flow. These are not allocable units to which costs can be distributed, effectively making the cost to treat this common flow shared proportionally among all customers.

Determination of Sanitary, DWII, WWII Flows

In the D+ area, sanitary flows are assumed to be 95% of retail and industrial winter water sales; in the M areas, sanitary flows are 90% of winter water sales. DWII is estimated by subtracting the sanitary flows from total flows on “dry” days. WWII is estimated by subtracting total flow on dry days from total flow on wet days.

POLLUTANTS

The second step is estimating the amount of BOD, TSS, Phosphorus, and Fats, Oils, and Greases each customer contributes to the system.

Pollutant Strengths

Due to the infeasibility of measuring each customer’s strength of flow, the current process assumes that all customers have the same strengths for each category of flow. Using published national data, the Strength of Flow Subcommittee estimated DWII and WWII strengths as a proportion of sanitary flow strengths for each pollutant and used weighted WRRF loadings and volumes to estimate strengths for each type of flow. See Figure 4 for currently used strengths and ratios, and Figure 5 for the development of these strengths. Total pounds of pollutants for each customer are calculated using these estimated strengths and the sanitary, DWII, and WWII flows previously estimated.

SHARES

Now that volume and pollutant totals have been developed for each M customer and D+, total flow volumes and pounds of each pollutant are converted to percentages for each customer. Common to All SHARES are calculated with a weighted average, currently set to 50%/50%, of the volume SHARE and pollutant SHARE. Figure 6 contains an example of SHARE development using FY 2018 units of service.

Suburban only SHARES are based on each M customer’s portion of total M flow.

CSO SHARES are based on the 1999 Settlement Agreement. 83% of CSO costs are distributed to Detroit. The remaining 17% is distributed among suburban customers based upon an agreed upon methodology by those customers.

CUSTOMER CHARGES

Industrial surcharges revenues are netted out of the total customer revenue requirement. Remaining flow, BOD, TSS, PHOS, and FOG costs are combined to create a single common to all cost pool. This total is then multiplied by each customer’s CTA SHARE. The same process is performed with suburban only costs and SHARES, OMID only costs and SHARES, and CSO costs and SHARES. The sum of these costs for each customer represents their share of GLWA’s revenue requirement. See Figure 7 for an example of the development of customer charges.

The final step is to account for Detroit's equity in the system and suburban bad debt. Each of these costs is distributed to suburban customers using Suburban Only SHARES, and the equity amount is subtracted from Detroit's total charge. The final annual total is billed to each customer on a fixed monthly basis.

AREAS FOR CONSIDERATION

Based on our preliminary review of the existing methodology and our experience assisting wastewater utilities with examination and development of cost of service methodologies, we have identified several areas that warrant consideration for change. The existing methodology is more complicated than typical, even for a utility like GLWA that provides service to its numerous member communities on solely a wholesale basis. The desire expressed by GLWA and Member Partner Communities to simplify further is consistent with the views of other wastewater utilities.

One area that warrants consideration for simplification is the use of strength of flow in the existing methodology. It is important that pollutant strength and the costs associated with the treatment and disposal of regulated pollutants be considered for purposes of determining excess strength surcharges for industrial customers to meet EPA requirements. In some cases, utilities analyze wastewater samples from wholesale customers, however, this is less common due to recognition of the difficulty of securing representative samples and the associated costs of such sampling and analysis as well as the variability in the results. GLWA's existing methodology that considers the strength of flow for sanitary discharges dry weather I/I, river induced I/I and wet weather-related flows is a level of complexity not typically seen. Great effort has been made to estimate the strength of these different flows in the GLWA system, but ultimately, they remain to be estimates with a limited level of accuracy. While additional effort and resources could be expended to improve the accuracy of these estimates, the results would remain relatively inaccurate compared to the other units of service used to allocate and distribute costs to customers.

However, it should be noted that removal of strength of flow without consideration of other facets of the cost of service methodology would not be consistent with the overriding objective of achieving a fair distribution of costs. The existing methodology that accounts for the volume of wet weather and dry weather I/I somewhat necessitates consideration of strength of flow to reasonably allocate costs to those customers with high wet weather volumes and dry weather I/I. Some utilities with similar service areas, for instance, Northeast Ohio Regional Sewer District (NEORS) in the metropolitan Cleveland area, charge their customers based primarily on sanitary flow, so all customers share in wet weather and dry weather I/I costs proportional to their sanitary flow.

Another area of consideration is the split of costs for the CSO facilities that are currently allocated 83% to DWSD and 17% to other Member Partner Communities. While we understand that these numbers are based on many years of technical discussions, hydraulic modeling and negotiation and as such may be a reasonable estimate of DWSD's use of CSO facilities at that time, such an allocation may not appropriately recognize the historic nature of the development of the system with relation to regulation of combined sewer systems. For example, as mentioned previously, NEORS recovers cost in proportion to sanitary flow of all communities, even though some areas are combined and others are separated.

Some consideration should be given to distributing costs to Member Partner Communities based on peak flow. Peak flow is a driver of many sewer utility's capital and operating costs; facilities must be sized to meet peak flow and some regulatory requirements are driven by peak flow impacts. By recognizing peak flow as a factor in cost of service, there is a price signal to customers that reducing peak flow will reduce their share of costs of the utility.

Based on our preliminary discussion with the Member Partner Communities, the impact of facilities constructed, funded, and operated by Member Partner Communities that can benefit the entire regional system may need to be recognized. As GLWA begins its next round of negotiations with MDEQ for its NPDES permit renewal, optimization of the collections system, including the components of the networks within the Member Partner Communities could achieve desired levels of environmental quality at a lower cost than would otherwise be required.

Finally, some consideration will need to be given to the timing of any changes and future updates. We understand that GLWA and the Member Partner Communities appreciate the consistency of the current approach where the distribution of costs is only updated every three years. To mitigate impacts on customers, GLWA might consider determining the impact of proposed changes in advance of implementation so that the Member Partner Communities can prepare and react, and then the changes may also be phased in over multiple years.

MEMBER PARTNER MEETINGS

An important aspect of this engagement is input from the Member Partner Communities. To that end the Raftelis Project Team, in conjunction with GLWA's Member Outreach Consultant, Bridgeport Consulting, conducted meetings with most of the Tier 1 Member Partner Communities over the course of several weeks in early May 2019. The Member Partner Communities that met with us, in order of their meeting were:

- » Macomb County (OMID)
- » Detroit Water and Sewerage Department
- » Oakland County (OMID and Oakland GWK)
- » Melvindale
- » Highland Park
- » Grosse Pointe Park
- » Southeast Macomb Sanitary District (SEMSD) and Harper Woods
- » Dearborn
- » Allen Park
- » Grosse Pointe Farms
- » Farmington
- » Wayne County (Rouge Valley)

The Member Partner Communities were encouraged to provide their honest and frank feedback concerning their perspective and concerns regarding GLWA's methodology for recovering sewer costs from all Member Partner Communities.

The Member Partner Communities also had the opportunity to provide feedback during the course of our engagement during presentations of our interim findings and preliminary recommendations at SHARES Work Group sessions on June 28, 2019 and July 26, 2019. Member Partner Communities provided alternative approaches during the July 26, 2019 SHARES Work Group that were influential in refinements made to the recommendations in this report.

MEMBER PARTNER KEY CONCERNS

Based on the meetings with the Member Partner Communities, the Raftelis Project Team compiled a list of Key Concerns about the sewer charge methodology. These concerns are general in nature, not necessarily directed at only the existing methodology, but meant to provide guidance on consideration of changes to the methodology.

Issues are ranked by the number of Member Partner Communities that expressed their concern with that issue, in descending order. Communities were unanimous in their concern with stability and simplification.

1. Stability in charges – Minimize each Member Partner Community’s change in charges from GLWA.
2. Simplification of methodology / Understanding of methodology – Simplify charge methodology so it can be easily understood and explained to others (e.g., elected officials)
3. Incentives to remove / reduce flows – Provide pricing signal for Member Partner Communities that reduce contributions to the regional GLWA system.
4. Phase-In / Grace period on any changes implemented – Allow Member Partner Communities an opportunity to respond to changes in the charge methodology before they are implemented or fully implemented.
5. Recognition of peak flows and how it relates to existing 83/17 CSO allocation – How does any new methodology supplement or supplant the existing 83/17 CSO allocation.
6. Recognition of investments in local systems that benefit the GLWA regional system – Member Partner Communities that reduce peaks for the benefit of the regional system through storage or other operational measures would like to know how it benefits them from a charge perspective.
7. Recognition of contract capacities – How does the charge methodology recognize contract capacities for customers.
8. Minimize change in distribution among communities – Some Member Partner Communities expressed concern how changes would disproportionately impact other communities in the region.²
9. Affordability – Address affordability considerations for Member Partner Communities retail customers.
10. Impact of new development / connection fees – Should there be recognition for new retail customers that are benefitting from the GLWA regional system.
11. Accuracy of existing cost / asset allocations – Are the existing cost and asset allocations suitable for any proposed new charge methodology.
12. Cost Causation – Does the proposed charge methodology recommend cost causation.

² This differs from item 1 in that this item indicates concern about shifting costs to communities other than themselves. Even if their share of costs were unchanged under a new methodology, they are concerned about the share of costs being shifted to other Member Partner Communities.

In our consideration of the above concerns raised by representatives of the Member Communities we have identified which can best tie to the charge methodology and which better tie to charge implementation or GLWA policies to support long term strategies of GLWA. In our opinion we believe that the concerns that can be effectively met through the charge methodology include items 2, 5, 7, 11, and 12. Issues that can be effectively addressed as part of the implementation of a new charge methodology include item 1, 4, 8 and 9. Issues that can be addressed through GLWA policies and programs a part from the charge methodology include items 3, 6, and 10.

POTENTIAL CHARGE APPROACHES

Based on the concerns of the Member Partner Communities and the understanding that the existing GLWA sewer charge methodology accounts for basically five factors in allocating and distributing costs (Average Volume, Pollutants, CSO facilities, OMID Specific, and Suburban Only), we will examine how the existing and other factors may be considered and used as part of the GLWA sewer charge methodology moving forward.

AVERAGE VOLUME

Average volume in effect recognizes each Member Partner Communities' total volumetric contributions to the GLWA regional system for the year. The average volume includes sanitary volume, dry weather I/I, and wet weather volume. While some of GLWA's costs relate to total volume treated, electricity and chemicals for example, many of GLWA's costs are driven by other factors besides total volume treated. Under the current methodology approximately 42% of the GLWA revenue requirement is recovered from Member Partner Communities based on average volume.

While average volume certainly accomplishes the objective of being simple and understandable, due to the nature of the GLWA regional system and the D+ customers, some assumptions need to be made to determine the share of average volumes among customers, so there may be some concern over the accuracy of that allocation.

The primary concern we have with average volume is that it does not differentiate the historic development of the system and recognize the average volumes from combined areas differently from separated areas on its own. Under the existing methodology, this is accomplished through the strength of flow allocation of costs associated with pollutants, which will be discussed separately.

Some other utilities with both older inner-city combined areas as well as newer suburban separated areas do not consider average volume or similar measures because of the burden it would place on those customers with combined systems.

POLLUTANTS

Pollutants recognizes the cost of treating extra strength surcharge pollutants by the GLWA treatment facilities, specifically BOD, TSS, Phosphorous, and FOG. Philosophical arguments can be made that if not for the pollutants in the wastewater we would not need any treatment facilities, but generally accepted allocation approaches recognize that treatment is driven by the volume of wastewater as well as pollutant loadings.

Under the current methodology approximately 42% of the GLWA revenue requirement is recovered from Member Partner Communities as well as retail surcharge customers. This share of costs allocated to pollutants is based on the 50/50 allocation of costs between volume and pollutants that was established during the previous charge simplification process. Based on our experience, this is a very high allocation of costs to pollutants for a large regional wastewater utility.

In the context of the GLWA charge methodology, the use of pollutants as a cost allocation factor, especially when considering the strength of each component of flow, is important because of the use of average volume. If only average volume were considered, those customers with combined systems would pay a much greater share of the GLWA regional costs due to their high levels of rain dependent I/I.

Throughout our customer meetings in discussing potential simplification, the strength of flow is one area that Member Partner Communities universally had concern about because of the number of assumptions needed to arrive at a determination.

No matter what is ultimately decided there will always need to be a consideration of pollutants in determining excess strength surcharges, but there is a desire among the Member Partner Communities to simplify this aspect of the charge methodology. Any adjustment must be considered carefully due to its impact on costs of different types of flow (i.e., sanitary volume, dry weather I/I, and wet weather volume).

CSO FACILITIES

Costs are allocated to CSO facilities and those facilities are allocated based on the 83/17 split between the City of Detroit and other customers. The 83/17 split was negotiated about 20 years ago and has been in place since while the allocation of the 17% split among the suburban customers was based on an analysis performed around the same time. The share of the revenue requirement allocated to CSO facilities is approximately 13% under the current methodology.

There are concerns about what costs are included in this pool, with some Member Partner Communities believing more should be included in the cost pool while the City of Detroit thinks some costs should be excluded.

There are also concerns related to the 83/17 split and whether it is representative of the cost of service.

Given the concern over this specific cost pool, both what is included and how it is allocated, it may be desirable to move to another cost allocation approach to accomplish the same pricing objectives in the charge structure. One approach may be use wet weather volume in place of the 83/17 split for some cost pools.

OMID SPECIFIC

Certain debt service and O&M costs as well as shares in GLWA's other costs are allocated directly to OMID in addition to their share of other costs. This allocation would most likely remain in place regardless of any proposed change in methodology for the remainder of the GLWA's revenue requirement under the existing contractual agreements. There was no mention of concerns about this cost allocation during our meetings

with the Member Partner Communities. This represents approximately 2% of GLWA's total revenue requirement.

SUBURBAN ONLY

There is an allocation of costs to suburban only customers, related primarily to the cost of measuring their volumes. There was no mention of concerns about this cost allocation during our meetings with the Member Partner Communities. This accounts for approximately 2% of the total GLWA revenue requirement.

These costs are allocated proportionally based on average volume excluding the City of Detroit. Given the minimal share of the total revenue requirement, any simplification may consider the elimination of this cost pool and allocation.

SANITARY VOLUME

A common methodology to allocating costs for sewer utilities is the use of sanitary volume. Sanitary volumes are typically estimated based on metered water usage, especially in regions like Michigan where winter average water usage should provide a reasonable estimate of sanitary volumes for most retail customers.

Some other large regional sewer utilities that serve both combined and separated areas use sanitary volume as a key component of their charge methodology. In effect this results in customers throughout their service area paying for combined areas in proportion to their sanitary volume. The rationale for this approach is often based on a historical perspective that the combined areas were the nucleus of the larger metropolitan area and they were built to accepted standards at the time, which allowed for combined sewers and the overflow of those sewers during rain events.

It may be appropriate to consider allocation of some of GLWA's revenue requirement on the basis of sanitary flow. A potential approach would be to have to primary cost pools, conveyance and treatment, with the treatment cost pool being allocated based on sanitary flows. However, there may still be challenges with such an approach in how some future CSO facilities are allocated between conveyance and treatment.

PEAK VOLUME

Many facilities and operations in the GLWA system are constructed to meet peak volume demands, yet it is not a component of the existing GLWA charge methodology. One potential challenge is the difficulty of determining peak volume by Member Partner Communities. An attempt has been made for some recent discussions, but that estimate is for peak month, while ideally such a determination would be for a shorter period of time, such as a peak day or possibly a longer period to encompass a peak event over more than a 24-hour period.

Peak volume may be a good approach for allocating some costs of the GLWA regional system, and in particular it may make the most sense to allocate the cost of conveyance facilities that need to be sized to meet potential peak volumes.

POPULATION

There has been discussion that population may be a factor used to allocate some portion of GLWA's revenue requirements. In our discussions with Member Partner Communities there is some concern over how population is measured (e.g., permanent residents, daytime workforce, etc.). There is also a concern that population and another proposed factor, sanitary volume, are closely correlated and may provide the appearance of a more precise approach than is really being delivered.

It is not common to use population as a cost allocation methodology (though it is common for utilities to allocate some costs based on number of customers, which may also correlate with population).

LAND AREA

The use of land area has been proposed as an approach to be considered, with distinction between land area with different characteristics related to their sewer service (e.g., combined/separated collection system and presence of foundation drains). While this would offer some advantages in terms of simplification and should be relatively easy to measure with current GIS technology, it would need to be determined at what level different land types would be classified, at the parcel level or some larger grouping (acre, block, square mile, entire Member Partner Community).

The most significant challenge would be determining the difference between different types of characteristics, for example, if a service area with separated system and no foundation drains is considered to have a units of service factor of 1.0, what is the factor for a service area served by combined sewers with foundation drains?

PATH FORWARD

A potential option for a 'Path Forward' with regards to the sewer SHARES and charge simplification was presented on May 3, 2019 to the SHARES Work Group. This approach would use sanitary volume, peak volume, and population to allocate a simplified cost pool that includes everything but industrial surcharge revenues and OMID specific costs.

Each of the three factors was discussed in the previous section of this report. The largest concern from the Member Partner Communities related to population, how it would be measured and whether it was significantly different from sanitary volume.

Combining all costs into a single cost pool may be a little too extreme for cost simplification, as mentioned in the previous section it may make sense for some cost pools to still be used such as conveyance and treatment, depending on the units of service ultimately decided upon to allocate costs.

RECOMMENDED CHARGE METHODOLOGY

Based on the discussion presented throughout this report, including feedback from Member Partner Communities, we are recommending a simplified charge methodology that we believe would provide equity among customers while simplifying the cost of service allocation process. Minimizing impacts on each

Member Partner Community while simplifying the charge methodology was the most important consideration of any proposed change. That was based on feedback we received from the Member Partner Communities throughout this engagement, as discussed in the Member Partner Key Concerns section of this report.

We believe that a three-factor methodology based on sanitary volume, peak volume, and average volume will meet the objectives of Member Partner Communities that tie to charge methodology. Each of these factors would have an associated cost pool, for sanitary volume we believe that cost pool may consist of secondary treatment and solids handling costs at the treatment plant. The cost pool allocated based on peak volume may consist of capital costs associated with the collection and conveyance system, including CSO facilities. Average volume would be used to allocate primary treatment costs at the treatment plant and operating costs of the collection and conveyance system, including CSO facilities. In addition to these primary cost pools, pollutants would still be considered for determining high strength surcharges for industrial customers and OMID Specific costs would be considered under the existing methodology per existing contractual agreements.

Summary of Recommended Charge Methodology

	Sanitary Volume	Peak Volume	Average Volume	Pollutants	OMID Specific
Cost Pool	Secondary Treatment and Solids Handling at Treatment Plant	Capital Cost of Collection/Conveyance System (including CSO Facilities)	Primary Treatment at Treatment Plant and Operational Cost of Collection/Conveyance System (including CSO Facilities)	Pollutant Costs (Surcharge Customers Only)	Direct Allocation (Current Methodology)
Units of Service	Sanitary Volume as reported by Member Partner Communities	Peak Volume as determined by GLWA	Total Average Volume as determined by GLWA	Surcharge Pollutant Loads	Direct Allocation (Current Methodology)

We believe this methodology addresses the key concerns which tie to charge methodology indicated by Member Partner Communities throughout this process, as summarized in the Member Partner Communities Key Concerns section of this report. We believe this is a more simple and understandable approach in terms of the cost pools and units and service that recognizes peak flows of Member Partner Communities, while providing incentive through lower charges to reduce peak flows and tying to cost causation principles. Other key concerns will need to be addressed through implementation, including how stability in charges and impacts on communities are addressed, including how changes may be phased in over a period of time.

Our project team did not have the schedule or budget in this engagement to undertake a more thorough analysis of the impact of this change on all Member Partner Communities, and additional consideration needs to be given to the details of both the cost pools (i.e., what costs should be included in each cost pool) and the units of service (i.e., what period would peak volumes be considered over, would contract capacities be used as peak volumes, and how will sanitary volume be determined). Undertaking this analysis will be important in determining an implementation approach that addresses the Member Partner Communities' key concerns.

We believe that this proposed approach addresses the objectives of the Member Partner Communities while providing an equitable approach to cost allocation that treats each Member Partner Community fairly.

SUBSEQUENT DISCUSSIONS

Following our presentations and discussions with the SHARES Work Group in June and July 2019 a small SHARES ‘Think Tank’ was convened to work towards a methodology that could be agreed upon by the larger group. The ‘Think Tank’ presented their preliminary findings to the SHARES Work Group on October 18, 2019, their memorandum is included in Appendix A of this report.

The conceptual proposal offered by the ‘Think Tank’ indicated that Cost Pools would be reduced to two or three and that units of service would focus on volume measures that could be agreed upon by members and not require lengthy and costly analysis that only provides an ‘illusion of accuracy’. The proposal indicated peak flow will be a unit of service they will consider and that strength of flow is one they would eliminate.

We agree with the concepts and perspectives set forth in the memorandum that these principles are generally consistent with our recommendations in this report, though further development and refinement still needs to be made to more exactly define the cost pools and units of service for each before a more definitive endorsement of the proposal can be made.

Figure 1: Personnel Cost Allocation

Revenue Requirement	WRRF							Wastewater Collection Facilities						
	Primary Pumping	Rack and Grit	Primary Treatment	Aeration	Secondary Treatment	Sludge Dewatering	Sludge Disposal	WRRF General	Lift Stations	CSO Facilities	Interceptors	Industrial Waste Control	Master Meters	General
Wastewater Operations	7.50%	4.00%	8.00%	16.00%	12.00%	10.00%	37.50%					5.00%		
Wastewater Process Control	7.50%	4.00%	8.00%	16.00%	12.00%	25.00%	25.00%					2.50%		
Wastewater Primary Processing	10.00%	15.00%	75.00%											
Wastewater Secondary Processing				50.00%	50.00%									
Wastewater Dewatering Process						100.00%								
Wastewater Incinerations Process							100.00%							
Biosolids Dryer Facility							100.00%							
Total: Personnel Costs	\$19,758,500	\$ 638,410	\$ 698,326	\$ 3,062,462	\$ 2,570,824	\$ 2,427,768	\$ 4,428,715	\$ 5,811,138	\$ -	\$ -	\$ -	\$ -	\$ 120,858	\$ -

Figure 2: Allocation of O&M Functions to Cost Drivers

Function	Revenue Requirement	Common to All									
		Flow	BOD	TSS	PHOS	FOG	Suburban	OMID	CSO	IWC	Detroit
Primary Pumping	6,369,710	100.00%									
Rack and Grit	4,069,013	100.00%									
Primary Chemical Additon	2,103,000				100.00%						
Primary Sedimentation	10,615,000			70.00%	20.00%	10.00%					
Aeration	17,140,010		100.00%								
Secondary Clarification	11,000,100		25.00%	65.00%	10.00%						
Chlorination	2,639,900	100.00%									
Dewatering	18,098,439		15.00%	70.00%	15.00%						
Sludge Treatment	56,791,383		100.00%								
Process Water and Outfall	-	100.00%									
Lift Stations	22,533,175	75.00%					25.00%				
CSO Facilities	18,781,675							100.00%			
Interceptors	11,814,478	96.50%					3.50%				
Industrial Waste Control	7,239,484								100.00%		
Master Meters	3,926,133					100.00%					
Total: O&M	\$ 193,121,500	\$ 41,379,475	\$ 79,396,184	\$ 27,249,472	\$ 8,040,776	\$ 1,061,500	\$ 3,926,133	\$ 6,046,800	\$ 18,781,675	\$ 7,239,484	\$ -
		21.43%	41.11%	14.11%	4.16%	0.55%	2.03%	3.13%	9.73%	3.75%	0.00%

Figure 3: Total Revenue Requirement Allocation

		Common to All										
		Flow	BOD	TSS	PHOS	FOG	Suburban	OMID	CSO	IWC	Detroit	
Allocation Proportion												
O&M Total	1	21.43%	41.11%	14.11%	4.16%	0.55%	2.03%	3.13%	9.73%	3.75%	0.00%	
O&M Non-Commodity	2	20.81%	38.86%	14.02%	3.08%	0.60%	2.47%	3.80%	11.80%	4.55%	0.00%	
Capital	3	47.92%	10.73%	18.28%	3.71%	0.48%	2.05%	1.31%	15.37%	0.14%	0.00%	
Indirect	4	34.99%	25.42%	16.24%	3.88%	0.52%	2.06%	2.23%	12.73%	1.94%	0.00%	
Budget Elements												
O&M	193,122,000	1	41,379,582	79,396,390	27,249,543	8,040,797	1,061,503	3,926,143	6,046,816	18,781,724	7,239,503	-
Operating Pension	10,824,000	2	2,252,796	4,206,322	1,517,956	333,383	65,240	267,054	411,301	1,277,521	492,427	-
Debt Service	214,991,000	3	103,033,504	23,075,582	39,296,791	7,981,223	1,025,543	4,407,728	2,817,116	33,042,669	310,845	-
Non Operating Pension	11,620,700	2	2,418,612	4,515,929	1,629,685	357,922	70,042	286,710	441,574	1,371,553	528,672	-
WRAP	2,261,000	4	791,052	574,657	367,269	87,663	11,646	46,663	50,445	287,726	43,879	-
R&R	627,000	3	300,487	67,298	114,605	23,276	2,991	12,855	8,216	96,366	907	-
Detroit I&E	27,500,000	4	9,621,372	6,989,412	4,467,008	1,066,226	141,649	567,554	613,555	3,499,537	533,686	-
I&E	12,010,600	3	5,756,028	1,289,131	2,195,339	445,876	57,293	246,240	157,380	1,845,948	17,366	-
Operating Reserves	1,853,800	1	397,207	762,135	261,571	77,185	10,189	37,687	58,044	180,288	69,493	-
Non Operating Revenue	(4,570,900)	4	(1,599,212)	(1,161,742)	(742,482)	(177,222)	(23,544)	(94,336)	(101,982)	(581,674)	(88,706)	-
Total: Revenue Requirement	\$ 470,239,200		164,351,428	119,715,114	76,357,286	18,236,328	2,422,552	9,704,300	10,502,466	59,801,657	9,148,068	\$ -

Figure 4: Current Strength of Flow

Strengths (mg/l)	BOD		TSS		PHOS		FOG	
	Value	%	Value	%	Value	%	Value	%
Sanitary	274.45	100.00%	322.94	100.00%	7.62	100.00%	34.82	100.00%
DWII	6.59	2.40%	6.78	2.10%	0.30	4.00%	-	0.00%
WWII	14.55	5.30%	125.95	39.00%	0.19	2.50%	13.96	40.10%

Figure 5: Strength of Flow Calculation

<u>Item</u>	<u>Item Description</u>	<u>BOD</u>	<u>TSS</u>	<u>PHOS</u>	<u>FOG</u>	
1	Total: WRRF Loadings (lbs)	<i>4-year average</i>	176,697,300	255,289,900	4,910,400	27,112,600
2	DWII SoF - Sanitary %	<i>SoF Work Group</i>	2.40%	2.10%	4.00%	0.00%
3	WWII SoF - Sanitary %	<i>SoF Work Group</i>	5.30%	39.00%	2.50%	40.10%
<u>Total Influent Volumes</u>						
4	Sanitary	<i>4-year average</i>	9,634,000	9,634,000	9,634,000	9,634,000
5	DWII	<i>4-year average</i>	12,822,200	12,822,200	12,822,200	12,822,200
6	WWII	<i>4-year average</i>	7,090,300	7,090,300	7,090,300	7,090,300
7	Total: Flows		29,546,500	29,546,500	29,546,500	29,546,500
<u>Weighted Influent Split</u>						
8	Sanitary	= (4)	9,634,000	9,634,000	9,634,000	9,634,000
9	DWII	= (2) * (5)	307,733	269,266	512,888	-
10	WWII	= (3) * (6)	375,786	2,765,217	177,258	2,843,210
11	Total: Weighted Influent		10,317,519	12,668,483	10,324,146	12,477,210
<u>Loading Allocation Factors</u>						
12	Sanitary	= (8) / (11)	93.4%	76.0%	93.3%	77.2%
13	DWII	= (9) / (11)	3.0%	2.1%	5.0%	0.0%
14	WWII	= (10) / (11)	3.6%	21.8%	1.7%	22.8%
<u>Allocated Loadings</u>						
15	Sanitary	= (1) * (12)	164,991,394	194,140,282	4,582,151	20,934,390
16	DWII	= (1) * (13)	5,270,216	5,426,138	243,941	-
17	WWII	= (1) * (14)	6,435,690	55,723,480	84,308	6,178,210
<u>Strengths (mg/l)</u>						
18	Sanitary	= (15) / (4), converted	274.45	322.94	7.62	34.82
19	DWII	= (16) / (5), converted	6.59	6.78	0.30	-
20	WWII	= (17) / (6), converted	14.55	125.95	0.19	13.96

Figure 6: Development of SHARES

Customer	Sanitary	DWII	WWII	Total	BOD	TSS	PHOS	FOG	Volume	BOD	TSS	PHOS	FOG	Volume	Pollutant	CTA
	mc ³	mc ³	mc ³	mc ³	lbs	lbs	lbs	lbs						Share	Share	SHARE
1 OMIID	2,181,200	524,900	244,900	2,951,000	37,793,156	46,101,443	1,050,327	4,953,078	12.46%	21.80%	19.34%	21.82%	19.48%	12.46%	20.42%	16.44%
2 Rouge Valley	1,449,200	751,500	506,200	2,706,900	25,587,274	33,499,970	709,589	3,590,151	11.43%	14.76%	14.05%	14.74%	14.12%	11.43%	14.36%	12.89%
3 Oakland GWK	1,011,100	645,800	820,900	2,477,800	18,326,596	27,100,097	502,950	2,912,390	10.46%	10.57%	11.37%	10.45%	11.46%	10.46%	11.01%	10.73%
4 Evergreen Farmington	997,400	472,500	222,100	1,692,000	17,477,225	22,044,645	486,016	2,360,849	7.14%	10.08%	9.25%	10.10%	9.29%	7.14%	9.61%	8.38%
5 NE Wayne Co	571,600	306,500	454,900	1,333,000	10,328,072	15,223,458	283,106	1,638,452	5.63%	5.96%	6.39%	5.88%	6.45%	5.63%	6.19%	5.91%
6 Allen Park	23,300	8,600	10,100	42,000	411,737	552,548	11,366	59,431	0.18%	0.24%	0.23%	0.24%	0.23%	0.18%	0.23%	0.21%
7 Center Line	28,700	7,800	12,400	48,900	505,976	679,104	13,946	73,169	0.21%	0.29%	0.28%	0.29%	0.29%	0.21%	0.29%	0.25%
8 Farmington	30,400	18,700	10,100	59,200	537,482	699,898	14,935	74,859	0.25%	0.31%	0.29%	0.31%	0.29%	0.25%	0.30%	0.28%
9 Grosse Pointe Park	41,700	25,200	32,300	99,200	753,828	1,104,834	20,697	118,758	0.42%	0.43%	0.46%	0.43%	0.47%	0.42%	0.45%	0.43%
10 Melvindale	41,800	18,600	15,200	75,600	737,306	969,666	20,416	104,075	0.32%	0.43%	0.41%	0.42%	0.41%	0.32%	0.41%	0.37%
11 Grosse Pointe Farms	53,100	43,100	46,800	143,000	969,582	1,456,094	26,632	156,164	0.60%	0.56%	0.61%	0.55%	0.61%	0.60%	0.59%	0.60%
12 Dearborn	420,200	286,700	346,200	1,053,100	7,628,401	11,309,844	209,428	1,214,747	4.45%	4.40%	4.74%	4.35%	4.78%	4.45%	4.59%	4.52%
13 Hamtramck	51,200	106,500	44,600	202,300	961,105	1,427,346	26,908	150,119	0.85%	0.55%	0.60%	0.56%	0.59%	0.85%	0.58%	0.72%
14 Grosse Pointe	12,800	26,700	11,200	50,700	240,352	357,261	6,729	37,573	0.21%	0.14%	0.15%	0.14%	0.15%	0.21%	0.15%	0.18%
15 Harper Woods	3,600	7,500	3,200	14,300	67,641	100,869	1,893	10,611	0.06%	0.04%	0.04%	0.04%	0.04%	0.06%	0.04%	0.05%
16 Highland Park	76,000	158,300	66,200	300,500	1,426,725	2,118,783	39,946	222,830	1.27%	0.82%	0.89%	0.83%	0.88%	1.27%	0.86%	1.06%
17 Redford Township	3,200	6,600	2,800	12,600	60,057	89,284	1,681	9,393	0.05%	0.03%	0.04%	0.03%	0.04%	0.05%	0.04%	0.04%
18 Wayne County #3	500	1,000	400	1,900	9,337	13,643	262	1,435	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
19 Total: Suburban Customers	6,997,000	3,416,500	2,850,500	13,264,000	123,821,854	164,848,787	3,426,826	17,688,083	55.99%	71.44%	69.15%	71.20%	69.58%	55.99%	70.13%	63.06%
20 Detroit	2,637,000	5,491,200	2,298,600	10,426,800	49,504,518	73,528,449	1,386,019	7,733,031	44.01%	28.56%	30.85%	28.80%	30.42%	44.01%	29.87%	36.94%
21 Total: Allocable Units	9,634,000	8,907,700	5,149,100	23,690,800	173,326,372	238,377,237	4,812,845	25,421,114	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Figure 7: Customer Charge Development

	<u>CTA</u>	<u>Suburban</u>	<u>OMID</u>	<u>CSO</u>	<u>IWC</u>	<u>Total</u>		
Budget From Charges								
Total Revenue Requirement	381,082,708	9,704,300	10,502,466	59,801,657	9,148,068	470,239,200		
Allocated to Industrial	5,115,100				9,148,068	\$ 14,263,168		
Net Budget from Charges	375,967,608	9,704,300	10,502,466	59,801,657	-	455,976,032		
							Ownership	
<u>Customer</u>	<u>CTA</u>	<u>Suburban</u>	<u>OMID</u>	<u>CSO</u>	<u>IWC</u>	<u>Total</u>	<u>Adj.</u>	<u>Adj. Total</u>
OMID	61,792,156	2,152,556	10,502,466	1,585,342		76,032,520	1,223,529	77,256,050
Rouge Valley	48,475,384	1,974,558	-	1,767,737		52,217,679	1,122,354	53,340,033
Oakland GWK	40,360,123	1,807,449	-	1,349,125		43,516,697	1,027,368	44,544,065
Evergreen Farmington	31,496,686	1,234,229	-	888,055		33,618,970	701,545	34,320,515
SE Macomb San District	22,219,686	972,417	-	702,071		23,894,174	552,730	24,446,904
Dearborn	17,138,483	781,114	-	975,365		18,894,962	443,991	19,338,953
Grosse Pointe Farms	2,240,767	104,379	-	301,400		2,646,546	59,330	2,705,876
Grosse Pointe Park	1,635,459	72,409	-	37,077		1,744,945	41,158	1,786,102
Melvindale	1,379,801	55,127	-	44,253		1,479,182	31,335	1,510,516
Farmington	1,035,791	43,203	-	31,097		1,110,091	24,557	1,134,648
Center Line	928,640	35,599	-	33,489		997,728	20,235	1,017,963
Allen Park	772,613	30,588	-	18,539		821,740	17,386	839,126
Highland Park	3,908,183	209,967	-	1,234,904		5,353,055	119,347	5,472,402
Hamtramck	3,088,574	171,257	-	953,836		4,213,668	97,344	4,311,012
Grosse Pointe	751,935	40,438	-	136,348		928,721	22,985	951,707
Harper Woods	208,662	10,887	-	7,774		227,323	6,188	233,512
Redford Township	137,228	7,085	-	79,536		223,850	4,027	227,877
Wayne County #3	20,678	1,037	-	20,931		42,646	589	43,235
Subtotal: Suburban Wholesale	237,590,850	9,704,300	10,502,466	10,166,880	-	267,964,496	5,516,000	273,480,496
City of Detroit	138,380,518	-	-	49,635,375	-	188,015,893	(5,516,000)	182,499,893
Total:	375,971,368	9,704,300	10,502,466	59,802,255	-	455,980,389	-	455,980,389

APPENDIX A: 'THINK TANK' MEMORANDUM

MEMORANDUM

Wastewater Charges Methodology
Status Report

October 16, 2019

To: Sewer SHAREs Work Group

From: SHAREs Think Tank Group

Suzanne Coffey	Carrie Cox / Tim Minor
Bart Foster	Vyto Kaunelis
Tim Prince	Eric Rothstein
Maria Sedki	Sam Smalley

The small SHAREs “Think Tank” work group has devoted significant time and effort seeking to establish a recommended new wastewater charge methodology. Many alternative approaches have been considered, and an extraordinary amount of detailed data has been analyzed. A robust discussion of potentially including or refining a number of different factors into the methodology has been undertaken. The group has achieved a general consensus on a recommended path forward for Sewer SHAREs that embraces the guiding principles of simplicity and stability in wastewater charges.

The approach under consideration requires further vetting of technical data and development of a carefully prepared process to inform stakeholders as they consider the recommendation. In addition, an alternative approach remains on the table that will require further consideration of incorporating “peaking” into the methodology

The group believes it is imprudent to attempt to complete transition to a new methodology for the FY 2021 wastewater charges. The group is structuring a work plan to complete the path forward by June 2020 in order to support full consideration for FY 2022 wastewater charge development. This work plan will seek to strategically use further information emerging from the Master Plan including proposed project concepts that may not directly align with traditional assignments to the 83/17 Combined Sewer Overflow (CSO) Cost Pool.

The group also believes it would be imprudent to make an interim adjustment to SHAREs while final details of a new approach and further understanding of Master Plan projects are in progress. We are concerned that two separate adjustments, which may be directionally inconsistent with respect to methodology and impact, could only serve to confuse stakeholders and frustrate our overarching objective of ultimate acceptance of a simpler, stable and equitable methodology. As such the group recommends that the existing SHAREs remain in effect for determination of FY 2021 wastewater charges.

Path Forward Agreements in Principle

The group has coalesced around these general preferences regarding a proposed new charge methodology:

1. Establish two or three “Cost Pools” and related Units of Service measures and eliminate the rest
 - *Consistent with general Raftelis study recommendations*
2. Focus on simplified, volume-based categories to establish Units of Service
 - *No Strength of Flow / Pollutants*
3. Reduce reliance on expensive studies that provide an “illusion of accuracy”
 - *Consistent with Raftelis study recommendations*
 - *Reduce costs, saving money for all customers*
4. Use discretely measurable volumes of both sanitary and total flow
 - *Metered flows for the System in total and the Master Metered Customers*
 - *Use studies undertaken in the last 12 months along with historical D+ studies to split the remainder into D+ and “Common” based on simplified assumptions*
5. Use longer term averaging of historical annual flow balance data for Units of Service
 - *10-year average (start with 7 years to match current flow balance protocols)**
 - *Recognize service area / operational / demographic adjustments where appropriate*
6. The recently completed FY 2019 Flow Balance should be the final year used in historical averages for the FY 2022 SHAREs
 - *Imprudent to attempt to incorporate fully vetted FY 2020 data*
 - *The FY 2019 results include “outliers” that need to be fully vetted and settled prior to utilization*
7. Consider cost pool assignments for the proposed conceptual projects that have recently emerged from the wastewater Master Plan Project
 - *Consider use of the 83/17 CSO Cost Pool*
 - *Consider cost pools needed for projects which benefit the region differently than a strict CSO or non-CSO benefit (wet and dry weather benefits)*

* An illustration of interpretation of recent flow balances is available in the appendix.

- *Consider cost allocations of projects which make use of local systems for the regional benefit*
 - *Consider other Regional System operational complexities and the need to address them in a holistic manner*
8. Consider possibility of incorporating an additional peak flow component into recommended methodology
 - *Aligns with Raftelis study recommendation*
 - *May result in modified Cost Pools with a peak flow Unit of Service measure rather than the 83/17 CSO Cost Pool*
 9. Use the FY 2020 Cost of Service Study[†] to establish guidance for populating Cost Pools, then simplify the application with policy driven assignments of weightings to Units of Service measures
 - *Results in **simplified** method to explain and understand*
 - *Promotes long-term **stability***
 - *Embraces notion that future focus areas are designed to serve overall mission of Wastewater Master Plan*
 10. Establish periodic review of policy weightings developed in (9) to ensure adherence to general “cost causative” factors

[†] With updates as appropriate from the FY 2021 Cost of Service Study



Financial Services Audit Committee Communication

Date: December 19, 2019

To: Great Lakes Water Authority Audit Committee

From: Nicolette N. Bateson, CPA, Chief Financial Officer/Treasurer

Re: Overview – Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year 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 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 establishes costs for allocation among member partners.

Analysis: GLWA’s financial strategy which drives the proposed biennial budget and five-year financial plan are a) optimizing operations and maintenance costs, b) lowering GLWA’s high debt burden through effective use of bond refunding opportunities combined with a programmatic use of revenue financed capital (i.e. pay as you go), and c) limiting average annual charge increases to no more than 4%.

Attached are the following related to discussion of the upcoming FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan.

1. Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Plan Executive Summary
2. Memo from The Foster Group (TFG) (links the GLWA internally prepared proposed budget with the overall potential charges impact)
3. Budget One-Pager which provides highlights of the FY 2021 budget year
4. Schedule of upcoming activities and due dates related to the budget cycle
5. Staffing Plan and Full Time Equivalent (FTE) tables for FY 2018 through FY 2025
6. Operations & Maintenance Expense by Cost Category - trend with three years of history
7. Operations & Maintenance Expense by Cost Center - with highest & lowest difference

Proposed Action: Receive and file this report for further review and discussion at the next Audit Committee meeting on January 17, 2020 at 8:00 am.

Great Lakes Water Authority
Proposed FY 2021 & FY 2022 Proposed Biennial Budget & Five-Year Plan through FY 2025
Executive Summary Schedules
As of December 19, 2019

Schedule 1A - Water System Revenue Requirements Budget

Water System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Amended	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	\$ 338,546,200	\$ 7,966,200	2.4%	\$ 349,895,500	\$ 11,349,300	3.4%	\$360,425,700	\$ 371,308,500	\$ 382,533,600
10.1 Non-Operating Revenue	9,084,200	7,068,800	4,854,300	(4,229,900)	-46.6%	3,807,100	(1,047,200)	-21.6%	3,887,900	3,934,500	3,966,700
Total Revenues	339,664,200	333,201,500	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
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	138,799,700	1,242,100	0.9%	140,532,100	1,732,400	1.2%	149,614,100	159,437,300	167,165,800
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	1,684,300	(14,000)	-0.8%	1,768,500	84,200	5.0%	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	23,608,300	30,096,300	(29,200)	-0.1%	36,104,800	6,008,500	20.0%	36,628,800	44,244,100	44,272,900
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	\$ 333,201,500	\$ 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

Great Lakes Water Authority
Proposed FY 2021 & FY 2022 Proposed Biennial Budget & Five-Year Plan through FY 2025
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Schedule 1B - Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Amended	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 (prior to adjustment)	\$ 471,874,500	\$471,874,500	\$489,411,900	\$ 17,537,400	3.7%	\$504,511,600	\$ 15,099,700	3.1%	\$ 519,796,300	\$ 535,450,400	\$ 551,713,700
Subtotal Revenues from Charges	471,874,500	471,874,500	489,411,900	17,537,400	3.7%	504,511,600	15,099,700	3.1%	519,796,300	535,450,400	551,713,700
10.1 Non-Operating Revenue	8,730,800	6,562,500	5,611,600	(3,119,200)	-35.7%	5,362,500	(249,100)	-4.4%	5,374,100	5,475,100	5,439,500
Total Revenues	480,605,300	478,437,000	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	202,710,400	(13,028,400)	-6.0%	211,560,900	8,850,500	4.4%	207,244,700	217,602,700	208,393,500
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	2,464,000	61,000	2.5%	2,549,400	85,400	3.5%	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	25,229,300	54,958,300	29,496,700	115.8%	55,555,000	596,700	1.1%	69,630,200	87,166,600	109,279,400
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	478,437,000	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

Great Lakes Water Authority
Proposed FY 2021 & FY 2022 Proposed Biennial Budget & Five-Year Plan through FY 2025
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Schedule 1C - Combined Water and Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year		Biennial Budget						Forecast		
	FY 2020 Adopted	FY 2020 Amended	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	\$ 827,958,100	\$ 25,503,600	3.2%	\$ 854,407,100	\$ 26,449,000	3.2%	\$ 880,222,000	\$ 906,758,900	\$ 934,247,300
Subtotal Revenues from Charges	802,454,500	798,007,200	827,958,100	25,503,600	3.2%	854,407,100	26,449,000	3.2%	880,222,000	906,758,900	934,247,300
10.1 Non-Operating Revenue	17,815,000	13,631,300	10,465,900	(7,349,100)	-41.3%	9,169,600	(1,296,300)	-12.4%	9,262,000	9,409,600	9,406,200
Total Revenues	820,269,500	811,638,500	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
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	341,510,100	(11,786,300)	-3.3%	352,093,000	10,582,900	3.1%	356,858,800	377,040,000	375,559,300
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	4,148,300	47,000	1.1%	4,317,900	169,600	4.1%	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	48,837,600	85,054,600	29,467,500	53.0%	91,659,800	6,605,200	7.8%	106,259,000	131,410,700	153,552,300
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	811,638,500	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

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

Flow of Funds Basis		FY 2021 Water Fund	FY 2021 Sewer Fund	FY 21 Combined (Informational Only)	FY 2022 Water Fund	FY 2022 Sewer Fund	FY 22 Combined (Informational Only)
Revenues							
1	Regional System Wholesale Revenues	\$ 338,546,200	\$ 489,411,900	\$ 827,958,100	\$ 349,895,500	\$ 504,511,600	\$ 854,407,100
2	Local System Revenues	75,007,000	101,867,700	176,874,700	76,420,000	119,227,500	195,647,500
3	Miscellaneous Revenue (Local System)	2,200,000	500,000	2,700,000	2,200,000	500,000	2,700,000
4	Non-Operating Revenue (Regional System)	4,854,300	5,611,600	10,465,900	3,807,100	5,362,500	9,169,600
5	Total Revenues	<u>\$ 420,607,500</u>	<u>\$ 597,391,200</u>	<u>\$ 1,017,998,700</u>	<u>\$ 432,322,600</u>	<u>\$ 629,601,600</u>	<u>\$ 1,061,924,200</u>
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	35,721,100	71,425,100	107,146,200	36,811,500	73,568,900	110,380,400
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	<u>183,168,400</u>	<u>270,051,200</u>	<u>453,219,600</u>	<u>186,774,000</u>	<u>276,183,500</u>	<u>462,957,500</u>
11	Net Revenues after Operations & Maintenance Expense	<u>\$ 237,439,100</u>	<u>\$ 327,340,000</u>	<u>\$ 564,779,100</u>	<u>\$ 245,548,600</u>	<u>\$ 353,418,100</u>	<u>\$ 598,966,700</u>
Debt Service by Lien							
12	Senior Lien Bonds	126,106,400	125,656,600	251,763,000	128,612,200	139,767,900	268,380,100
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	5,236,400	54,321,500	59,557,900	13,342,400	57,541,400	70,883,800
15	Total Debt Service	<u>\$ 180,623,600</u>	<u>\$ 234,620,100</u>	<u>\$ 415,243,700</u>	<u>\$ 186,638,200</u>	<u>\$ 245,413,600</u>	<u>\$ 432,051,800</u>
Debt Service Coverage							
16	Senior Lien Bonds (11)/(12)	1.88	2.61		1.91	2.53	
17	Second Lien Bonds (11) / [(12)+(13)]	1.35	1.82		1.42	1.88	
18	SRF Junior Lien Bonds (11) / (15)	1.31	1.40		1.32	1.44	

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Schedule 5A - Water Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	FY 2020 Projected	FY 2021 Requested	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Water Improvement & Extension Fund						
Water System Revenue Transfers	\$23,608,300	\$30,096,300	\$36,104,800	\$36,628,800	\$44,244,100	\$44,272,900
Receipt of DWSD Shortfall Loan	-	-	-	-	-	-
Grant Revenues	-	-	-	-	-	-
Earnings on Investments, Net	-	-	-	-	-	-
Capital Outlay	(10,125,300)	(17,892,000)	(13,760,200)	(5,427,400)	(5,457,700)	(4,748,000)
Revenue Financed Capital - Strategic	(50,000,000)	(75,000,000)	(95,000,000)	(30,000,000)	(40,000,000)	(42,000,000)
Increase (Decrease) in I&E Reserves	(\$36,517,000)	(\$62,795,700)	(\$72,655,400)	\$1,201,400	(\$1,213,600)	(\$2,475,100)
Beginning Year Balance	264,584,900	228,067,900	165,272,200	92,616,800	93,818,200	92,604,600
Projected Ending Balance	\$228,067,900	\$165,272,200	\$92,616,800	\$93,818,200	\$92,604,600	\$90,129,500

(Note: shortfall loan is not applicable for the water system.)

Great Lakes Water Authority
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Schedule 5B - Sewer Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	FY 2020 Projected	FY 2021 Requested	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Sewer Improvement & Extension Fund						
Sewer System Revenue Transfers	\$25,229,300	\$54,958,300	\$55,555,000	\$69,630,200	\$87,166,600	\$109,279,400
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)	(9,755,200)	(10,375,800)	(14,757,200)
Revenue Financed Capital - Strategic	(15,000,000)	(45,000,000)	(70,000,000)	(60,000,000)	(75,000,000)	(95,000,000)
Increase (Decrease) in I&E Reserves	\$9,395,400	\$8,765,500	(\$21,534,700)	(\$125,000)	\$1,790,800	(\$477,800)
Beginning Year Balance	96,648,700	106,044,100	114,809,600	93,274,900	93,149,900	94,940,700
Projected Ending Balance	\$106,044,100	\$114,809,600	\$93,274,900	\$93,149,900	\$94,940,700	\$94,462,900

Great Lakes Water Authority
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Schedule 5C - Water Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	FY 2020 Projected	FY 2021 Requested	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Water Construction Bond Fund						
Bond Proceeds, Net	\$0	\$0	\$0	\$171,080,000	\$122,200,000	\$122,200,000
Earnings on Investments, Net	1,076,600	710,300	204,400	-	-	-
Transfer from Improvement & Extension Fund	50,000,000	75,000,000	95,000,000	30,000,000	40,000,000	42,000,000
Contributions In Aid of Construction	-	-	-	-	-	-
Grant Revenues (DWRP Loans)	12,898,300	12,365,800	16,590,200	18,889,800	18,549,900	-
Project Expenditures	(78,220,000)	(110,673,000)	(152,930,300)	(171,608,200)	(180,925,100)	(164,206,400)
Increase (Decrease) in Construction Funds	(\$14,245,100)	(\$22,596,900)	(\$41,135,700)	\$48,361,600	(\$175,200)	(\$6,400)
Beginning Year Balance	92,331,900	78,086,800	55,489,900	14,354,200	62,715,800	62,540,600
Projected Ending Balance	\$78,086,800	\$55,489,900	\$14,354,200	\$62,715,800	\$62,540,600	\$62,534,200

Great Lakes Water Authority
Proposed FY 2021 & FY 2022 Proposed Biennial Budget & Five-Year Plan through FY 2025
Executive Summary Schedules
As of December 19, 2019

Schedule 5D - Sewer Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	FY 2020 Projected	FY 2021 Requested	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Sewer Construction Bond Fund						
Bond Proceeds, Net	\$0	\$0	\$59,220,000	\$ 46,060,000	\$97,760,000	\$50,760,000
Earnings on Investments, Net	355,200	-	-	300,600	17,400	367,200
Transfer from Improvement & Extension Fund	15,000,000	45,000,000	70,000,000	60,000,000	75,000,000	95,000,000
Contributions In Aid of Construction	-	-	-	-	-	-
Grant Revenues (CWRP Loans)	40,505,000	33,200,000	15,112,000	13,500,000	-	-
Project Expenditures	(131,703,100)	(82,978,500)	(95,843,500)	(119,716,600)	(172,769,300)	(146,148,200)
Increase (Decrease) in Construction Funds	(\$75,842,900)	(\$4,778,500)	\$48,488,500	\$144,000	\$8,100	(\$21,000)
Beginning Year Balance	82,031,700	6,188,800	1,410,300	49,898,800	50,042,800	50,050,900
Projected Ending Balance	\$6,188,800	\$1,410,300	\$49,898,800	\$50,042,800	\$50,050,900	\$50,029,900

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MEMORANDUM

FY 2021 Budget/Charge Planning
Executive Summary

December 17, 2019

To: Nicolette Bateson

From: Bart Foster

This memorandum has been prepared to summarize observations based on our review of the preliminary GLWA budget plan for FY 2021. Via our review we have updated our comprehensive five-year financial forecasts, and those updated forecasts have been used to prepare the budget summary exhibits presented nearby. This commentary focusses on the budget plan for FY 2021, in support of the proposed Water and Sewer charges that will be presented next month.

Executive Summary of Preliminary FY 2021 Budget / Charge Adjustments

- The average FY 2021 “System” Charge Adjustment for each System is below 4%
 - *Water = 3.8%, Sewer = 3.7%*
 - *Impacts on the on the overall Suburban Wholesale and Detroit Customer Classes, and on individual Member Partners, will be determined via the Cost of Service Study and presented next month.*
- The FY 2021 financial plan embraces GLWA’s commitment to stable and increasing “bottom line” contributions to the Improvement and Extension (“I&E”) Fund(s) and the accompanying debt service coverage ratios.
- The “drivers” for the charge increases are somewhat different between Water and Sewer, as illustrated below

	<u>Water</u>	<u>Sewer</u>	<u>Combined</u>
<u>Charge Increase Drivers - %</u>			
Revenue Requirement Increase	1.1%	3.0%	2.2%
Negative Sales Revenue Variance	1.4%	0.0%	0.6%
Negative Investment Income Variance	<u>1.3%</u>	<u>0.7%</u>	<u>0.9%</u>
Total	3.8%	3.7%	3.7%

- *The Water charge adjustment is designed to support a moderate increase in overall revenue requirements, and to address negative baseline revenue budgets associated with both sales and investment income.*
- *The Sewer revenue requirement increase is a bit larger, but the baseline Sewer revenues do not have to overcome negative sales revenue budget to the entirely fixed nature of the Sewer charges. Sewer charges must also accommodate lower forecasted investment income.*
- The Operation and Maintenance Expense (“O&M”) Budget reflects detailed review and recognition of 3 full years of GLWA experience.

	<u>FY 2020</u>	<u>FY 2021</u>	<u>Variance</u>	<u>% Variance</u>
<u>O&M Expense - \$ millions</u>				
Water	131.5	137.1	5.6	4.3%
Sewer	<u>187.1</u>	<u>184.9</u>	<u>(2.1)</u>	-1.1%
Combined	318.5	322.1	3.5	1.1%

- *Overall increase from FY 2020 budget is 1.1%*
- *Water / Sewer impacts reflect actual experience and specific budget programs.*
- The debt service amounts in the total Revenue Requirement BUDGETs reflect natural changes in the existing principal and interest schedules, but do not reflect any issuance of new revenue bonds during FY 2021.
- The debt service amounts in the total Revenue Requirement BUDGETs also reflect anticipated savings with the planned refunding transactions in late FY 2020. * See I&E Deposit commentary below.
 - *Projected Water savings = \$4.8 million*
 - *Projected Sewer savings = \$7.0 million*
- The FY 2021 budget amounts associated with Master Bond Ordinance (“MBO”) requirements are largely fixed and the same as the FY 2020 amounts.
 - *Legacy Pension Reimbursement, Lease Payment, WRAP Fund contribution*
- Amounts not required to fund O&M, debt service, and MBO requirements represent to “bottom line” contributions to the I&E Fund (and operating reserves). These amounts support the measure of debt service coverage.
 - *The Water “bottom line” amounts are stable compared to FY 2020*

- *The Sewer “bottom line” amounts reflect significant improvement compared to FY 2020, and are now more closely aligned with the Water figures*
 - ** To the extent that actual refinancing results vary from those assumed above, it is our understanding that GLWA intends to adjust the I&E deposits accordingly, without impacting the overall BUDGET or Charge Adjustments*
- The following schedule provides additional perspective on key indices for GLWA budget plans since FY 2017

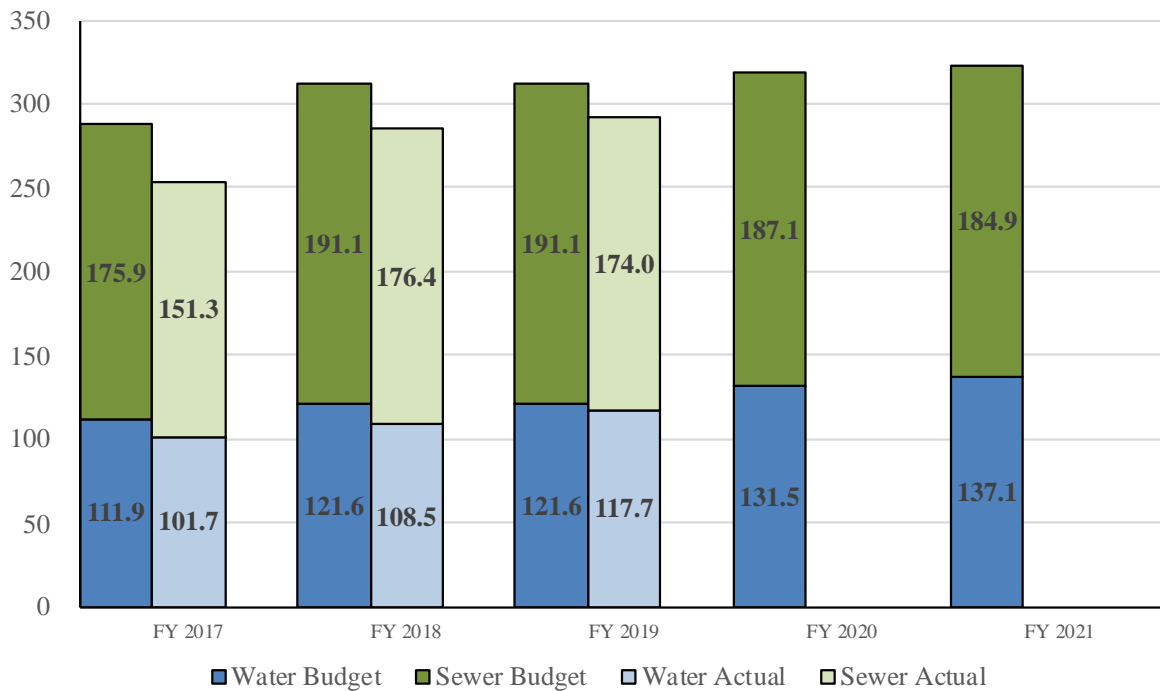
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<u>Water</u>					
Annual Change in Budgeted Revenue Req't (a)	4.0%	-0.9%	1.0%	2.5%	1.1%
<u>Annual Average Charge Increase</u>					
Total Regional System, Including Detroit Customer Class	4.5%	1.9%	1.6%	0.6%	3.8%
<u>(a) Revenue Requirement Budget Indices</u>					
O&M Budget Adjustment (b)	4.0%	8.7%	0.0%	8.2%	4.3%
Budgeted Deposit to I&E Fund - \$ millions	23.8	32.8	39.1	30.1	30.1
Budgeted Deposit to All Reserve Funds - \$ millions	23.8	34.6	39.1	34.1	31.0
Regional System Debt Service Coverage	1.34	1.48	1.52	1.47	1.44
<u>Sewer</u>					
Annual Change in Budgeted Revenue Req't (a)	4.0%	0.3%	1.0%	2.2%	3.0%
<u>Annual Average Charge Increase</u>					
Total Regional System, Including Detroit Customer Class	8.3%	-0.7%	0.1%	0.8%	3.7%
<u>(a) Revenue Requirement Budget Indices</u>					
O&M Budget Adjustment (b)	4.0%	8.7%	0.0%	-2.1%	-1.1%
Budgeted Deposit to I&E Fund - \$ millions	14.1	11.9	12.2	25.5	55.0
Budgeted Deposit to All Reserve Funds - \$ millions	14.1	14.5	12.2	25.5	55.0
Regional System Debt Service Coverage	1.25	1.27	1.25	1.31	1.48
<u>Combined Water and Sewer</u>					
Annual Change in Budgeted Revenue Req't (a)	4.0%	-0.2%	1.0%	2.3%	2.2%
<u>Annual Average Charge Increase</u>					
Total Regional System, Including Detroit Customer Class	6.7%	0.3%	0.7%	0.7%	3.8%
<u>(a) Revenue Requirement Budget Indices</u>					
O&M Budget Adjustment (b)	4.0%	8.7%	0.0%	1.9%	1.1%
Budgeted Deposit to I&E Fund - \$ millions	37.9	44.7	51.3	55.6	85.1
Budgeted Deposit to All Reserve Funds - \$ millions	37.9	49.1	51.3	59.6	85.9
Regional System Debt Service Coverage	1.29	1.35	1.35	1.37	1.46

(b) FY 2018 Budget reflects reassignment of \$10 million per system from minor capital expense to O&M expense.

Additional commentary on these executive summary observations follows.

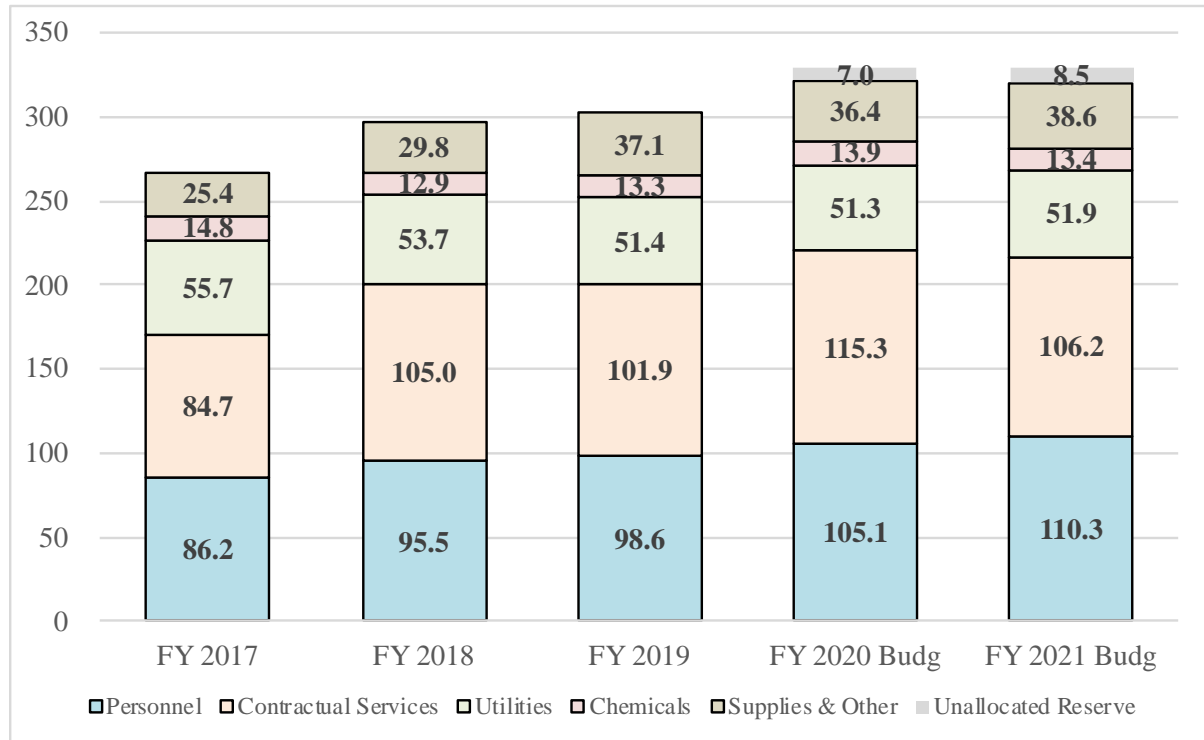
Operation and Maintenance Expense Budget

The chart below summarizes overall budgeted O&M expense (in \$ millions) for FYs 2017 through FY 2021 (preliminary) and compares actual reported figures for FYs 2017 through 2019. The FY 2021 O&M budget reflects detailed review and recognition of 3 full years of GLWA experience.



	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
Water Budget	111.9	121.6	121.6	131.5	137.1
Sewer Budget	<u>175.9</u>	<u>191.1</u>	<u>191.1</u>	<u>187.1</u>	<u>184.9</u>
Total Budget	287.7	312.6	312.6	318.5	322.1
Water Actual	101.7	108.5	117.7		
Sewer Actual	<u>151.3</u>	<u>176.4</u>	<u>174.0</u>		
Total Actual	253.0	284.9	291.7		
Water Variance	(10.1)	(13.0)	(3.8)		
Sewer Variance	<u>(24.5)</u>	<u>(14.7)</u>	<u>(17.1)</u>		
Total Variance	(34.7)	(27.7)	(20.9)		
Water % Variance	-9.1%	-10.7%	-3.2%		
Sewer % Variance	-14.0%	-7.7%	-8.9%		
Total % Variance	-12.1%	-8.9%	-6.7%		

Additional perspective on the O&M Budget is provided by examining the major cost types included in the budget. (Figures in \$ millions)



	Actual			Budget		FY 2021 Budg vs		FY 2021 Budg vs	
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020 B	FY 2019	FY 2020 B
Personnel	86.2	95.5	98.6	105.1	110.3	11.7	5.2	11.9%	5.0%
Contractual Services	84.7	105.0	101.9	115.3	106.2	4.3	(9.2)	4.2%	-7.9%
Utilities	55.7	53.7	51.4	51.3	51.9	0.5	0.6	1.1%	1.2%
Chemicals	14.8	12.9	13.3	13.9	13.4	0.1	(0.5)	1.1%	-3.4%
Supplies & Other	25.4	29.8	37.1	36.4	38.6	1.5	2.2	4.1%	6.1%
Subtotal	266.7	296.9	302.3	322.0	320.5	18.2	(1.6)	6.0%	-0.5%
Unallocated Reserve	0.0	0.0	0.0	7.0	8.5	8.5	1.5	NA	22.2%
Gross Total	266.7	296.9	302.3	329.0	329.0	26.7	(0.0)	8.8%	0.0%
Capital Program Allocation	(2.1)	(1.7)	(3.4)	(5.4)	(3.5)	(0.1)	1.9	3.4%	-35.4%
Shared Services	(11.7)	(9.9)	(7.1)	(5.0)	(3.4)	3.7	1.6	-52.2%	-32.1%
Operation and Maintenance Expense	252.9	285.3	291.7	318.5	322.1	30.3	3.5	10.4%	1.1%

Personnel Costs reflect the largest area of budget increase, reflective of the continual ramp up towards fulfilling the staffing plan and of the underlying prices of salaries and fringe benefits. Contractual services reflect a budget reduction for FY 2020. Commodity costs associated with chemicals and utilities are remarkably stable. The unallocated reserve reflects a fairly conservative allowance for unanticipated expenditures. We note that the total “gross” FY 2021 O&M budget is actually the same as the FY 2020 budget. Lower offsets related to the capital program allocation and shared services result in the overall 1.1% increase on a net basis.

Water Revenue Requirement BUDGET

The table below compares the preliminary FY 2021 budgeted Water revenue requirements with the original (used for charge development) FY 2020 budget. *(Figures in \$ millions)*

	(1)	(2)	(3)	(4)
	Baseline FY 2020 BUDGET	Preliminary FY 2021 BUDGET	Variance	% Variance
<u>Baseline Establishment</u>				
1	Baseline FY 2020 Revenue Requirement Budget	339.7	339.7	
2	Revenue Requirement Index		1.1%	
3	Budgeted FY 2021 Revenue Requirement [1]*(1+[2])	339.7	343.4	3.7 1.1%
4	less: Forecasted Investment Income	(9.1)	(4.9)	4.2 -46.6%
5	Revenues Required from Charges [3] + [4]	330.6	338.5	8.0 2.4%
6	Revenues Under Existing Charges	330.6	326.1	(4.5) -1.4%
7	Revenues Required from Charge Increases [5] - [6]		12.5	
8	Projected Average Charge Increase [7] / [6]		3.8%	
<u>Revenue Requirement Specifics</u>				
9	Operation and Maintenance Budget	131.5	137.1	5.6 4.3%
10	Legacy Pension Reimbursement - Operating	6.0	6.0	0.0 0.0%
11	Debt Service (a)	137.6	138.8	1.2 0.9%
12	Transfer to Pension Obligation Payment Fund	6.3	6.3	0.0 0.0%
13	Transfer to WRAP Fund	1.7	1.7	(0.0) -0.8%
14	Lease Payment - Transfer to Detroit Local I&E	22.5	22.5	0.0 0.0%
15	Operating Reserve Requirement	4.0	0.9	(3.1) -78.0%
16	Subtotal Rev Req'ts [9] thru [15]	309.5	313.3	3.8 1.2%
17	Balance = Transfer to GLWA Regional I&E [3] - [16]	30.1	30.1	(0.0) -0.1%
18	Regional Debt Service Coverage Ratio	1.47	1.44	
<u>(a) Debt Service Specifics</u>				
19	Existing Revenue Bonds	135.8	139.9	4.1 3.0%
20	Forecasted Revenue Bonds	0.0	0.0	0.0 0.0%
21	Existing SRF Loans	1.8	2.6	0.9 48.5%
22	Forecasted SRF Loans	0.0	1.0	1.0 0.0%
23	Subtotal	137.6	143.6	6.0 4.4%
24	less: Forecasted Refinancing Savings	0.0	(4.8)	(4.8) 0.0%
25	Budgeted Debt Service	137.6	138.8	1.2 0.9%

This provides more detailed comparisons of the observations expressed in the Executive Summary. Note the debt service specifics in footnote (c). The FY 2021 principal and interest requirements on existing revenue bonds reflects a natural increase compared to FY 2020. In addition, the amounts required for existing and forecasted SRF loans is naturally increasing as GLWA's participation in DWRF funding of water projects increases. As a result, the overall budgeted debt service for FY 2021 is an increase over FY 2020 despite the recognition of forecasted refinancing savings. This has negative implications on the budgeted FY 2021 "bottom line" contribution for the Water Fund.

Sewer Revenue Requirement BUDGET

Here's the same comparison for the preliminary FY 2021 Sewer revenue requirement budget with the original (used for charge development) FY 2020 budget. (*Figures in \$ millions*)

	(1)	(2)	(3)	(4)
	Baseline FY 2020 BUDGET	Preliminary FY 2021 BUDGET	Variance	% Variance
<u>Baseline Establishment</u>				
1	Baseline FY 2020 Revenue Requirement Budget	480.6	480.6	
2	Revenue Requirement Index		3.0%	
3	Budgeted FY 2021 Revenue Requirement [1]*(1+[2])	480.6	495.0	14.4 3.0%
4	less: Forecasted Investment Income	(8.7)	(5.6)	3.1 -35.7%
5	Revenues Required from Charges [3] + [4]	471.9	489.4	17.5 3.7%
6	Revenues Under Existing Charges	471.9	471.9	0.0 0.0%
7	Revenues Required from Charge Increases [5] - [6]		17.5	
8	Projected Average Charge Increase [7] / [6]		3.7%	
<u>Revenue Requirement Specifics</u>				
9	Operation and Maintenance Budget	187.1	184.9	(2.1) -1.1%
10	Legacy Pension Reimbursement - Operating	10.8	10.8	0.0 0.0%
11	Debt Service (a)	215.7	202.7	(13.0) -6.0%
12	Transfer to Pension Obligation Payment Fund	11.6	11.6	0.0 0.0%
13	Transfer to WRAP Fund	2.4	2.5	0.1 2.5%
14	Lease Payment - Transfer to Detroit Local I&E	27.5	27.5	0.0 0.0%
15	Operating Reserve Requirement	0.0	0.0	0.0 0.0%
16	Subtotal Rev Req'ts [9] thru [15]	455.1	440.1	(15.1) -3.3%
17	Balance = Transfer to GLWA Regional I&E [3] - [16]	25.5	55.0	29.5 115.8%
18	Regional Debt Service Coverage Ratio	1.31	1.48	
<u>(a) Debt Service Specifics</u>				
19	Existing Revenue Bonds	161.0	155.7	(5.3) -3.3%
20	Forecasted Revenue Bonds	1.8	0.0	(1.8) -100.0%
21	Existing SRF Loans	52.9	53.6	0.7 1.3%
22	Forecasted SRF Loans	0.0	0.4	0.4 0.0%
23	Subtotal	215.7	209.7	(6.0) -2.8%
24	less: Forecasted Refinancing Savings	0.0	(7.0)	(7.0) 0.0%
25	Budgeted Debt Service	215.7	202.7	(13.0) -6.0%

Again, note the debt service specifics in footnote (c). Contrary to Water, the FY 2021 principal and interest requirements on existing revenue bonds reflects a natural *decrease* compared to FY 2020. In addition, the projected revenue bond issue included in the FY 2020 budget has been delayed to FY 2022 in the updated forecast, in part due to enhanced utilization of the SRF loan process and in part due to natural delays in the CIP. As a result, the overall budgeted debt service for FY 2021 reflected a decrease *even before* the recognition of forecasted refinancing savings. The resulting budgeted debt service savings has *positive* implications on the budgeted FY 2021 “bottom line” contribution for the Sewer Fund, and produces a more consistent budgeted contribution – and resulting debt service coverage ratio - from both Funds.

We continue diligent review on all of the budget parameters included in the preliminary submittal. We are preparing additional analysis and commentary to provide to the GLWA management team, the Board of Directors, and ultimately to Member Partners as part of the FY 2021 Charge Rollout process in early January.

In addition, we are utilizing this information in our preparation of the FY 2021 Cost of Service Study and the accompanying proposed wholesale service charges for FY 2021. Those proposed charges are scheduled to be delivered to the Board of Directors on January 22, 2020 and formally presented to Member Partners at the final FY 2021 Charge Rollout meeting on January 23, 2020.

We are prepared to discuss this matter at your convenience.

The combined GLWA revenue requirement budget is the basis for establishing the annual charges for services. Much of the FY 2021 budget of \$838 million is fixed commitments such as debt service (41%), lease payment (6%), legacy liabilities (4%) as well as capital funding (10%), 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 fleet maintenance (\$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

	Prior Year FY 2018 Staffing Plan	Current Year FY 2019 Staffing Plan	FY 2020 Staffing Plan	FY 2021 Staffing Plan	FY 2022 Staffing Plan	FY 2023 Staffing Plan	FY 2024 Staffing Plan	FY 2025 Staffing Plan
Operating Area and Team								
Chief Operating Officer Water Operations	354.00	360.00	363.00	366.00	366.00	366.00	366.00	366.00
COO - Water Operations & Field Services	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00
Energy, Research & Innovation	0.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Facility Operations	22.00	22.00	25.00	25.00	25.00	25.00	25.00	25.00
Field Service Operations	44.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00
Lake Huron Water Plant	31.00	30.00	30.00	31.00	31.00	31.00	31.00	31.00
Northeast Water Plant	32.00	32.00	30.00	32.00	32.00	32.00	32.00	32.00
Southwest Water Plant	29.00	29.00	30.00	30.00	30.00	30.00	30.00	30.00
Springwells Water Plant	35.00	35.00	36.00	36.00	36.00	36.00	36.00	36.00
Systems Operations Control	79.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
Water Director	7.00	9.00	9.00	11.00	11.00	11.00	11.00	11.00
Water Engineering	19.00	24.00	24.00	23.00	23.00	23.00	23.00	23.00
Water Quality	18.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
Water Works Park	36.00	37.00	37.00	35.00	35.00	35.00	35.00	35.00
Chief Operating Officer Wastewater Operations	436.00	440.00	440.00	443.00	443.00	442.00	441.00	440.00
BDF, COF & Hauling	0.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
Chief Operating Officer Wastewater	18.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Combined Sewer Overflow	18.00	33.00	36.00	37.00	37.00	36.00	36.00	36.00
Industrial Waste Control	31.00	30.00	29.00	29.00	29.00	29.00	29.00	29.00
Wastewater Dewatering Process	0.00	54.00	50.00	51.00	51.00	51.00	51.00	51.00
Wastewater Director	0.00	46.00	47.00	47.00	47.00	47.00	47.00	47.00
Wastewater Engineering	32.00	26.00	24.00	24.00	24.00	24.00	24.00	24.00
Wastewater Incineration Process	0.00	52.00	52.00	51.00	51.00	51.00	51.00	51.00
Wastewater Laboratories	25.00	33.00	38.00	40.00	40.00	40.00	40.00	40.00
Wastewater Operations	312.00	16.00	15.00	15.00	15.00	15.00	15.00	15.00
Wastewater Primary Process	0.00	51.00	50.00	55.00	55.00	55.00	54.00	53.00
Wastewater Process Control	0.00	27.00	27.00	25.00	25.00	25.00	25.00	25.00
Wastewater Secondary Process	0.00	46.00	46.00	44.00	44.00	44.00	44.00	44.00
Chief Planning Officer	68.00	62.00	70.00	73.00	73.00	73.00	73.00	73.00
Asset Management	9.00	7.00	9.00	11.00	11.00	11.00	11.00	11.00
Capital Improvement Planning	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Chief Planning Officer	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Energy Management	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Research Innovation								
Systems Analytics	39.00	40.00	43.00	44.00	44.00	44.00	44.00	44.00
Systems Planning	4.00	4.00	7.00	7.00	7.00	7.00	7.00	7.00
Chief Administration & Compliance Officer	111.00	119.00	122.00	124.00	124.00	124.00	124.00	124.00
Chief Administrative Officer	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Enterprise Risk Management and Safety	4.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
General Counsel	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Info Technology Business Applications	12.00	13.00	13.00	16.00	16.00	16.00	16.00	16.00
Info Technology Enterprise Applications	14.00	13.00	13.00	10.00	10.00	10.00	10.00	10.00
Info Technology Infrastructure	14.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Info Technology Security & Risk	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Info Technology Service Delivery	12.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
InfoTechnology Project Management Office	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Office of the CIO	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Organizational Development	28.00	28.00	31.00	33.00	33.00	33.00	33.00	33.00
Chief Financial Officer	110.00	118.00	123.00	124.00	124.00	124.00	124.00	124.00
Chief Financial Officer	2.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00
Data Analytics & Internal Audit	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Financial Planning & Analysis	6.00	8.00	9.00	9.00	9.00	9.00	9.00	9.00
Financial Reporting & Accounting	27.00	27.00	27.00	26.00	26.00	26.00	26.00	26.00
Logistics and Materials	22.00	23.00	24.00	24.00	24.00	24.00	24.00	24.00
Owners' Representative	5.00	5.00	6.00	5.00	5.00	5.00	5.00	5.00
Procurement Director	30.00	30.00	29.00	31.00	31.00	31.00	31.00	31.00
Public Finance	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Reporting and Compliance	0.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00
Transformation	6.00	7.00	8.00	8.00	8.00	8.00	8.00	8.00
Treasury	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Chief Executive Officer	98.00	85.00	89.00	89.00	89.00	89.00	89.00	89.00
Chief Executive Officer	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
HazMat	0.00	17.00	19.00	19.00	19.00	19.00	19.00	19.00
Public Affairs	7.00	7.00	8.00	8.00	8.00	8.00	8.00	8.00
Security and Integrity	89.00	59.00	60.00	60.00	60.00	60.00	60.00	60.00
Grand Total	1,177.00	1,184.00	1,207.00	1,219.00	1,219.00	1,218.00	1,217.00	1,216.00

Operating Area and Team	Prior Year FY 2018 FTEs	Current Year FY 2019 FTEs	FY 2020 FTEs	FY 2021 FTEs	FY 2022 FTEs	FY 2023 FTEs	FY 2024 FTEs	FY 2025 FTEs
Chief Operating Officer Water Operations	354.00	360.00	363.00	365.25	365.25	365.25	365.25	365.25
COO - Water Operations & Field Services	2.00	2.00	2.00	2.75	2.75	2.75	2.75	2.75
Energy, Research & Innovation	0.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Facility Operations	22.00	22.00	25.00	24.50	24.50	24.50	24.50	24.50
Field Service Operations	44.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00
Lake Huron Water Plant	31.00	30.00	30.00	31.00	31.00	31.00	31.00	31.00
Northeast Water Plant	32.00	32.00	30.00	32.00	32.00	32.00	32.00	32.00
Southwest Water Plant	29.00	29.00	30.00	30.00	30.00	30.00	30.00	30.00
Springwells Water Plant	35.00	35.00	36.00	36.00	36.00	36.00	36.00	36.00
Systems Operations Control	79.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
Water Director	7.00	9.00	9.00	11.00	11.00	11.00	11.00	11.00
Water Engineering	19.00	24.00	24.00	23.00	23.00	23.00	23.00	23.00
Water Quality	18.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
Water Works Park	36.00	37.00	37.00	35.00	35.00	35.00	35.00	35.00
Chief Operating Officer Wastewater Operations	432.50	434.50	432.25	436.75	442.50	441.50	441.00	440.00
BDF, COF & Hauling	0.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Chief Operating Officer Wastewater	18.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Combined Sewer Overflow	18.00	32.00	31.25	36.50	36.50	36.00	36.00	36.00
Industrial Waste Control	31.00	30.00	29.00	28.50	29.00	29.00	29.00	29.00
Wastewater Dewatering Process	0.00	52.00	49.00	51.00	51.00	51.00	51.00	51.00
Wastewater Director	0.00	46.00	47.00	46.00	47.00	47.00	47.00	47.00
Wastewater Engineering	32.00	26.00	24.00	23.50	24.00	24.00	24.00	24.00
Wastewater Incineration Process	0.00	52.00	52.00	49.75	51.00	51.00	51.00	51.00
Wastewater Laboratories	25.00	33.00	38.00	40.00	40.00	40.00	40.00	40.00
Wastewater Operations	308.50	15.50	12.00	13.50	15.00	15.00	15.00	15.00
Wastewater Primary Process	0.00	50.50	50.00	54.50	55.00	54.50	54.00	53.00
Wastewater Process Control	0.00	27.00	26.00	24.50	25.00	25.00	25.00	25.00
Wastewater Secondary Process	0.00	45.50	46.00	44.00	44.00	44.00	44.00	44.00
Chief Planning Officer	63.50	60.25	64.25	63.25	70.00	72.00	72.00	72.00
Asset Management	8.00	7.00	9.00	9.50	10.00	10.00	10.00	10.00
Capital Improvement Planning	6.00	6.25	4.25	5.50	7.50	8.00	8.00	8.00
Chief Planning Officer	4.50	3.00	2.00	3.00	3.00	3.00	3.00	3.00
Energy Management	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Systems Analytics	39.00	40.00	43.00	39.25	42.50	44.00	44.00	44.00
Systems Planning	3.25	4.00	6.00	6.00	7.00	7.00	7.00	7.00
Chief Administration & Compliance Officer	110.75	119.00	120.00	124.00	124.00	124.00	124.00	124.00
Chief Administrative Officer	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Enterprise Risk Management and Safety	4.00	8.00	6.00	8.00	8.00	8.00	8.00	8.00
General Counsel	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Info Technology Business Applications	12.00	13.00	13.00	16.00	16.00	16.00	16.00	16.00
Info Technology Enterprise Applications	14.00	13.00	13.00	10.00	10.00	10.00	10.00	10.00
Info Technology Infrastructure	14.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Info Technology Security & Risk	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Info Technology Service Delivery	12.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
InfoTechnology Project Management Office	9.75	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Office of the CIO	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Organizational Development	28.00	28.00	31.00	33.00	33.00	33.00	33.00	33.00
Chief Financial Officer	109.50	114.25	119.25	122.00	122.00	122.00	122.00	122.00
Chief Financial Officer	2.00	3.00	5.00	4.50	4.50	4.50	4.50	4.50
Data Analytics & Internal Audit	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Financial Planning & Analysis	6.00	8.00	9.00	9.00	9.00	9.00	9.00	9.00
Financial Reporting & Accounting	26.50	25.00	26.00	25.00	25.00	25.00	25.00	25.00
Logistics and Materials	22.00	23.00	23.25	24.00	24.00	24.00	24.00	24.00
Owners' Representative	5.00	4.25	6.00	5.00	5.00	5.00	5.00	5.00
Procurement Director	30.00	29.25	27.00	30.50	30.50	30.50	30.50	30.50
Public Finance	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Reporting and Compliance	0.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00
Transformation	6.00	6.75	8.00	8.00	8.00	8.00	8.00	8.00
Treasury	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Chief Executive Officer	97.50	84.50	88.50	88.25	89.00	89.00	89.00	89.00
Chief Executive Officer	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
HazMat	0.00	17.00	19.00	19.00	19.00	19.00	19.00	19.00
Public Affairs	7.00	7.00	7.50	7.25	8.00	8.00	8.00	8.00
Security and Integrity	88.50	58.50	60.00	60.00	60.00	60.00	60.00	60.00
Grand Total	1,167.75	1,172.50	1,187.25	1,199.50	1,212.75	1,213.75	1,213.25	1,212.25

Financial Plan Calendar

FY 2021 and 2022 Biennial Budget & Five-Year Financial Planning Cycle

The Great Lakes Water Authority (GLWA) Financial Planning Cycle includes:

1. FY 2021 and 2022 Biennial Budget
2. FY 2021 through FY 2025 Five-Year Financial Plan
3. FY 2021 through FY 2025 Five-Year Capital Improvement Plan
4. FY 2021 Schedule of Revenues and Charges

The schedule below reflects planning for the comprehensive GLWA Financial Plan.

Date	Activity
Friday, August 30, 2019	Internal – Deadline for Cost Center Budget Request
Thursday, October 17, 2019	Charges Rollout Meeting #1 – Water & Sewer Capital Improvement Plan Update
Thursday, November 21, 2019	Charges Rollout Meeting #2 – Units of Service Update
Sunday, December 1, 2019	GLWA and DWSD (City) - Exchange shared services to be provided and related costs (Shared Services Agreement 5.4)
Thursday, December 19, 2019	GLWA Audit Committee Meeting – Revenue Requirement Status Report
Wednesday, January 1, 2020	DWSD – Preliminary two-year budget forecast Including key assumptions and impact statement due to GLWA (Water and Sewer Services Agreement 5.3a)
Wednesday, January 8, 2020	GLWA Board Workshop – Review of Proposed FY 2021 and 2022 Biennial Budget (Revenue Requirement) and Five-Year Financial Plan
Thursday, January 9, 2020	Charges Rollout Meeting #3 – Proposed FY 2021 Revenue Requirement
Friday, January 17, 2020	GLWA Audit Committee Meeting – Regular Meeting
Wednesday, January 22, 2020	GLWA Board Meeting – Status Report FY 2021 Service Charges, FY 2021 and 2022 Biennial Budget (Revenue Requirement) and Five-Year Financial Plan
Thursday, January 23, 2020	Charges Rollout Meeting #4 – Proposed FY 2021 Service Charges

Friday, January 24, 2020	Publish notice of the hearing by publication in a newspaper of general circulation (B)
Friday, January 24, 2020	Mail Notice to Member Partners of Public Hearing to be held on February 26, 2020 (minimum 30 days prior to Act 279 Public Hearing) (D)
Saturday, February 1, 2020	DWSD – Current capital improvement plan due to GLWA (Water and Sewer Services Agreement 5.3d(i))
Wednesday, February 26, 2020	GLWA Board Meeting – Public Hearing FY 2021 & FY 2022 Biennial Budget (A)
Wednesday, February 26, 2020	GLWA Board Meeting – Public Hearing FY 2021 Schedule of Revenues and Charges (Act 279, minimum 120 days before effective date) (C)
Wednesday, February 26, 2020	GLWA Board Meeting – Proposed Approval of the FY 2021 & FY 2022 Biennial Budget (A)
Wednesday, February 26, 2019	GLWA Board Meeting – Proposed Approval of FY 2021–2025 Capital Improvement Plan
Wednesday, February 26, 2020	GLWA Board Meeting – Public Hearing & Proposed Approval of FY 2021 Schedule of Revenues and Charges (Act 279, minimum 120 days before effective date) (C)
Monday, March 2, 2020	Mail Notice to Member Partners of Approved Charges
Monday, March 23, 2020	DWSD – Local system adopted biennial budget due to GLWA (Water and Sewer Services Agreement 5.3b)
Friday, May 1, 2020	DWSD – Local system provides direction to GLWA on how to apply lease payment (Water and Sewer Services Agreement 4.3)
Wednesday, July 1, 2020	GLWA – Effective date of FY 2020 and 2021 Biennial Budget, FY 2020 Schedule of Charges, and FY 2020-2024 Capital Improvement Plan

(A) thru (D) - The above schedule is designed to meet applicable statutory and contractual requirements with excerpts shown below.

- A. **Uniform Budgeting and Accounting Act, Act 2 of 1968, Section 141.434**, “Before final passage of a general appropriations act by the legislative body, a public hearing shall be held as required by 1963 (2nd Ex Sess) PA 43, MCL 141.411 to 141.415, and the open meetings act, 1976 PA 267, MCL 15.261 to 15.275.” (For purposes of Public Act 2, the GLWA Board is the legislative body.)

- B. **Budget Hearings of Local Governments, Act 43 of 1963 (2nd Ex. Sess.), Section 141.412**, “The local unit shall give notice of the hearing by publication in a newspaper of general circulation within the local unit at least 6 days before the hearing.” (For purposes of Public Act 2, the GLWA Board is a local unit.)
- C. **Home Rule City Act, Act 279 of 1909, Section 117.5e**, “Municipal water or sewage system; annual audit; public hearing before proposed rate increase. A municipal water or sewage system established by a city incorporated under this act which serves more than 40% of the population of the state shall:(b) Hold at least 1 public hearing at least 120 days before a proposed rate increase is scheduled to take effect. Each hearing shall be conducted in compliance with Act No. 267 of the Public Acts of 1976, being sections 15.261 to 15.275 of the Michigan Compiled Laws. Notice of the time, date, and place of each hearing shall be given in the manner required by Act No. 267 of the Public Acts of 1976, shall be prominently printed in a daily newspaper of general circulation within the area, and shall be mailed to each city, village, or township served by the system not less than 30 days before each hearing. A final vote by the governing body of the city to implement a proposed rate increase shall not be taken until the hearings provided for in this subdivision are concluded and the results of those hearings are considered by the city's governing body.” (Emphasis added)

It should be noted that the Home Rule City Act does not apply to GLWA. It is relevant to GLWA’s planning cycle, however, as it is referenced in the *Wholesale Customer Model Water Contract* as noted below.

- D. **GLWA Wholesale Customer Model Water Contract Section 7.02** provides: “Notification of Rates. As soon as possible in the ratemaking process, the Board shall provide information on proposed rates and the draft data and information used in the calculation of proposed rates in a format that will enable Customer to assist in the ratemaking process. Not less than thirty calendar days prior to the hearing required by Act 279, the Board shall provide Customer with written notice of a proposed rate and the underlying data used to calculate the rate. The Board shall meet with Customer to review the rate and the data.” (Emphasis added; Act 279 is the Home Rule City Act noted above.)

Great Lakes Water Authority
Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Plan
Operations & Maintenance Expense by Cost Category - trend with three years of history
As of 12.19.2019

Positions (FTE) filled at year end	881	968	1,024									
Positions (FTE) budgeted	1,106	1,168	1,173	1,187	1,200			1,213	1,214	1,213	1,212	

O&M Cost Category	ACTUAL	ACTUAL	ACTUAL	FY 2020 Board Adopted Budget	FY 2021			Sum of FY 2021 Request vs FY 2019 Actual	FY 2022 - FY 2025			
	FY 2017 Activity	FY 2018 Activity thru 06.30.2018	FY 2019 Activity thru 06.30.2019		FY 2021 Department Requested	Sum of FY 2021 Dollar Increase	Sum of FY 2021 Dollar Increase %		FY 2022 Department Requested	FY 2023 Department Requested	FY 2024 Department Requested	FY 2025 Department Requested
2.0 Personnel	86,156,300	95,525,800	98,588,800	105,090,700	110,333,100	5,242,400	5.0%	11,744,300	112,128,900	112,793,200	113,248,100	113,677,600
A Water Operations	15,468,300	17,554,200	19,349,000	19,477,100	20,765,100	1,288,000	6.6%	1,416,100	20,859,400	20,953,700	21,047,900	21,142,100
B Wastewater Operations	33,260,500	35,353,900	36,668,300	36,219,200	37,871,500	1,652,300	4.6%	1,203,200	38,559,200	38,666,800	38,799,700	38,907,400
C Centralized Services	24,504,100	27,601,700	26,877,400	31,078,300	32,276,800	1,198,500	3.9%	5,399,400	33,165,300	33,548,700	33,697,000	33,845,600
D Administrative Services	12,923,400	15,016,000	15,694,100	18,316,100	19,419,700	1,103,600	6.0%	3,725,600	19,545,000	19,624,000	19,703,500	19,782,500
3.0 Utilities	55,661,800	53,693,800	51,395,700	51,333,700	51,937,000	603,300	1.2%	541,300	52,404,200	52,882,200	53,371,000	53,853,000
A Water Operations	28,329,800	26,801,100	26,130,400	25,078,900	26,153,800	1,074,900	4.3%	23,400	26,169,800	26,185,800	26,185,800	26,185,800
B Wastewater Operations	27,060,800	26,732,700	25,037,200	26,080,000	25,531,600	(548,400)	-2.1%	494,400	25,980,800	26,440,800	26,910,900	27,390,100
C Centralized Services	260,300	139,000	168,500	158,600	156,800	(1,800)	-1.1%	(11,700)	157,100	157,300	157,500	158,100
D Administrative Services	10,900	21,000	59,600	16,200	94,800	78,600	485.2%	35,200	96,500	98,300	116,800	119,000
4.1 Chemicals	14,765,300	12,877,700	13,275,600	13,898,600	13,419,800	(478,800)	-3.4%	144,200	13,551,600	13,699,300	13,785,600	13,836,800
A Water Operations	5,340,800	4,804,700	5,088,800	4,774,700	5,053,900	279,200	5.8%	(34,900)	5,059,600	5,065,300	5,065,300	5,065,300
B Wastewater Operations	9,424,500	8,073,000	8,186,800	9,123,900	8,365,900	(758,000)	-8.3%	179,100	8,492,000	8,634,000	8,720,300	8,771,500
C Centralized Services	0	0	0	0	0	0	N/A	0	0	0	0	0
4.2 Supplies & Other	25,433,400	29,846,000	37,095,000	36,392,000	38,621,600	2,229,600	6.1%	1,526,600	38,276,400	39,246,400	41,743,700	40,792,300
A Water Operations	3,045,500	4,068,900	4,998,600	4,739,900	5,168,800	428,900	9.0%	170,200	5,176,000	5,183,100	5,183,100	5,174,500
B Wastewater Operations	12,546,600	13,064,300	18,411,600	14,855,400	14,241,900	(613,500)	-4.1%	(4,169,700)	13,934,000	15,861,900	17,686,600	17,269,500
C Centralized Services	8,622,300	11,799,100	12,505,100	15,289,300	17,306,900	2,017,600	13.2%	4,801,800	17,293,300	16,327,200	16,968,200	16,433,700
D Administrative Services	1,219,000	913,700	1,179,700	1,507,400	1,904,000	396,600	26.3%	724,300	1,873,100	1,874,200	1,905,800	1,914,600
4.3 Contractual Services	84,716,700	104,981,000	101,898,100	115,306,800	106,153,800	(9,153,000)	-7.9%	4,255,700	106,384,700	104,335,800	103,252,600	103,002,600
A Water Operations	7,722,200	9,168,600	15,851,600	11,290,200	14,900,700	3,610,500	32.0%	(950,900)	14,916,300	14,980,800	15,004,800	14,978,800
B Wastewater Operations	26,867,800	28,069,600	25,834,200	28,012,900	26,725,600	(1,287,300)	-4.6%	891,400	26,932,800	27,438,100	27,431,500	27,227,600
C Centralized Services	45,732,400	51,687,600	49,343,600	65,863,400	54,381,700	(11,481,700)	-17.4%	5,038,100	54,047,800	51,343,900	49,949,900	49,638,800
D Administrative Services	4,394,300	16,055,200	10,868,700	10,140,300	10,145,800	5,500	0.1%	(722,900)	10,487,800	10,573,000	10,866,400	11,157,400
5.1 Capital Program Allocation	(2,127,900)	(1,683,300)	(3,380,700)	(5,414,300)	(3,495,200)	1,919,100	-35.4%	(114,500)	(3,463,700)	(3,525,100)	(4,005,700)	(3,554,800)
A Water Operations	(869,300)	(582,700)	(1,873,300)	(1,983,900)	(1,805,200)	178,700	-9.0%	68,100	(1,812,800)	(1,820,500)	(1,828,100)	(1,835,700)
B Wastewater Operations	(1,150,300)	(969,600)	(1,325,900)	(1,239,400)	(1,325,800)	(86,400)	7.0%	100	(1,331,600)	(1,337,400)	(1,838,900)	(1,349,100)
C Centralized Services	(108,300)	(125,300)	(90,800)	(2,112,500)	(279,300)	1,833,200	-86.8%	(188,500)	(234,000)	(281,600)	(252,700)	(283,700)
D Administrative Services	0	(5,700)	(90,700)	(78,500)	(84,900)	(6,400)	8.2%	5,800	(85,300)	(85,600)	(86,000)	(86,300)
5.2 Shared Services	(11,704,400)	(9,908,100)	(7,139,400)	(5,025,100)	(3,412,900)	1,612,200	-32.1%	3,726,500	(1,777,700)	(1,813,300)	(1,849,700)	(1,886,700)
A Water Operations	(74,500)	(141,100)	(351,500)	(53,000)	0	53,000	-100.0%	351,500	0	0	0	0
B Wastewater Operations	(101,200)	(293,000)	(713,700)	(331,600)	(338,200)	(6,600)	2.0%	375,500	(344,900)	(351,900)	(359,000)	(366,300)
C Centralized Services	(11,459,200)	(9,438,300)	(5,740,300)	(4,016,600)	(2,806,300)	1,210,300	-30.1%	2,934,000	(1,159,100)	(1,182,200)	(1,205,900)	(1,230,000)
D Administrative Services	(69,500)	(35,700)	(333,900)	(623,900)	(268,400)	355,500	-57.0%	65,500	(273,700)	(279,200)	(284,800)	(290,400)
7.0 Unallocated Reserve	0	0	0	6,965,300	8,516,200	1,550,900	22.3%	8,516,200	11,072,700	17,394,000	22,237,200	28,769,500
A Water Operations	0	0	0	2,697,300	1,729,300	(968,000)	-35.9%	1,729,300	2,723,000	5,119,500	7,282,600	10,421,400
B Wastewater Operations	0	0	0	3,264,900	4,603,900	1,339,000	41.0%	4,603,900	5,971,800	9,294,300	11,764,100	14,876,100
C Centralized Services	0	0	0	653,000	1,684,700	1,031,700	158.0%	1,684,700	1,464,300	1,665,200	1,664,600	1,698,100
D Administrative Services	0	0	0	350,100	498,300	148,200	42.3%	498,300	913,600	1,315,000	1,525,900	1,773,900
Grand Total	252,901,200	285,332,900	291,733,100	318,547,700	322,073,400	3,525,700	1.1%	30,340,300	328,577,100	335,012,500	341,782,800	348,490,300

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		FY 2017 Activity	FY 2018 Activity	FY 2019 Activity thru 06.30.2019	FY 2020 Board Adopted Budget					
A		58,962,800	61,673,700	69,193,600	66,021,200	71,966,400	73,091,300	5,945,200	9.0%	2,772,800
	Southwest Water Plant	8,022,000	8,022,500	9,327,700	6,675,500	9,407,500	9,424,900	2,732,000	40.9%	79,800
	Springwells Water Plant	9,620,900	10,047,600	15,044,400	12,063,800	13,631,400	13,707,100	1,567,600	13.0%	(1,413,000)
	Northeast Water Plant	8,875,500	9,400,300	9,731,500	9,356,600	10,229,900	10,242,500	873,300	9.3%	498,400
	Imlay Pumping Station	1,899,400	2,091,300	2,615,200	1,805,300	2,305,000	2,305,000	499,700	27.7%	(310,200)
	North Service Center Pumping Station	2,064,100	2,094,500	2,455,600	1,927,000	2,416,000	2,416,000	489,000	25.4%	(39,600)
	Lake Huron Water Plant	11,023,800	11,542,600	11,408,700	11,846,200	12,031,300	12,043,900	185,100	1.6%	622,600
	Franklin Road Pumping Station	810,100	845,100	933,800	780,600	915,000	915,000	134,400	17.2%	(18,800)
	Water Director	728,800	1,375,500	1,490,600	1,617,800	1,724,200	1,729,700	106,400	6.6%	233,600
	COO - Water Operations & Field Services	285,200	332,100	330,800	359,600	462,900	465,400	103,300	28.7%	132,100
	Water Quality	1,146,200	1,239,500	1,272,700	1,846,600	1,944,700	1,929,400	98,100	5.3%	672,000
	Adams Road Pumping Station	541,800	545,100	517,600	520,000	605,000	605,000	85,000	16.3%	87,400
	West Service Center Pumping Station	839,100	745,600	813,500	720,000	799,300	799,700	79,300	11.0%	(14,200)
	Joy Road Pumping Station	436,800	592,400	626,000	592,300	657,500	657,500	65,200	11.0%	31,500
	Rochester Pumping Station	183,000	182,400	207,800	174,200	231,000	231,000	56,800	32.6%	23,200
	Ypsilanti Pumping Station	308,900	375,000	630,200	353,300	406,800	413,200	53,500	15.1%	(223,400)
	Wick Road Pumping Station	465,100	558,200	605,600	551,000	589,500	599,000	38,500	7.0%	(16,100)
	Water Works Park	8,618,700	8,618,600	8,068,900	8,693,400	8,729,500	8,729,200	36,100	0.4%	660,600
	Ford Rd Pumping Station	281,700	401,000	416,000	394,600	423,700	423,700	29,100	7.4%	7,700
	Schoolcraft Pumping Station	424,000	408,900	399,600	401,300	416,000	416,000	14,700	3.7%	16,400
	Michigan Ave Pumping Station	87,500	83,500	98,500	90,800	102,000	102,000	11,200	12.3%	3,500
	Eastside Pumping Station	37,500	34,200	52,700	43,000	53,000	53,000	10,000	23.3%	300
	Northwest Pumping Station	5,400	8,300	21,400	17,000	27,000	27,000	10,000	58.8%	5,600
	Newburgh Pumping Station	358,000	375,800	331,600	382,300	390,000	390,000	7,700	2.0%	58,400
	O&M Unallocated Reserve	0	0	0	0	0	0	0	N/A	0
	Electric Ave Pumping Station	24,000	18,700	19,100	25,500	19,500	19,500	(6,000)	-23.5%	400
	Orion Township Pumping Station	61,500	71,200	70,900	81,500	74,500	74,500	(7,000)	-8.6%	3,600

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		FY 2017 Activity	FY 2018 Activity	FY 2019 Activity thru 06.30.2019						
A	Roseville Pumping Station	4,000	0	0	10,300	0	0	(10,300)	-100.0%	0
	West Chicago Rd Pumping Station	25,100	50,500	25,700	51,000	36,000	36,000	(15,000)	-29.4%	10,300
	Haggerty Road Pumping Station	249,400	211,300	221,200	271,100	248,000	248,000	(23,100)	-8.5%	26,800
	Water Engineering	1,535,300	1,402,000	1,456,300	1,672,300	1,360,900	1,365,100	(311,400)	-18.6%	(95,400)
	Water System Operations Unallocated	0	0	0	2,697,300	1,729,300	2,723,000	(968,000)	-35.9%	1,729,300
B		107,908,700	110,030,900	112,098,500	115,985,300	115,676,400	118,194,100	(308,900)	-0.3%	3,577,900
	Wastewater System Operations Unallocated	0	0	0	3,264,900	4,603,900	5,971,800	1,339,000	41.0%	4,603,900
	Wastewater Dewatering Process	2,118,300	1,990,000	5,931,600	5,406,700	6,176,300	6,220,200	769,600	14.2%	244,700
	Wastewater Incineration Process	2,058,000	1,812,100	5,424,800	4,724,000	5,167,800	5,310,600	443,800	9.4%	(257,000)
	Wastewater Laboratories	753,800	884,300	4,047,300	4,148,900	4,558,500	4,195,500	409,600	9.9%	511,200
	Wastewater Primary Process	3,290,700	2,615,700	7,889,400	7,463,600	7,836,000	8,013,900	372,400	5.0%	(53,400)
	Combined Sewer Overflow	1,623,700	2,396,700	4,073,900	4,346,900	4,677,400	4,725,900	330,500	7.6%	603,500
	Wastewater Process Control	306,500	1,081,200	3,541,600	4,944,700	5,229,700	5,374,900	285,000	5.8%	1,688,100
	Wastewater Engineering	1,704,200	2,537,900	1,778,200	2,262,000	2,453,300	2,563,500	191,300	8.5%	675,100
	Chief Operating Officer Wastewater	0	400	1,983,900	2,507,800	2,667,300	2,695,000	159,500	6.4%	683,400
	Blue Hill Pumping Station	13,900	0	38,800	0	132,500	131,000	132,500	N/A	93,700
	Industrial Waste Control	4,887,800	5,162,600	2,708,600	2,407,100	2,496,300	2,511,500	89,200	3.7%	(212,300)
	Oakwood Pumping Station	2,700	165,900	287,200	196,900	283,000	283,000	86,100	43.7%	(4,200)
	Freud Pumping Station	273,300	223,300	328,200	281,600	357,500	357,500	75,900	27.0%	29,300
	Woodmere Pumping Station	200	0	(41,000)	0	67,300	66,500	67,300	N/A	108,300
	7 Mile Combined Sewer Overflow	121,800	154,000	261,600	130,300	152,100	154,400	21,800	16.7%	(109,500)
	Connor Creek Combined Sewer Overflow	1,560,600	1,483,700	1,970,100	1,250,100	1,268,200	1,279,300	18,100	1.4%	(701,900)
	Puritan Fenkell Combined Sewer Overflow	138,500	242,900	402,900	293,000	301,100	307,200	8,100	2.8%	(101,800)
	Leib Combined Sewer Overflow	122,900	230,400	532,300	145,800	152,000	153,900	6,200	4.3%	(380,300)
	Wastewater Engineering; Capital Only	0	0	0	0	0	0	0	N/A	0

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		FY 2017 Activity	FY 2018 Activity	FY 2019 Activity thru 06.30.2019				2021 Dollar Increase	2021 Dollar Increase %	
B	Wastewater Fire Damage	1,753,200	0	0	0	0	0	0	N/A	0
	Belle Isle Combined Sewer Overflow	82,500	(200)	86,100	0	(400)	(5,800)	(400)	N/A	(86,500)
	Northeast Pumping Station	0	792,200	967,500	750,000	748,000	746,000	(2,000)	-0.3%	(219,500)
	Fischer Pumping Station	400	0	(62,300)	0	(5,100)	(5,300)	(5,100)	N/A	57,200
	Belle Isle Pumping Station	0	0	(82,200)	0	(6,000)	(6,700)	(6,000)	N/A	76,200
	Fox Creek Pumping Station	13,900	1,500	900	18,500	2,000	2,000	(16,500)	-89.2%	1,100
	Hubble Southfield CSO	383,000	572,800	652,400	472,400	447,800	453,500	(24,600)	-5.2%	(204,600)
	St Aubin Combined Sewer Overflow	90,100	232,200	1,332,300	165,900	140,300	141,900	(25,600)	-15.4%	(1,192,000)
	Oakwood Combined Sewer Overflow	1,447,500	1,364,400	1,823,900	1,306,300	1,280,000	1,271,100	(26,300)	-2.0%	(543,900)
	Conner Pumping Station	613,000	831,900	805,500	899,400	870,000	870,000	(29,400)	-3.3%	64,500
	Fairview Pumping Station	460,700	616,100	486,100	680,200	535,000	535,000	(145,200)	-21.3%	48,900
	Wastewater Director	2,032,800	2,384,200	4,777,000	5,285,600	5,136,200	5,285,300	(149,400)	-2.8%	359,200
	Wastewater Secondary Process	5,376,100	6,198,500	10,415,700	10,479,900	9,847,600	9,940,800	(632,300)	-6.0%	(568,100)
	Wastewater Operations	60,344,400	56,206,700	28,038,000	27,411,900	26,683,500	27,334,400	(728,400)	-2.7%	(1,354,500)
	BDF, COF & Hauling	15,706,000	18,782,100	20,145,000	21,766,000	20,297,500	20,438,100	(1,468,500)	-6.7%	152,500
	Baby Creek Combined Sewer Overflow	628,200	1,067,400	1,553,200	2,974,900	1,119,800	878,200	(1,855,100)	-62.4%	(433,400)
C		67,551,400	81,664,200	83,063,600	106,913,500	102,721,300	104,734,700	(4,192,200)	-3.9%	19,657,700
	Info Technology Business Applications	2,565,500	4,980,200	5,371,300	5,914,000	9,685,800	9,811,200	3,771,800	63.8%	4,314,500
	Capital Improvement Planning	0	0	657,100	1,943,900	3,559,600	3,288,500	1,615,700	83.1%	2,902,500
	Centralized Services Unallocated Reserve	0	0	0	653,000	1,684,700	1,464,300	1,031,700	158.0%	1,684,700
	Energy, Research & Innovation	0	613,300	1,852,400	2,040,000	2,785,500	2,787,800	745,500	36.5%	933,100
	Systems Planning	1,308,600	4,286,600	4,842,900	2,433,100	2,960,700	3,046,900	527,600	21.7%	(1,882,200)
	Info Technology Infrastructure	19,984,300	14,264,300	14,779,500	19,432,400	19,802,900	21,443,400	370,500	1.9%	5,023,400
	Security and Integrity	4,034,100	4,551,000	4,206,800	4,253,600	4,365,200	4,352,300	111,600	2.6%	158,400
	Info Technology Security & Risk	109,200	326,600	223,500	403,200	459,800	462,100	56,600	14.0%	236,300

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C	HazMat	0	410,100	1,540,800	1,545,500	1,594,200	1,666,800	48,700	3.2%	53,400
	O&M Unallocated Reserve	0	0	0	0	0	0	0	N/A	0
	Meter Operations	0	0	0	0	0	0	0	N/A	0
	Field Services Director	126,200	3,682,200	0	0	0	0	0	N/A	0
	Central Yard	0	0	0	0	0	0	0	N/A	0
	Energy Management	365,600	196,200	0	0	0	0	0	N/A	0
	Chief Planning Officer	438,400	886,700	368,600	408,900	382,000	383,600	(26,900)	-6.6%	13,400
	Office of the CIO	1,874,700	437,700	662,800	975,800	878,200	882,200	(97,600)	-10.0%	215,400
	Asset Management	710,100	1,711,200	3,115,100	4,990,100	3,693,900	4,370,200	(1,296,200)	-26.0%	578,800
	Info Technology Enterprise Applications	839,600	1,074,900	635,900	4,098,700	2,570,600	2,139,600	(1,528,100)	-37.3%	1,934,700
	Systems Operations Control	14,223,300	11,748,100	10,746,800	11,939,700	9,958,700	9,969,200	(1,981,000)	-16.6%	(788,100)
	Facility Operations	4,765,600	7,774,100	5,358,900	8,538,200	6,188,300	6,181,200	(2,349,900)	-27.5%	829,400
	Field Service Operations	4,732,900	11,989,700	16,729,500	20,493,100	17,958,100	18,127,800	(2,535,000)	-12.4%	1,228,600
	Systems Analytics	3,756,800	6,497,400	6,155,800	9,385,500	6,504,700	6,610,800	(2,880,800)	-30.7%	348,900
D		18,478,400	31,964,400	27,377,200	29,627,700	31,709,300	32,557,000	2,081,600	7.0%	4,332,100
	Procurement Director	4,064,600	1,661,300	2,596,200	2,715,300	3,111,600	3,121,900	396,300	14.6%	515,400
	Treasury	465,900	687,000	721,300	591,200	829,500	841,300	238,300	40.3%	108,200
	Enterprise Risk Mgt. Insurance Fund	2,704,000	2,624,400	2,915,200	2,411,300	2,634,100	2,684,300	222,800	9.2%	(281,100)
	Data Analytics & Internal Audit	308,900	403,400	633,700	544,000	750,500	756,800	206,500	38.0%	116,800
	Public Affairs	929,300	1,028,700	1,261,700	1,386,100	1,587,900	1,593,200	201,800	14.6%	326,200
	Logistics and Materials	0	1,341,500	1,691,400	1,723,900	1,921,300	1,934,400	197,400	11.5%	229,900
	Chief Administrative Officer	471,100	561,400	731,100	936,600	1,123,600	1,131,600	187,000	20.0%	392,500
	Administrative Services Unallocated Res	0	0	0	350,100	498,300	913,600	148,200	42.3%	498,300
	Public Finance	1,000,400	1,255,900	1,147,400	878,400	1,014,300	946,500	135,900	15.5%	(133,100)
	Reporting and Compliance	0	0	447,000	395,200	516,900	519,200	121,700	30.8%	69,900
	Financial Planning & Analysis	507,000	1,095,100	1,150,400	1,239,200	1,358,600	1,369,400	119,400	9.6%	208,200
	General Counsel	2,559,200	4,761,000	2,006,600	3,038,900	3,111,200	3,157,800	72,300	2.4%	1,104,600
	Organizational Development	2,172,100	2,615,300	3,207,300	4,366,400	4,421,200	4,708,200	54,800	1.3%	1,213,900

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		FY 2017 Activity	FY 2018 Activity	FY 2019 Activity thru 06.30.2019				Sum of FY 2021 Dollar Increase	2021 Dollar Increase %	
D	Chief Executive Officer	458,000	501,100	565,300	632,700	663,000	670,000	30,300	4.8%	97,700
	Enterprise Risk Management and Safety	333,100	1,552,800	858,700	1,819,800	1,828,600	1,832,200	8,800	0.5%	969,900
	Procurement (Enterprise Services)	0	104,600	0	0	0	0	0	N/A	0
	O&M Unallocated Reserve	0	0	0	0	0	0	0	N/A	0
	Discontinued Capital Program	0	0	2,258,400	0	0	0	0	N/A	(2,258,400)
	Procurement (Water & Field Services)	0	1,161,800	0	0	0	0	0	N/A	0
	Procurement (Wastewater)	0	758,500	0	0	0	0	0	N/A	0
	Legal Settlement & Claims - Operating	(5,418,900)	5,103,900	0	0	0	0	0	N/A	0
	Transition	1,275,100	0	0	0	0	0	0	N/A	0
	Board of Directors	2,300	129,100	104,200	202,400	197,600	201,600	(4,800)	-2.4%	93,400
	Chief Financial Officer	326,200	563,000	678,100	840,400	828,900	831,800	(11,500)	-1.4%	150,800
	Owners' Representative	0	97,000	615,800	629,100	590,300	594,200	(38,800)	-6.2%	(25,500)
	Transformation	1,165,100	946,200	747,600	1,414,900	1,339,900	1,339,000	(75,000)	-5.3%	592,300
	Financial Reporting & Accounting	5,155,000	3,011,400	3,039,800	3,511,800	3,382,000	3,410,000	(129,800)	-3.7%	342,200
Grand Total		252,901,300	285,333,200	291,732,900	318,547,700	322,073,400	328,577,100	3,525,700	1.1%	30,340,500

GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

September 2019

**Presented to the
Great Lakes Water Authority
Audit Committee on December 19, 2019**

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Appendix

 Aged Accounts Receivable Report..... A-1

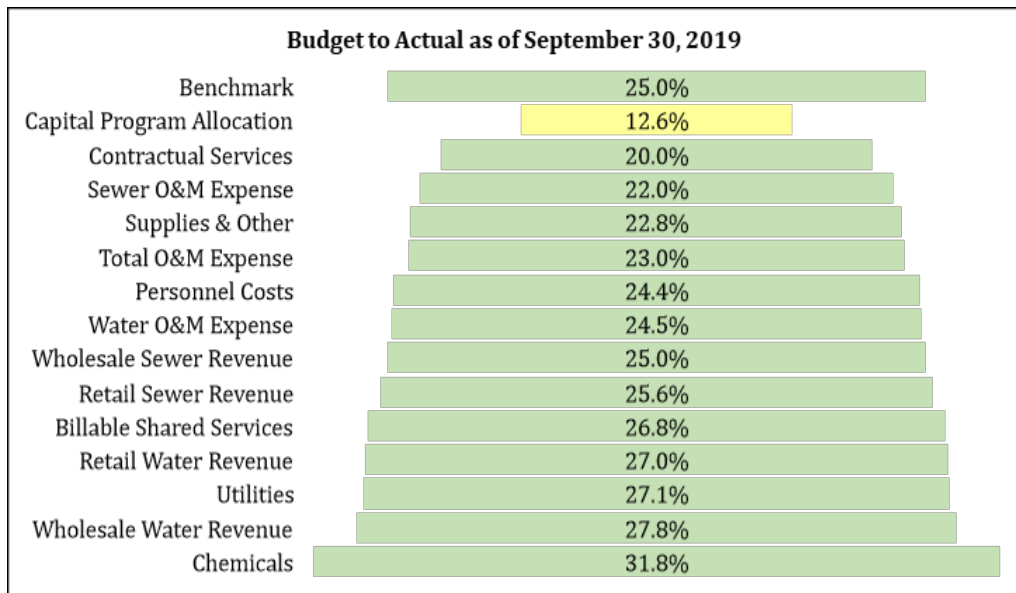
 Highland Park Life-to-Date Billings & Collections B-1

Revenue and Expense Budget to Actual¹ – Pro-rata Benchmark of 25%

Current period financial results indicate most revenue and expense reporting categories fall within the 7.5% of the pro-rata budget to actual benchmark.

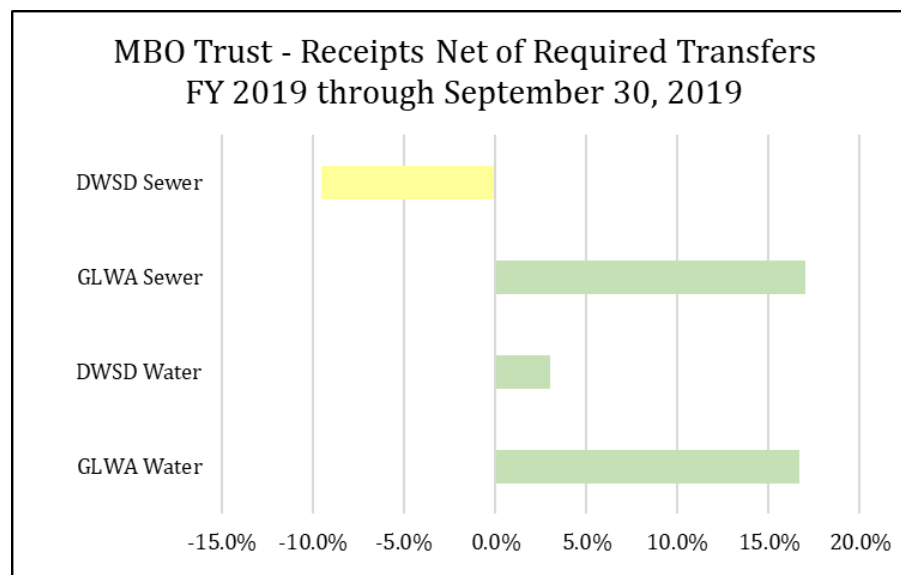
The Capital Program Allocation

expense variation is currently under review by the Budget team.



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 receipts have rebounded after in the first month of the fiscal year. DWSD Sewer net receipts result in a September shortfall of

\$2.1 million and a cumulative FY 2020 DWSD Sewer shortfall of \$6.3 million. Looking ahead, DWSD proactively resolved 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.

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 September 2019, the pro-rata benchmark is 25.0% (3 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 24.5%. The *sewer* system O&M expenses, at 22.0%, 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 22.3%; while the *sewer* system is at 23.5%. 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 2018, the DWSD sewer shortfall through June 30, 2018, was \$24.1 million. A plan for payment of this shortfall is in place with the outer boundary of payment terms being paid over three years plus interest at the three-year treasury rate plus 1.5% with payments beginning in July 2019. For FY 2019, DWSD sewer had a surplus through September 30, 2018, of \$2.2 million (FY 2019 ended with a zero surplus/shortfall). 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 \$758 thousand and the DWSD *sewer* system budgetary shortfall is approximately \$6.3 million through September 30, 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 9/30/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 9/30/2019	Percent Year-to- Date
Water System							
Revenues							
Wholesale Customer Charges	\$ 307,383	\$ 91,767	29.9%	\$ 309,285	\$ 309,285	\$ 86,482	28.0%
Retail Services Agreement	20,181	5,082	25.2%	21,296	21,296	5,324	25.0%
Investment Earnings	9,425	2,190	23.2%	9,084	9,084	775	8.5%
Other Revenues	-	16	0.0%	-	-	-	0.0%
Total Revenues	\$ 336,989	\$ 99,055	29.4%	\$ 339,664	\$ 339,664	\$ 92,582	27.3%
Revenue Requirements							
Operations & Maintenance Expense	\$ 121,563	\$ 34,533	28.4%	\$ 131,491	\$ 131,491	\$ 32,172	24.5%
O&M Legacy Pension	6,048	1,512	25.0%	6,048	6,048	1,512	25.0%
Debt Service	131,242	33,300	25.4%	137,558	137,558	30,689	22.3%
Accelerated Legacy Pension	6,268	1,567	25.0%	6,268	6,268	1,567	25.0%
Extraordinary Repair & Replacement							
Deposit	-	-	0.0%	-	-	-	0.0%
Lease Payment	22,500	5,625	25.0%	22,500	22,500	5,625	25.0%
Operating Reserve Deposit	-	-	0.0%	3,976	3,976	994	0.0%
Water Residential Assistance Program	1,673	418	25.0%	1,698	1,698	425	25.0%
Improvement & Extension Fund							
Transfer Pending	47,695	11,924	25.0%	30,126	30,126	7,531	25.0%
Total Revenue Requirements	\$ 336,989	\$ 88,879	26.4%	\$ 339,664	\$ 339,664	\$ 80,516	23.7%
Net Difference		\$ 10,176				\$ 12,066	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 14,808				\$ 7,666	
Revenue Requirement Variance		(4,632)				4,401	
Overall Variance		<u>\$ 10,176</u>				<u>\$ 12,066</u>	

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

	FY 2019 AMENDED BUDGET	FY 2019 THRU 9/30/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 9/30/2019	Percent Year-to- Date
Sewer System							
Revenues							
Wholesale Customer Charges	\$ 271,296	\$ 68,738	25.3%	\$ 272,324	\$ 272,324	\$ 68,648	25.2%
Retail Services Agreement	181,159	45,752	25.3%	185,807	185,807	46,452	25.0%
Industrial Waste Control Charges	15,001	2,361	15.7%	13,744	13,744	2,091	15.2%
Pollutant Surcharges	-	1,606	0.0%	-	-	1,481	0.0%
Investment Earnings	6,879	2,371	34.5%	8,731	8,731	1,814	20.8%
Other Revenues	-	144	0.0%	-	-	126	0.0%
Total Revenues	\$ 474,335	\$ 120,972	25.5%	\$ 480,605	\$ 480,605	\$ 120,612	25.1%
Revenue Requirements							
Operations & Maintenance Expense	\$ 191,079	\$ 34,257	17.9%	\$ 187,057	\$ 187,057	\$ 41,147	22.0%
O&M Legacy Pension	10,824	2,706	25.0%	10,824	10,824	2,706	25.0%
Debt Service	208,389	52,530	25.2%	215,739	215,739	50,645	23.5%
Accelerated Legacy Pension	11,621	2,905	25.0%	11,621	11,621	2,905	25.0%
Extraordinary Repair & Replacement							
Deposit	-	-	0.0%	-	-	-	0.0%
Lease Payment	27,500	6,875	25.0%	27,500	27,500	6,875	25.0%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program	2,374	594	25.0%	2,403	2,403	601	25.0%
DWSD Budget Shortfall Pending	-	(2,172)	0.0%	-	-	6,292	0.0%
Improvement & Extension Fund							
Transfer Pending	22,548	5,637	25.0%	25,462	25,462	6,365	25.0%
Total Revenue Requirements	\$ 474,335	\$ 103,332	21.8%	\$ 480,605	\$ 480,605	\$ 117,536	24.5%
Net Difference		\$ 17,640				\$ 3,076	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 2,388				\$ 460	
Revenue Requirement Variance		15,252				2,616	
Overall Variance		<u>\$ 17,640</u>				<u>\$ 3,076</u>	

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of September 30, 2019, is 25.0% (three 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 9/30/2018	Percent Year-to-Date	BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	ACTIVITY THRU 9/30/2019	Percent Year-to-Date	
Water	\$ 66,596	\$ 20,457	30.7%	\$ 66,021	\$ 66,021	\$ 16,578	25.1%	
Sewer	118,319	26,314	22.2%	115,985	115,985	26,786	23.1%	
Centralized	99,045	17,345	17.5%	106,914	106,914	23,276	21.8%	
Administrative	28,683	5,647	19.7%	29,628	29,628	6,766	22.8%	
Employee Benefits	-	(972)	0.0%	-	-	(87)	0.0%	
Total O&M Budget	\$ 312,642	\$ 68,791	22.0%	318,548	318,548	73,319	23.0%	

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 23.0% which is reasonably within the pro-rata benchmark of 25.0%. This positive variance equates to a dollar amount of \$6.3 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 24.4% through September 2019.

Utilities: The overall category is higher than the benchmark; coming in at 27.1% through September 2019. This variance is not unexpected as usage varies throughout the year. Electric is higher than the benchmark; coming in at 30.3%. 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. Gas is lower than the benchmark; coming in at 15.0%. The related bills are currently being reviewed to identify the cause for the lower readings.

Chemicals: This category is higher than the benchmark; coming in at 31.8% through September 2019. While variances in this category are not unexpected as usage varies throughout the year, the variance for September 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 22.8% through September 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 20.0% through September 2019. Variances in this category are not unexpected as the usage of contracts varies throughout the year. While this category is being reviewed, this variance is not a concern at this time.

Capital Program Allocation: This category is lower than the benchmark; coming in at 12.6% through September 2019. A review of this category is being conducted.

Shared Services: This category is slightly higher than the benchmark; coming in at 26.8% through September 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 to adjust the shared services budget to this revised FY 2020 forecast.

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

Expense Categories Entity-wide	FY 2019	FY 2019	Percent	FY 2019	Percent	FY 2020	FY 2020	FY 2020	Percent	PRORATED
	AMENDED BUDGET	ACTIVITY THRU 9/30/2018	Year-to- Date at 9/30/2018	ACTIVITY THRU 6/30/2019	Year-to- Date at 6/30/2019	AMENDED BUDGET	AMENDED BUDGET (3 MONTHS)	ACTIVITY THRU 9/30/2019	Year-to- Date	BUDGET LESS FY 2020 ACTIVITY
Salaries & Wages	\$ 61,600	\$ 14,493	23.5%	\$ 59,922	24.2%	\$ 68,301	\$ 17,075	\$ 16,056	23.5%	\$ 1,019
Workforce Development	751	177	23.5%	794	22.3%	1,014	254	218	21.5%	35
Overtime	7,612	1,841	24.2%	7,554	24.4%	6,140	1,535	1,853	30.2%	(318)
Employee Benefits	23,778	6,335	26.6%	21,998	28.8%	23,005	5,751	6,370	27.7%	(619)
Transition Services	8,556	2,137	25.0%	8,322	25.7%	6,630	1,658	1,233	18.6%	425
Employee Benefits Fund	-	(972)	0.0%	-	0.0%	-	-	(87)	0.0%	87
<i>Personnel Costs</i>	<u>102,296</u>	<u>24,010</u>	23.5%	<u>98,589</u>	24.4%	<u>105,091</u>	<u>26,273</u>	<u>25,644</u>	24.4%	629
Electric	39,019	13,683	35.1%	39,103	35.0%	38,386	9,596	11,628	30.3%	(2,031)
Gas	6,631	1,391	21.0%	6,568	21.2%	6,444	1,611	964	15.0%	647
Sewage Service	2,491	363	14.6%	2,094	17.3%	1,847	462	487	26.4%	(26)
Water Service	3,648	1,148	31.5%	3,631	31.6%	4,658	1,164	834	17.9%	330
<i>Utilities</i>	<u>51,789</u>	<u>16,585</u>	32.0%	<u>51,396</u>	32.3%	<u>51,334</u>	<u>12,833</u>	<u>13,912</u>	27.1%	(1,079)
Chemicals	13,385	3,566	26.6%	13,276	26.9%	13,899	3,475	4,420	31.8%	(946)
Supplies & Other	36,206	4,616	12.7%	37,120	12.4%	36,392	9,098	8,306	22.8%	792
Contractual Services	102,803	22,628	22.0%	101,873	22.2%	115,307	28,827	23,062	20.0%	5,764
Capital Program Allocation	(3,356)	(743)	22.1%	(3,381)	22.0%	(5,414)	(1,354)	(682)	12.6%	(672)
Shared Services	(9,005)	(1,871)	20.8%	(7,139)	26.2%	(5,025)	(1,256)	(1,344)	26.8%	88
Unallocated Reserve	18,524	-	0.0%	-	0.0%	6,965	1,741	-	0.0%	1,741
Total Expenses	<u>\$ 312,642</u>	<u>\$ 68,791</u>	22.0%	<u>\$ 291,733</u>	23.6%	<u>\$ 318,548</u>	<u>\$ 79,637</u>	<u>\$ 73,319</u>	23.0%	<u>\$ 6,318</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 in a draft format. Adjustments related to fiscal year end 2019 audit affect the basic financial statements. The results of these adjustments will be presented in the audited CAFR.

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 September 30, 2019
(\$000)

	Water	Sewage Disposal	Total Business- type Activities	Comparative June 30, 2019
Assets				
Cash (a)	\$ 131,118	\$ 184,633	\$ 315,751	\$ 571,015
Investments (a)	399,655	282,580	682,235	460,078
Accounts Receivable	94,548	87,196	181,744	208,914
Due from (to) Other Funds (b)	3,256	(3,256)	-	2,890
Other Assets (c)	594,786	450,923	1,045,709	1,046,518
Cash Held FBO DWSD Advance (d)	-	5,669	5,669	
Capital Assets, net of Depreciation	1,356,887	2,317,327	3,674,214	3,747,784
Construction Work in Process (e)	478,732	332,999	811,731	786,405
Total assets	3,058,982	3,658,072	6,717,054	6,823,603
Deferred Outflows (f)	92,839	177,210	270,050	273,596
Liabilities				
Liabilities - Short-Term (g)	126,519	164,237	290,756	321,270
Due to (from) Other Funds (b)	-	-	-	2,890
Other Liabilities (h)	2,775	6,306	9,081	9,097
Cash Held FBO DWSD (d)	3,001	-	3,001	2,807
Liabilities - Long-Term (i)	3,033,736	3,737,865	6,771,601	6,853,419
Total liabilities	3,166,031	3,908,408	7,074,439	7,189,483
Deferred Inflows (f)	59,384	47,372	106,756	108,541
Total net position (j)	\$ (73,594)	\$ (120,498)	\$ (194,091)	\$ (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 September 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 September 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 August 31, 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 September 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 Three Months ended September 30, 2019
(\$000)**

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- type Activities	Comparative June 30, 2019
Revenue						
Wholesale customer charges	\$ 88,146	94.3%	\$ 68,648	57.8%	\$ 156,793	\$ 584,172
Local system charges	5,324	5.7%	46,452	39.1%	51,776	201,341
Industrial waste charges	-	0.0%	2,091	1.8%	2,091	9,106
Pollutant surcharges	-	0.0%	1,481	1.2%	1,481	5,933
Other revenues	-	0.0%	126	0.1%	126	528
Total Revenues	\$ 93,470	100%	\$ 118,797	100%	\$ 212,267	\$ 801,079
Operating expenses						
Operations and Maintenance	32,172	34.4%	41,306	34.8%	73,478	293,863
Depreciation	33,995	36.4%	40,267	33.9%	74,261	309,115
Total operating expenses	66,167	70.8%	81,572	68.7%	147,739	602,978
Operating income	27,303	29.2%	37,225	31.3%	64,528	198,101
Total Nonoperating (revenue) expense	24,015	25.7%	33,780	28.4%	57,794	220,170
Increase/(Decrease) in Net Position	3,288	3.5%	3,445	2.9%	6,733	(22,070)
Net position (deficit), beginning of year	(76,882)		(123,943)		(200,825)	(178,755)
Net position (deficit), end of year	\$ (73,594)		\$ (120,498)		\$ (194,091)	\$ (200,825)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is \$3.3 million.
- ✓ Wholesale water customer charges of \$88.1 million account for 94.3% of Water System revenues.
- ✓ Operating expenses of \$66.1 million represent 70.8% of total operating revenue. Depreciation is the largest operating expense at \$34.0 million or 51.4% of operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$27.3 million or 29.2% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$22.2 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 \$3.4 million.
- ✓ Wholesale customer charges of \$68.6 million account for 57.8% 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 \$46.4 million account for 39.1% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$81.5 million represent 68.7% of total operating revenue. Depreciation is the largest operating expense at \$40.2 million or 49.4% of total operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$37.2 million or 31.3% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$29.2 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 September 2019 Financial Report Binder. Explanatory notes follow this schedule.

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

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- type Activities	Percent of Total
Operating expenses						
Personnel						
Salaries & Wages	6,573	20.4%	10,934	26.5%	17,507	23.8%
Overtime	1,128	3.5%	725	1.8%	1,853	2.5%
Benefits	3,949	12.3%	2,335	5.7%	6,283	8.6%
Total Personnel	<u>\$ 11,650</u>	<u>36.2%</u>	<u>\$ 13,994</u>	<u>33.9%</u>	<u>\$ 25,644</u>	<u>34.9%</u>
Utilities						
Electric	7,978	24.8%	3,650	8.8%	11,628	15.8%
Gas	45	0.1%	918	2.2%	964	1.3%
Sewage	73	0.2%	415	1.0%	487	0.7%
Water		0.0%	834	2.0%	834	1.1%
Total Utilities	<u>\$ 8,096</u>	<u>25.2%</u>	<u>\$ 5,817</u>	<u>14.1%</u>	<u>\$ 13,912</u>	<u>18.9%</u>
Chemicals	1,574	4.9%	2,846	6.9%	4,420	6.0%
Supplies and other	2,904	9.0%	5,402	13.1%	8,306	11.3%
Contractual services	9,637	30.0%	13,584	32.9%	23,221	31.6%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(428)	-1.3%	(254)	-0.6%	(682)	-0.9%
Shared services allocation	(1,262)	-3.9%	(83)	-0.2%	(1,344)	-1.8%
Operations and Maintenance Expenses	<u>\$ 32,172</u>	<u>100.0%</u>	<u>\$ 41,306</u>	<u>100.0%</u>	<u>\$ 73,478</u>	<u>100.0%</u>

Totals may be off due to rounding.

- ✓ Core expenses for water and sewage disposal systems are utilities (18.9% of total O&M expenses) and chemicals (6.0%).
- ✓ Personnel costs (34.9% 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 (31.6%) includes:
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$3.8 million); and
 - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenance, field, planning and other services.
- ✓ Capital Adjustment represents expenses for a CIP project that was canceled.

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 Three Months ended September 30, 2019
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2019
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (5,586)	\$ (4,548)	\$ (10,134)	\$ (40,673)
Interest income DWSD Shortfall	-	(386)	(386)	(1,104)
Investment earnings	(1,176)	(1,851)	(3,027)	(26,518)
Other nonoperating revenue	(6)	(4)	(11)	(420)
Interest expense				-
Bonded debt	27,876	33,780	61,656	250,966
Lease obligation	4,385	5,360	9,745	39,264
Other obligations	1,217	393	1,610	6,368
Total interest expense	33,478	39,533	73,011	296,597
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	6,527
Capital Contribution	-	-	-	-
Amortization, issuance costs, debt	(4,004)	463	(3,541)	(3,995)
Amortization, raw water rights	892	-	892	3,567
(Gain) loss on disposal of capital assets	(1)	(3)	(4)	(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	\$ 24,015	\$ 33,780	\$ 57,794	\$ 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). The repayment of the shortfall will last for three years (two years remain on the 2016 & 2017 shortfall balance and three years remain on the 2018 shortfall balance).

- ✓ 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:

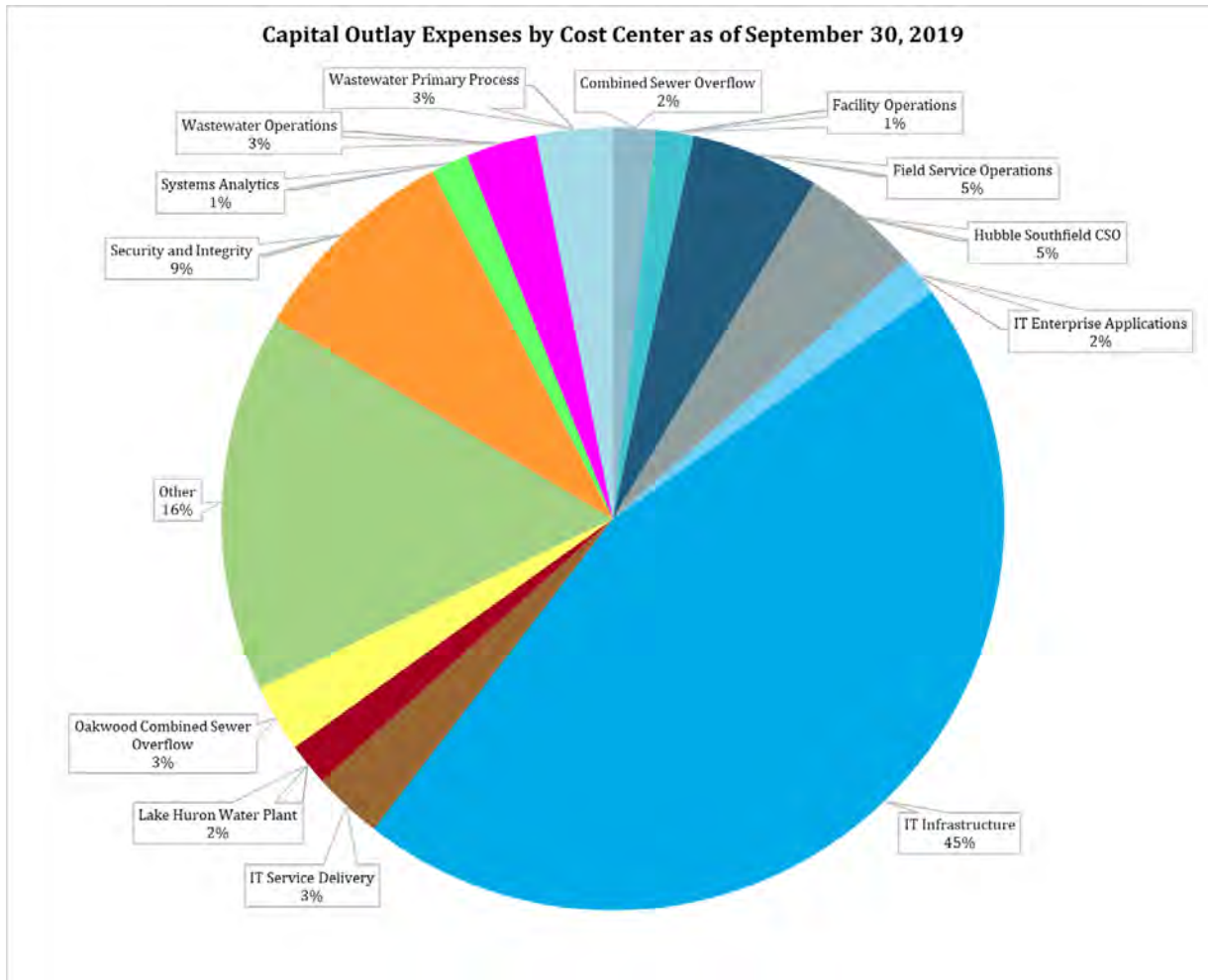
- ✓ Legacy Pension expense is reflected as income due to changes in actuarial assumptions and rates from the June 30, 2018 City of Detroit General Retirement System Component II audited financial statement.
- ✓ Sewer Other Non-operating expense includes the 2018 MOU Item 8a from June 27, 2018 for a final 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 September 30, 2019, total capital outlay spend is \$3.4 million. Following this chart is a sample list of projects and purchases from the total spend of \$3.4 million:



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

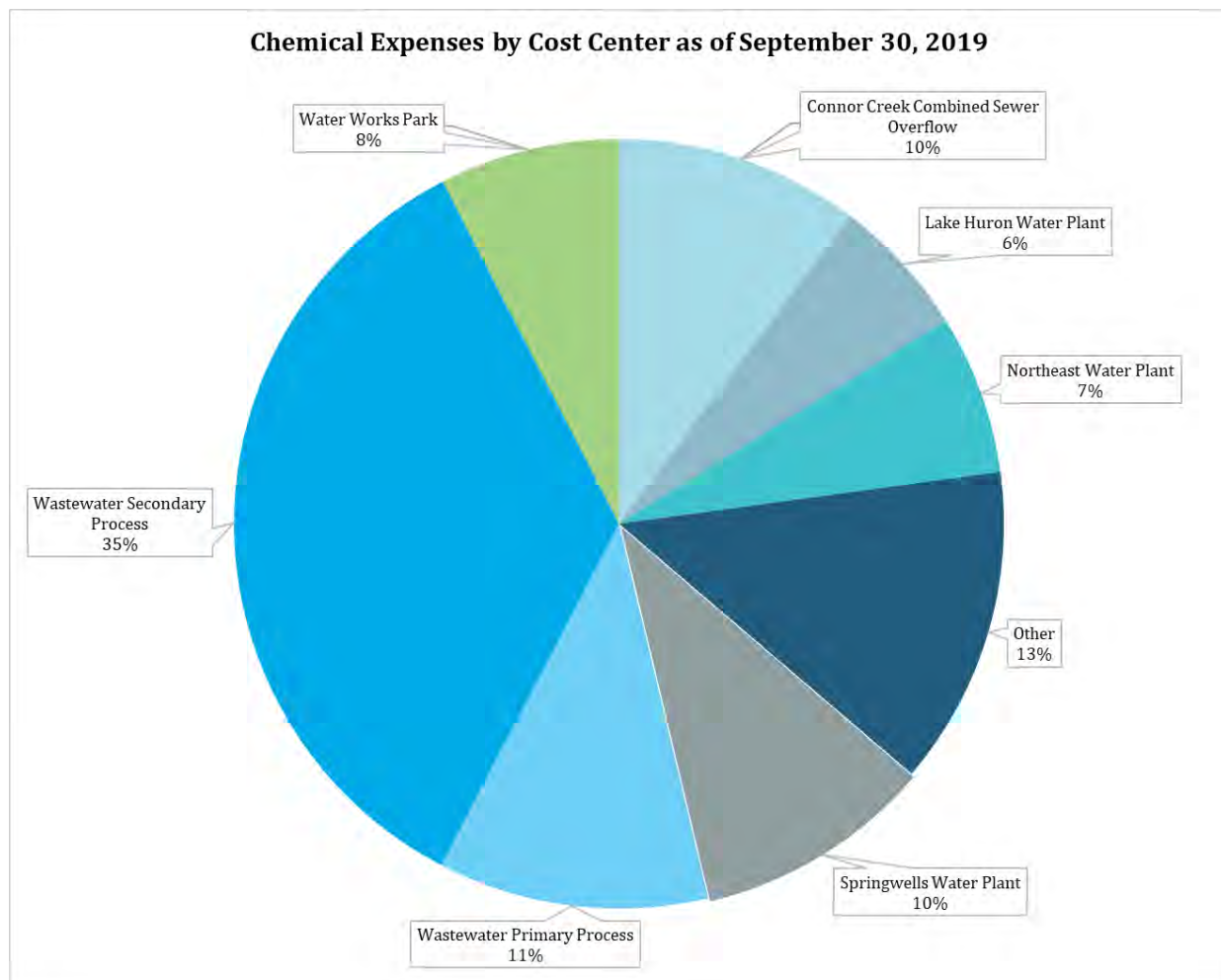
Water Operations: 14 Mile Water Main assessment (\$138k); skid steer loader (\$44k) under ‘other’ for the Southwest Water Plant and Seepex Cavity Pump (\$36k) at Lake Huron Water Plant.

Wastewater Operations: Accusonic flow meters (\$168k); Transformer C structure at Water Resource Recovery Facility (\$99k); chemical feed pump (\$96k); water heater for Scum building (\$76k); HVAC controls upgrade (\$52k); Rotork Actuators (\$49k)

Centralized & Administrative Facilities: Low voltage wiring services (\$1.3m); security infrastructure improvements (\$303k); IT software (\$210k); Transmitters (\$53k); 2nd Floor furniture at CSF (\$49k); IT computers (\$40k); IT Premium hardware support (\$37k); Furniture for Water Quality team (\$36k) under the category of 'other'; IT monitors (\$34k) and bathroom renovation (\$51k) under the category of 'other' for the Logistics and Materials team

Chart 2 – Chemical Spend – Water and Sewer System Combined

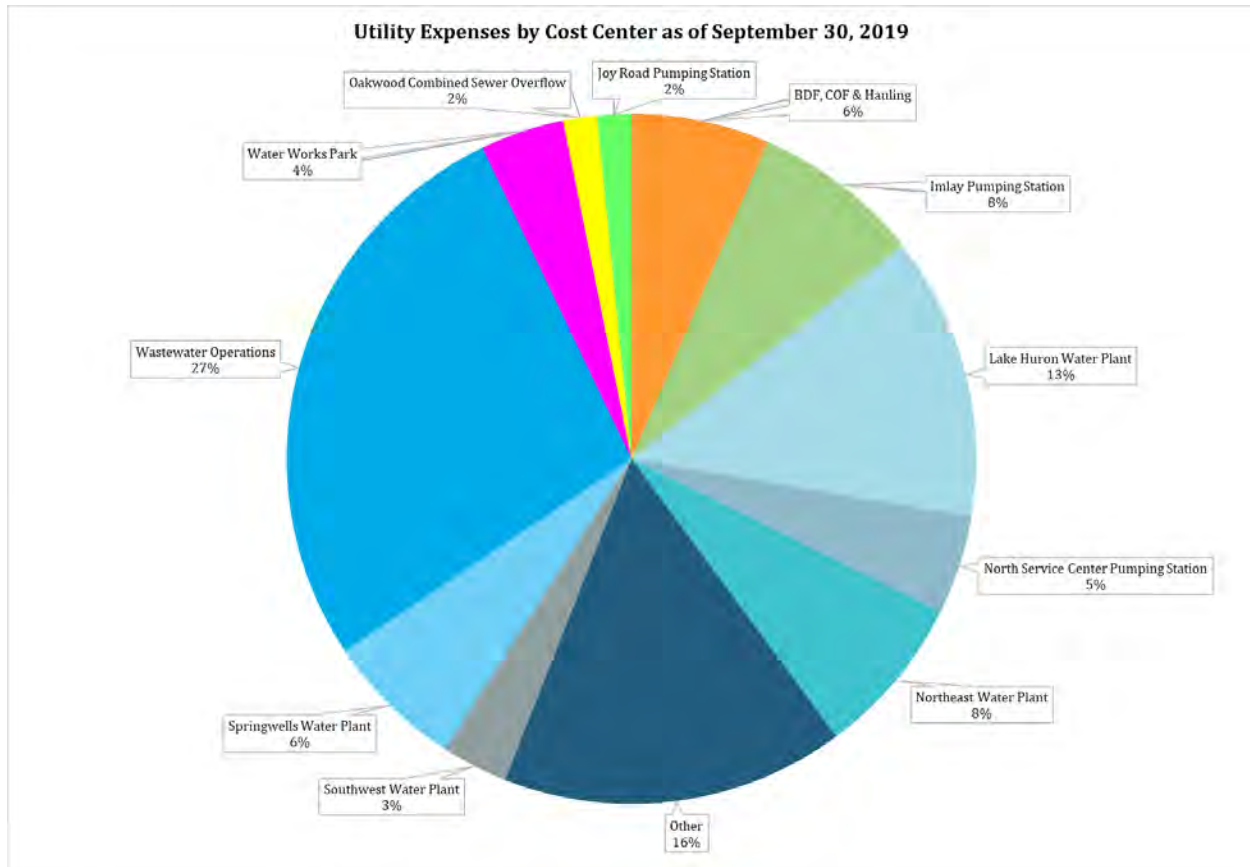
Chemical spend is \$4.4 million through September 30, 2019. The allocation is shown in the chart below and remains consistent with prior periods.



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 \$13.9 million through September 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 August 2019.

Chart 1 - Bank Reconciliation Completion Status

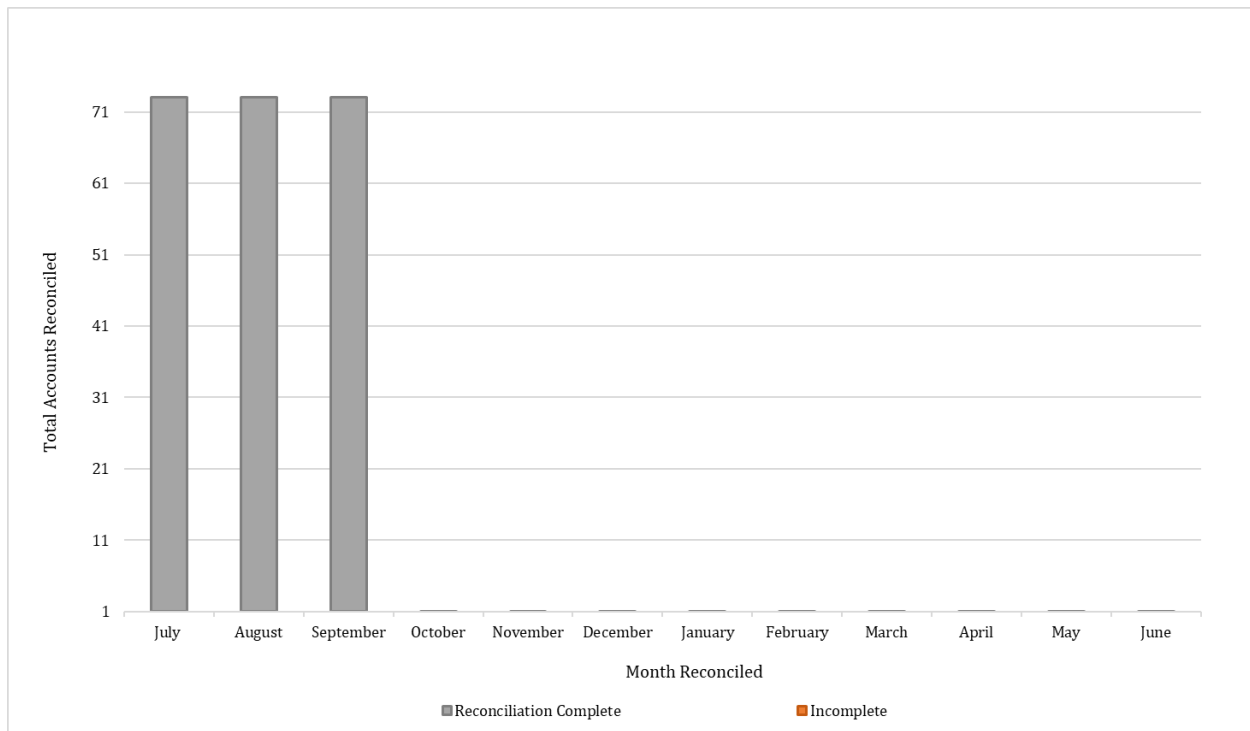


Table 1 - Fiscal Year 2020 GL Cash Account Rollforward

Total GL Cash accounts as of July 1, 2019	71
New GL Cash accounts	2
Inactivated GL Cash accounts	0
Total GL Cash accounts as of September 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 Three Months Ended September 30, 2019**

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 12,066	\$ 3,076	\$ 15,142
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	2,860	5,119	7,979
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	8,399	21,413	29,812
Accelerated pension B&C notes obligation portion (g)	44	99	143
Lease payment (h)	1,240	1,515	2,755
WRAP (i)	7	26	33
DWSD short term allocation (j)	-	6,292	6,292
Improvement & Extension Fund (j)	8,525	6,206	14,731
Nonbudgeted financial reporting categories adjustments			
Depreciation (k)	(33,995)	(40,267)	(74,262)
Amortization (k)	3,112	(463)	2,649
Other nonoperating income (k)	7	4	11
Other nonoperating expense (k)	-	-	-
Gain(loss) on disposal of capital assets (k)	1	3	4
Raw water rights (l)	621	-	621
Investment earnings construction fund (m)	401	422	823
Net Position Increase/(Decrease) per Financial Statements (b)	\$ 3,288	\$ 3,445	\$ 6,733

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 a \$159 thousand Sewer Improvement and Extension Fund expense relating to a repair paid for through the Sewer Improvement and

Extension Fund. This is a consolidated expense for financial reporting purposes but is 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.

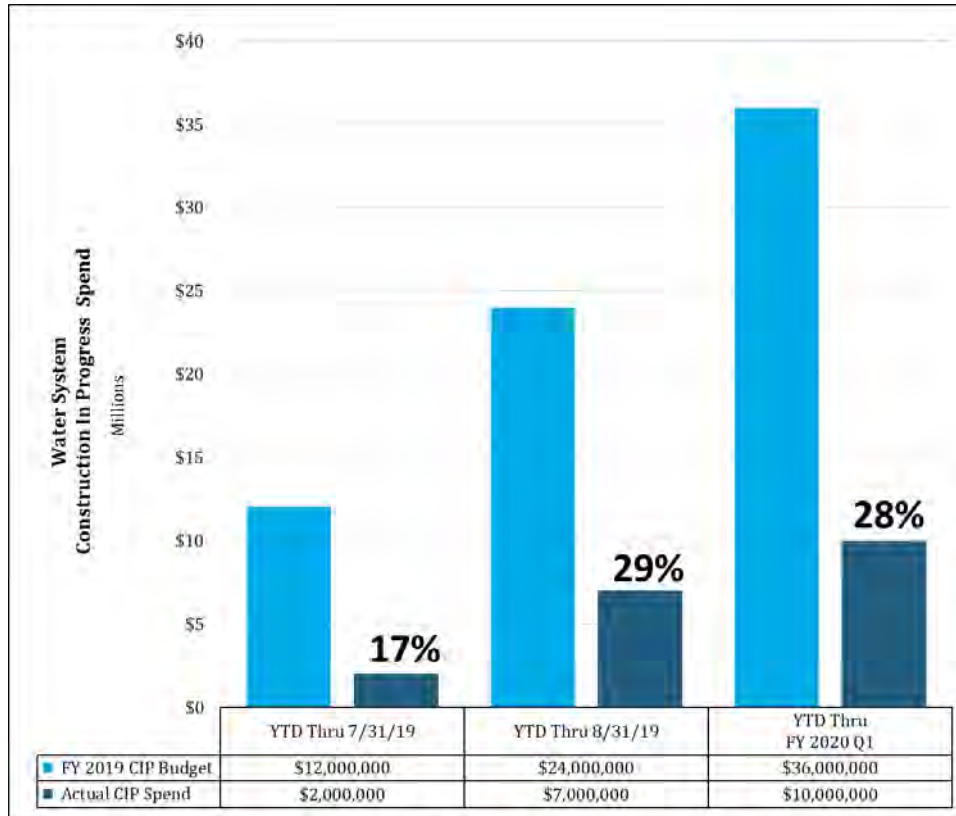
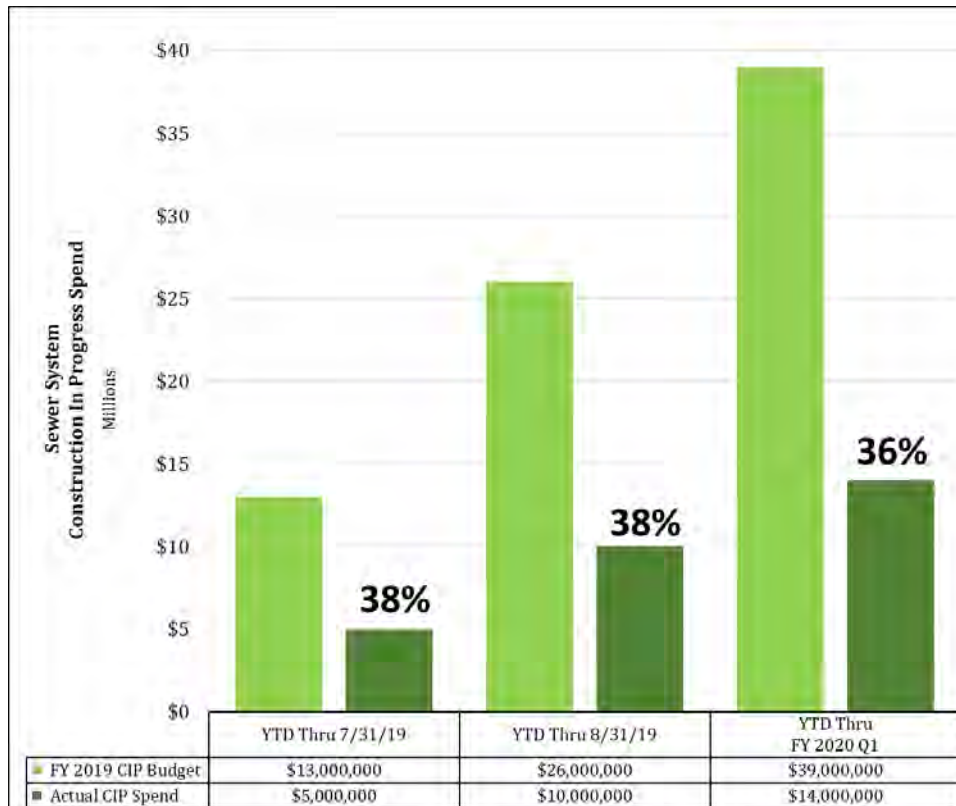
This report presents quarterly and monthly CWIP spending trends against a prorated spending plan. The prorated spending plan is calculated by dividing the total fiscal year 2020 board-approved CIP plan by twelve equal months. It should be noted that these interim reports are prepared on a modified cash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

Chart 1 – Water System Construction in Work in Progress Spend

As of September 2019, the Water system incurred over \$10 million of construction costs to date. While this is only 28% of the fiscal year 2020 prorated spending plan through September, future months are anticipated to increase closer to plan.

Chart 2 – Sewer System Construction in Work in Progress Spend

As of September 2019, the Sewer system incurred over \$14 million of construction costs to date. While this is only 36% of the fiscal year 2020 prorated spending plan through September, future months are anticipated to increase closer to plan.

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 September 1, 2019. MBO transfers for water totaling \$37.6 million have been transferred to GLWA accounts.

Table 2 - GLWA FY 2020 Sewer MBO Transfers reflects the required transfers for FY 2020 completed through September 1, 2019. MBO transfers for sewer totaling \$53.9 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 DWSD)	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
Total FY 2020	\$32,872,626	\$1,512,000	\$2,673,924	\$495,201	\$0	\$0	\$37,553,751

Table 2 – GLWA FY 2020 Sewer MBO Transfers

SEWER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWSD)	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
Total FY 2020	\$46,764,300	\$2,706,000	\$3,671,877	\$721,824	\$0	\$0	\$53,864,001

Table 3 – GLWA MBO Transfer History

GLWA MBO Transfer History							
WATER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWSD)	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 (3 month)	32,872,626	1,512,000	2,673,924	495,201	-	-	37,553,751
Life to Date	\$458,929,434	\$25,682,300	\$44,659,716	\$8,776,101	\$2,686,900	\$606,000	\$541,340,451
SEWER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of DWSD)	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 (3 month)	46,764,300	2,706,000	3,671,877	721,824	-	-	53,864,001
Life to Date	\$705,647,492	\$46,030,800	\$61,099,469	\$11,531,420	\$8,246,100	\$779,600	\$833,334,881

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 September 1, 2019. MBO transfers for Water totaling \$14.5 million have been transferred to accounts held by DWSD. For FY 2020, DWSD has requested that \$3,548,000.00 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 September 1, 2019. MBO transfers for Sewer totaling \$23.7 million have been transferred to accounts held by DWSD. For FY 2020, DWSD has requested that \$5,032,700.00 of the lease payment be utilized to offset a portion of debt service of which one-twelfth is applied monthly.

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
Total FY 2020	\$ 8,665,599	\$ 1,068,000	\$ 4,737,999	\$ 14,471,598

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
Total FY 2020	\$ 17,335,875	\$ 714,000	\$ 5,616,825	\$ 23,666,700

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 (3 month)				
MBO/Lease Requirement	8,665,599	1,068,000	5,625,000	15,358,599
Offset to Debt Service	-	-	(887,001)	(887,001)
Net MBO Transfer	8,665,599	1,068,000	4,737,999	14,471,598
Life-to-Date				
MBO/Lease Requirement	138,991,603	18,137,100	95,625,000	252,753,703
Offset to Debt Service	-	-	(9,061,101)	(9,061,101)
Total Water	\$ 138,991,603	\$ 18,137,100	\$ 86,563,899	\$ 243,692,602
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 (3 month)				
MBO/Lease Requirement	17,335,875	714,000	6,875,000	24,924,875
Offset to Debt Service	-	-	(1,258,175)	(1,258,175)
Total MBO Transfer	17,335,875	714,000	5,616,825	23,666,700
Life-to-Date				
MBO/Lease Requirement	195,931,687	12,149,800	116,875,000	324,956,487
Offset to Debt Service	-	-	(34,831,339)	(34,831,339)
Total Sewer	\$ 195,931,687	\$ 12,149,800	\$ 82,043,661	\$ 290,125,148

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

This report includes the following:

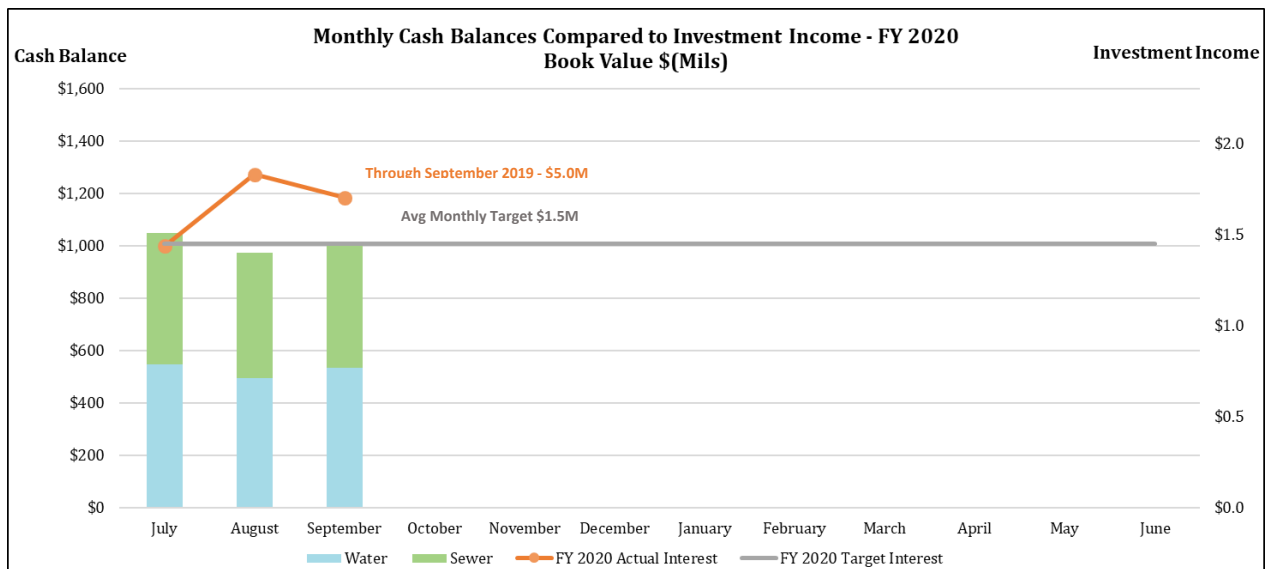
1. Monthly Cash Balances Compared to Investment Income
2. Cash Balance Detail

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 September 2019 of \$5 million is 29% 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 September 2019



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$549	\$494	\$536									
Sewer	\$501	\$479	\$464									
Total	\$1,050	\$973	\$1,000									
Investment Income	\$1.4	\$1.8	\$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

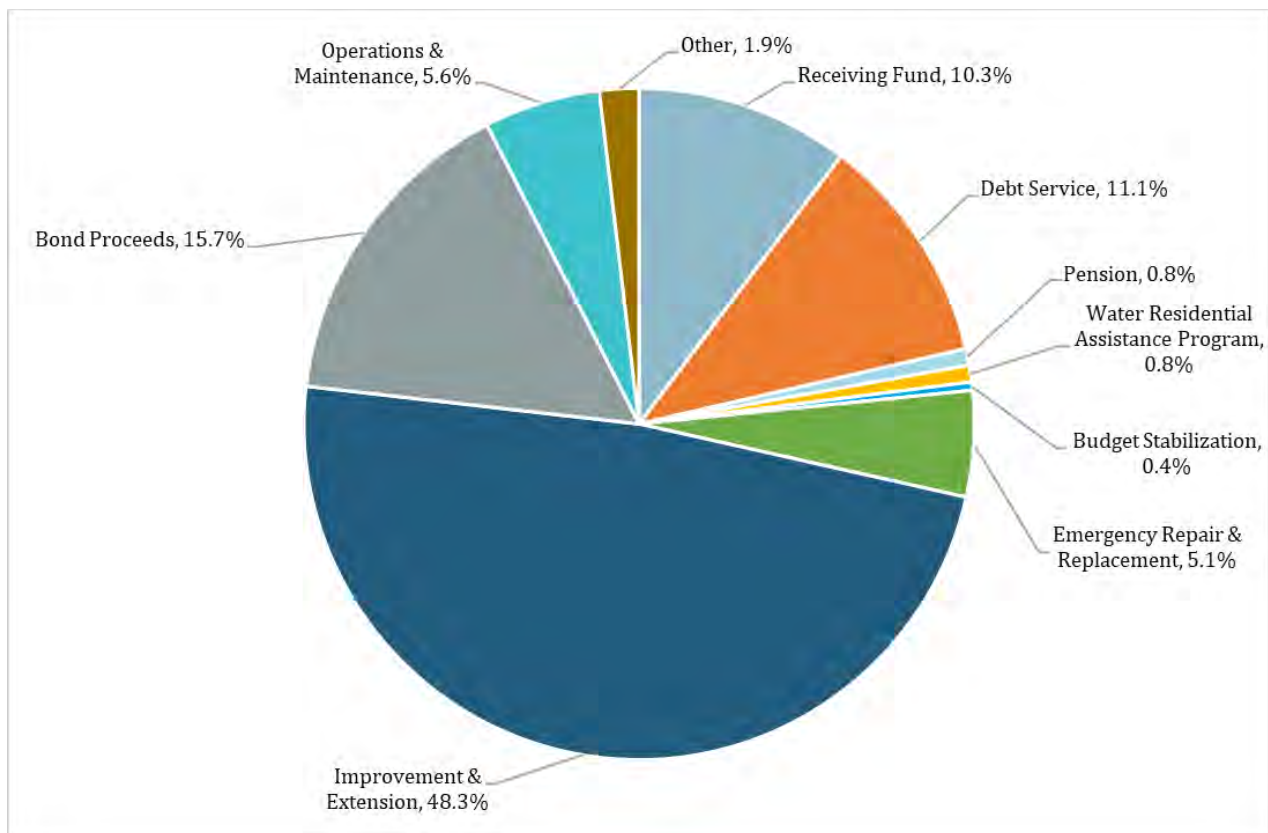
Funds Held Outside Trust:

- 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 September 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 September 30, 2019 is \$536 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.

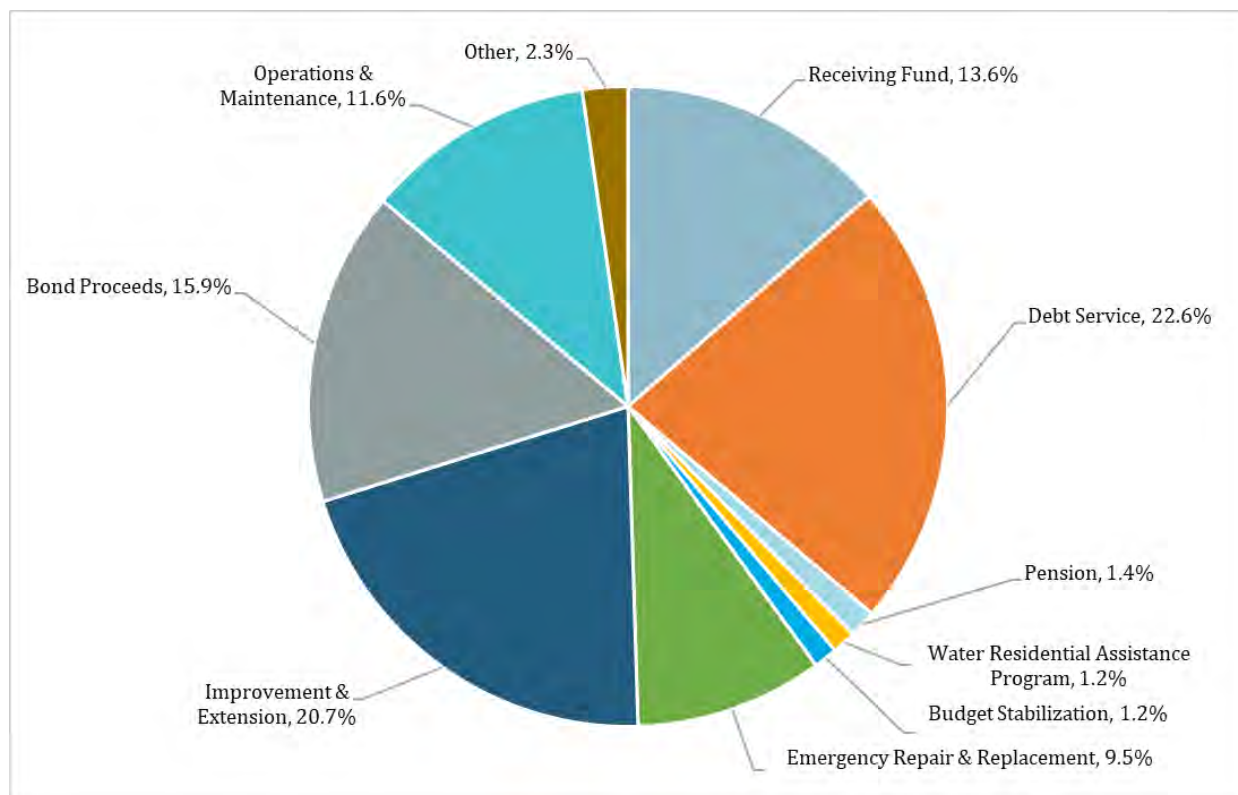
Chart 2 – Cash Balances - Water Funds as of September 30, 2019



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

Chart 3 – Cash Balances - Sewer Funds as of September 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 September 30, 2019 is \$464 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 September 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 September 30, 2019, the DWSD usage was at 91.85% of the budget and billed revenue was at 97.13% 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					
November	218,154	8,078,402	37.03					
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	755,504	27,941,609	36.98	(67,023)	(826,269)
<i>Subtotals ytd</i>	<i>822,527</i>	<i>28,767,878</i>	<i>34.97</i>	<i>755,504</i>	<i>27,941,609</i>	<i>36.98</i>	<i>(67,023)</i>	<i>(826,269)</i>
<i>Achievement of Budget</i>				<i>91.85%</i>	<i>97.13%</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 2 – DWSD Retail Water Collections

Water				
Month	Current Year	Prior Year	Variance	Ratio
October	9,015,400	9,528,528	(513,128)	-5.39%
November	7,938,517	8,049,328	(110,811)	-1.38%
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%
Rolling, 12-Month Total	98,867,233	101,076,958		
Rolling, 12-Month Average	8,238,936	8,423,080		

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 September 30, 2019, the DWSD usage was at 92.26% of the budget and billed revenue was at 98.25% 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				
November	211,617	25,759,684				
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	706,918	82,191,137	(59,331)	(1,459,995)
<i>Subtotals ytd</i>	<i>766,249</i>	<i>83,651,132</i>	<i>706,918</i>	<i>82,191,137</i>	<i>(59,331)</i>	<i>(1,459,995)</i>
<i>Achievement of Budget/Goal</i>			<i>92.26%</i>	<i>98.25%</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
October	23,938,933	23,786,903	152,030	0.64%
November	20,624,039	19,485,270	1,138,769	5.84%
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%
Rolling 12-Month Total	258,439,003	250,384,563		
Rolling, 12-Month Average	21,536,584	20,865,380		

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 September 30, 2019 with comparative totals from September 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	287,179	\$ 329.10	\$ 15,191,000 16.1%	\$ 7,839,000 8.3%	\$ 17,430,000 18.4%	\$ 54,051,000 57.2%	\$ 94,510,000 100.0%
Commercial	28,107	1,445.46	10,131,000 24.9%	3,081,000 7.6%	7,061,000 17.4%	20,354,000 50.1%	40,627,000 100.0%
Industrial	4,810	3,874.72	4,980,000 26.7%	1,781,000 9.6%	2,583,000 13.9%	9,294,000 49.9%	18,637,000 100.0%
Tax Exempt Entities	8,103	1,908.40	2,571,000 16.6%	1,292,000 8.4%	2,255,000 14.6%	9,345,000 60.4%	15,464,000 100.0%
Government Entities	2,860	1,473.70	887,000 21.0%	217,000 5.2%	806,000 19.1%	2,305,000 54.7%	4,215,000 100.0%
Subtotal - Active Accounts	331,059	\$ 523.94	\$ 33,760,000 19.5%	\$ 14,210,000 8.2%	\$ 30,135,000 17.4%	\$ 95,349,000 55.0%	\$ 173,454,000 100.0%
Inactive Accounts	268,650	87.08	207,000 0.9%	229,000 1.0%	1,290,000 5.5%	21,669,000 92.6%	23,395,000 100.0%
Total	599,709	\$ 328.24	\$ 33,966,000	\$ 14,439,000	\$ 31,424,000	\$ 117,019,000	\$ 196,849,000
% of Total A/R			17.3%	7.3%	16.0%	59.4%	100.0%
Water Fund	223,231	182.47	\$ 8,274,000	\$ 3,024,000	\$ 5,686,000	\$ 23,749,000	\$ 40,732,000
Sewer Fund	280,868	555.83	\$ 25,692,000	\$ 11,415,000	\$ 25,739,000	\$ 93,270,000	\$ 156,116,000
Total September 30, 2019	599,709	328.24	\$ 33,966,000	\$ 14,439,000	\$ 31,424,000	\$ 117,019,000	\$ 196,849,000
Water Fund- Allowance							\$ (26,360,000)
Sewer Fund- Allowance							\$ (90,858,000)
Total September 30, 2019	Bad Debt Allowance						\$ (117,218,000)
Comparative Totals from 2018	581,685	308.77	\$ 36,154,000	\$ 14,983,000	\$ 28,654,000	\$ 99,813,000	\$ 179,605,000

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 September 30, 2019, the billed usage was at 92.8% of budget and billed revenue at 96.64% 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					
November	917,034	24,049,100	26.22					
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	4,357,168	88,136,926	20.23	(338,053)	(3,060,974)
<i>Subtotals ytd</i>	<i>4,695,221</i>	<i>91,197,900</i>	<i>19.42</i>	<i>4,357,168</i>	<i>88,136,926</i>	<i>20.23</i>	<i>(338,053)</i>	<i>(3,060,974)</i>
<i>Achievement of Budget</i>				<i>92.80%</i>	<i>96.64%</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
October	27,827,722	38,336,777	(10,509,055)	-27.41%
November	29,238,260	27,261,391	1,976,869	7.25%
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%
Rolling 12-Month Total	309,166,619	319,428,910		
Rolling 12-Month Average	25,763,885	26,619,076		

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 September 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	22,882,500	N/A	-
January	N/A	22,882,500	N/A	22,882,500	N/A	-
February	N/A	22,882,500	N/A	22,882,500	N/A	-
March	N/A	22,882,500	N/A	22,882,500	N/A	-
April	N/A	22,882,500	N/A	22,882,500	N/A	-
May	N/A	22,882,500	N/A	22,882,500	N/A	-
June	N/A	22,882,500	N/A	22,882,500	N/A	-
Total		274,590,000		68,647,500		-
<i>Subtotals ytd</i>		68,647,500		68,647,500		-
<i>Achievement of Budget</i>				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
October	16,105,200	21,902,800	(5,797,600)	-26.47%
November	28,633,300	22,662,700	5,970,600	26.35%
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%
Rolling 12-Month Total	278,673,423	275,301,406		
Rolling, 12-Month Average	23,222,785	22,941,784		

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 September 30, 2019, Highland Park had a delinquent balance of \$41.6 million, including \$32.2 million for wastewater treatment services, \$1.7 million for industrial waste control services, and \$7.7 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 September 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
October 31, 2018 Balance	6,549,545	32,342,211	1,643,551	40,535,307
November 2018 Billing	104,007	467,900	3,963	575,869
November 2018 Payments	-	-	-	-
November 30, 2018 Balance	6,653,552	32,810,111	1,647,514	41,111,176
December 2018 Billing	101,944	467,900	3,961	573,805
December 2018 Payments	-	-	-	-
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

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 September 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. The \$612,872 water balance that is 46-74 days past due is related to Westland and Inkster. The check from Westland was lost in the mail and is going to be replaced. Inkster paid in full in October. The \$4,531,500 sewer balance that is 46-74 days past due is related to balances for three Wayne County accounts and were paid in full in October.

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 n 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	\$ 43,336,444.35	\$ 35,267,825.29	\$ 717,574.00	\$ 101,871.11	\$ 7,249,173.95
Sewer	\$ 43,561,986.23	\$ 7,273,899.50	\$ 5,004,000.00	\$ 467,900.00	\$ 30,816,186.73
IWC	\$ 3,362,659.75	\$ 541,544.27	\$ -	\$ 48,608.71	\$ 2,772,506.77
Pollutant Surcharge	\$ 692,518.46	\$ 601,963.61	\$ 44,634.82	\$ 1,046.24	\$ 44,873.79
Total	\$ 90,953,608.79	\$ 43,685,232.67	\$ 5,766,208.82	\$ 619,426.06	\$ 40,882,741.24
	100.00%	48.03%	6.34%	0.68%	44.95%

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 35,666,052.94	\$ 35,053,180.47	\$ 612,872.47	\$ -	\$ -
Sewer	\$ 11,332,899.50	\$ 6,801,399.50	\$ 4,531,500.00	\$ -	\$ -
IWC	\$ 1,675,256.72	\$ 533,504.94	\$ -	\$ 44,487.86	\$ 1,097,263.92
Pollutant Surcharge	\$ 692,518.46	\$ 601,963.61	\$ 44,634.82	\$ 1,046.24	\$ 44,873.79
Total	\$ 49,366,727.62	\$ 42,990,048.52	\$ 5,189,007.29	\$ 45,534.10	\$ 1,142,137.71
	100.00%	87.08%	10.51%	0.09%	2.31%

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 35,666,052.94	\$ 35,053,180.47	\$ 612,872.47	\$ -	\$ -
Sewer	\$ 11,332,899.50	\$ 6,801,399.50	\$ 4,531,500.00	\$ -	\$ -
IWC	\$ 472,462.86	\$ 464,346.76	\$ -	\$ 8,116.10	\$ -
Pollutant Surcharge	\$ 692,518.46	\$ 601,963.61	\$ 44,634.82	\$ 1,046.24	\$ 44,873.79
Total	\$ 48,163,933.76	\$ 42,920,890.34	\$ 5,189,007.29	\$ 9,162.34	\$ 44,873.79
	100.00%	89.11%	10.77%	0.02%	0.09%

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 three months of activity to date.

Water fund activity exceeded required MBO disbursements by 20% through September 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 21% through September 30, 2019 with a historical ratio of cash receipts exceeding MBO disbursements by 6% since January 1, 2016. This ratio is expected to return to its average level consistent with prior years over the next several periods.

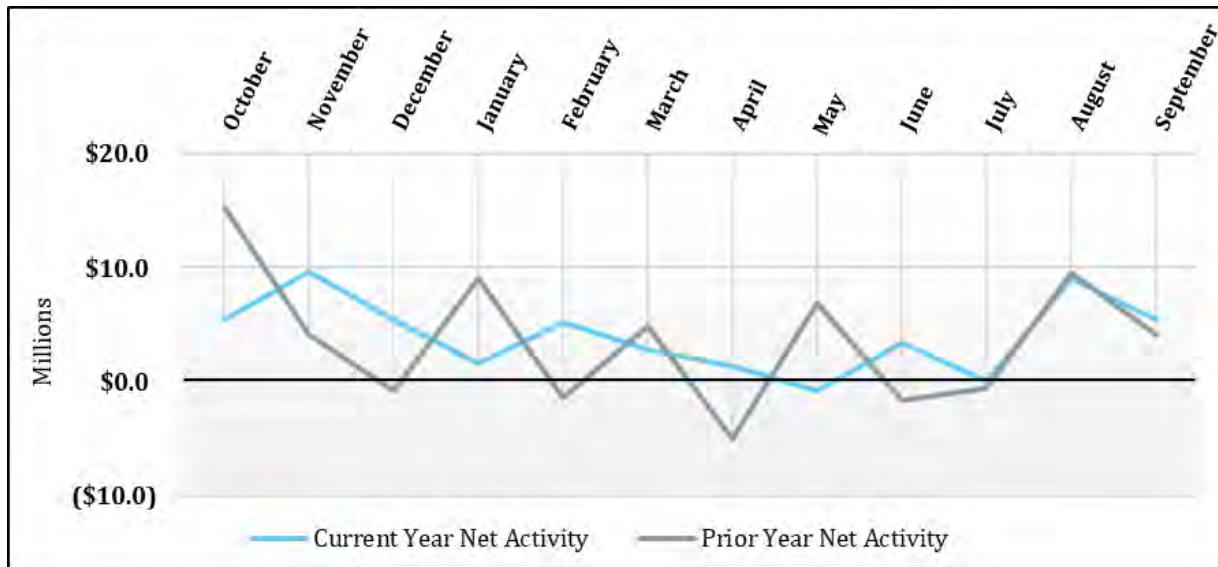
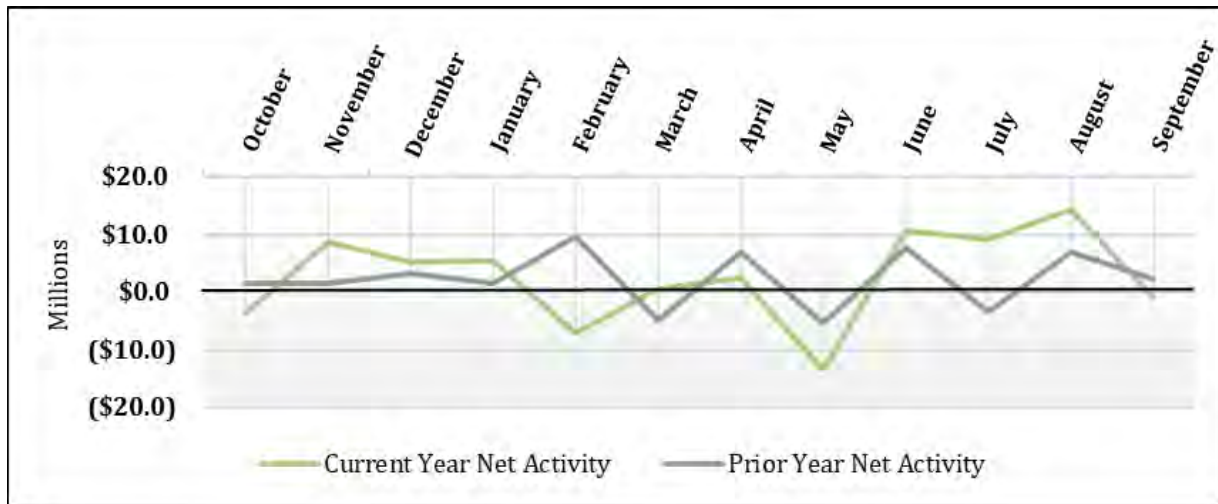
Chart 1 – GLWA 12-Month Net Receipts – Water outlines monthly cash receipt trends across two points of reference for the regional water system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

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 (Prelim)	FY 2020	Life-to-Date Total
Water						
1 Receipts	\$ 149,688,711	\$ 352,941,909	\$ 338,452,001	\$ 336,594,234	\$ 87,279,888	\$1,264,956,743
2 MOU Adjustments	-	-	-	-	-	-
3 Adjusted Receipts	149,688,711	352,941,909	338,452,001	336,594,234	87,279,888	1,264,956,743
4 Disbursements	(146,256,185)	(288,777,985)	(297,064,810)	(289,230,481)	(72,690,475)	(1,094,019,936)
5 Receipts Net of Required Transfers	3,432,526	64,163,924	41,387,191	47,363,753	14,589,413	170,936,807
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)	\$ 14,589,413	\$ 97,502,107
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	102%	122%	114%	116%	120%	116%
Sewer						
9 Receipts	\$ 232,377,715	\$ 469,788,882	\$ 476,269,761	\$ 467,743,744	\$ 133,163,972	\$1,779,344,074
10 MOU Adjustments	-	-	-	-	-	-
11 Adjusted Receipts	232,377,715	469,788,882	476,269,761	467,743,744	133,163,972	1,779,344,074
12 Disbursements	(219,538,325)	(441,443,340)	(458,903,335)	(453,406,636)	(110,496,216)	(1,683,787,852)
13 Receipts Net of Required Transfers	12,839,390	28,345,542	17,366,426	14,337,108	22,667,756	95,556,222
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	4,324,797	13,692,152
17 Net Receipts	\$ 11,553,924	\$ 331,008	\$ (29,444,708)	\$ 1,156,763	\$ 26,992,553	\$ 10,589,540
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	106%	106%	104%	103%	121%	106%
Combined						
19 Receipts	\$ 382,066,426	\$ 822,730,791	\$ 814,721,762	\$ 804,337,978	\$ 220,443,860	\$3,044,300,817
20 MOU Adjustments	-	-	-	-	-	-
21 Adjusted Receipts	382,066,426	822,730,791	814,721,762	804,337,978	220,443,860	3,044,300,817
22 Disbursements	(365,794,510)	(730,221,325)	(755,968,145)	(742,637,117)	(183,186,691)	(2,777,807,788)
23 Receipts Net of Required Transfers	16,271,916	92,509,466	58,753,617	61,700,861	37,257,169	266,493,029
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	4,324,797	13,692,152
27 Net Receipts	\$ 14,986,450	\$ 64,494,932	\$ (13,797,217)	\$ 825,516	\$ 41,581,966	\$ 108,091,647
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	104%	113%	108%	108%	120%	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 three months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 3% through September 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 September 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 coupled with strong cash receipts for October will resolve the current \$5.7 million Sewer shortfall.

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.

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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 (Prelim)	FY 2020	Life-to-Date Total
Water						
1 Receipts	\$ 26,201,881	\$ 96,451,105	\$ 101,233,147	\$ 99,868,219	\$ 25,383,429	\$ 349,137,781
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	44,647,981	96,451,105	101,233,147	99,868,219	25,383,429	367,583,881
4 Disbursements	(47,809,552)	(93,066,144)	(93,049,457)	(97,694,600)	(24,625,623)	(356,245,376)
5 Receipts Net of Required Transfers	(3,161,571)	3,384,961	8,183,690	2,173,619	757,806	11,338,505
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)	\$ 757,806	\$ 2,931,425
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	\$ 66,103,464	\$ 872,528,153
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	66,103,464	934,810,453
12 Disbursements	(122,297,300)	(261,963,973)	(266,217,825)	(271,018,306)	(72,395,352)	(993,892,756)
13 Receipts Net of Required Transfers	(1,285,466)	(28,240,606)	(24,113,034)	848,691	(6,291,888)	(59,082,303)
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	\$ (6,291,888)	\$ (5,669,269)
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	\$ 91,486,893	\$1,221,665,934
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	91,486,893	1,302,394,334
21 Disbursements	(170,106,852)	(355,030,117)	(359,267,282)	(368,712,906)	(97,020,975)	(1,350,138,132)
22 Receipts Net of Required Transfers	(4,447,037)	(24,855,645)	(15,929,344)	3,022,310	(5,534,082)	(47,743,798)
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)	\$ (5,534,082)	\$ (2,737,844)
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>	<u>FY 2017 Shortfall</u>
<u>(29,526,072)</u>	<u>Subtotal</u>
238,264	June IWC not due until July
<u>(29,287,808)</u>	<u>FY 2017 Shortfall-to-Date</u>
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
		11,770,089	17,529,911

Table 4 – FY 2017 DWSD Loan Receivable Payments - Sewer

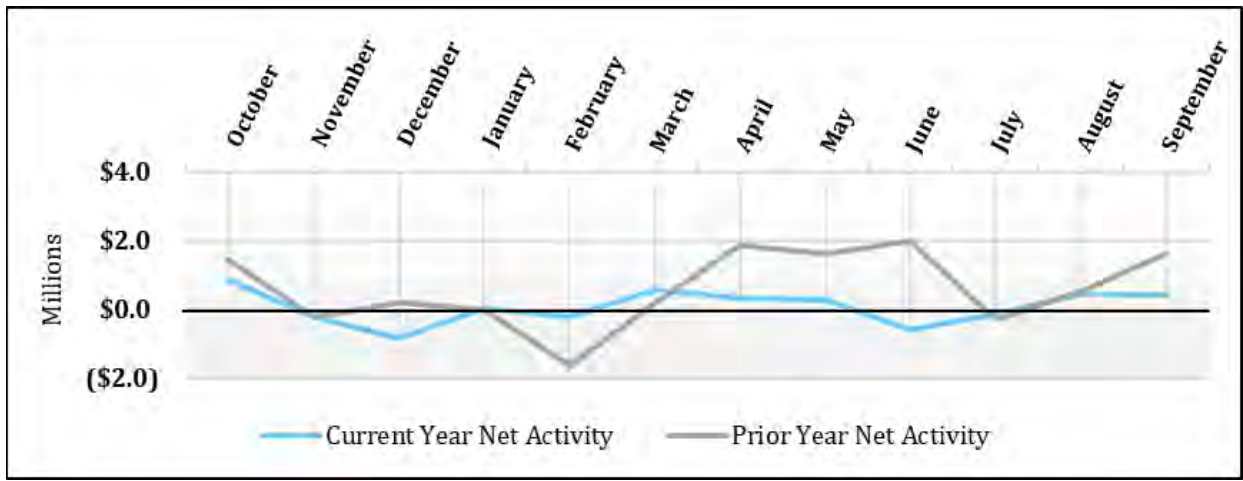
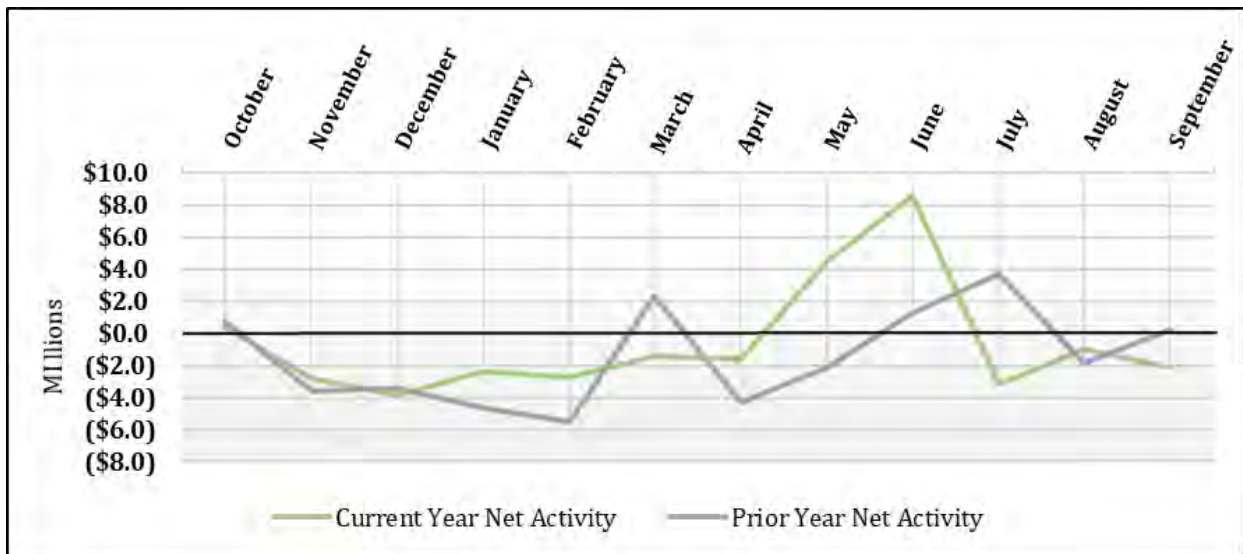
Date	Transaction	Principal	Interest	Total Paid
2/8/2019	Loan Receivable Payment (for the months of Jul - Dec)	4,635,462	564,636	5,200,098
2/22/2019	Loan Receivable Payment (for the months of Jan - Mar)	2,353,768	246,280	2,600,049
4/15/2019	Loan Receivable Payment (for the month of Apr)	789,990	76,693	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
		11,770,089	1,230,155	13,000,244

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
		1,922,064	22,190,970

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
		1,922,064	188,316	2,110,380

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 three months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 16% through September 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 9% through September 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 (Prelim)	FY 2020	Life-to-Date Total
Water						
1 Receipts	\$ 175,890,592	\$ 449,393,014	\$ 439,685,148	\$ 436,462,453	\$ 112,663,317	\$1,614,094,524
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	194,336,692	449,393,014	439,685,148	436,462,453	112,663,317	1,632,540,624
4 Disbursements	(194,065,737)	(381,844,129)	(390,114,267)	(386,925,081)	(97,316,098)	(1,450,265,312)
5 Receipts Net of Required Transfers	270,955	67,548,885	49,570,881	49,537,372	15,347,219	182,275,312
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)	\$ 15,347,219	\$ 100,433,532
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	100%	118%	113%	113%	116%	113%
Sewer						
9 Receipts	\$ 297,634,449	\$ 703,512,249	\$ 718,374,552	\$ 733,083,541	\$ 199,267,436	\$2,651,872,227
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	199,267,436	2,714,154,527
12 Disbursements	(341,835,625)	(703,407,313)	(725,121,160)	(724,424,942)	(182,891,568)	(2,677,680,608)
13 Receipts Net of Required Transfers	11,553,924	104,936	(6,746,608)	15,185,799	16,375,868	36,473,919
14 I&E Transfer	-	-	(22,698,100)	(22,547,700)	-	(45,245,800)
15 Shortfall Advance	-	-	-	-	-	-
16 Shortfall Repayment (principal)	-	-	-	9,367,355	4,324,797	13,692,152
17 Net Receipts	\$ 11,553,924	\$ 104,936	\$ (29,444,708)	\$ (7,361,901)	\$ 20,700,665	\$ 4,920,272
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	103%	100%	99%	102%	109%	101%
Combined						
19 Receipts	\$ 473,525,041	\$1,152,905,263	\$1,158,059,700	\$1,169,545,994	\$ 311,930,753	\$4,265,966,751
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	311,930,753	4,346,695,151
22 Disbursements	(535,901,362)	(1,085,251,442)	(1,115,235,427)	(1,111,350,023)	(280,207,666)	(4,127,945,920)
23 Receipts Net of Required Transfers	11,824,879	67,653,821	42,824,273	64,723,171	31,723,087	218,749,231
24 I&E Transfer	-	-	(48,437,800)	(78,649,780)	-	(127,087,580)
25 Shortfall Advance	-	-	-	-	-	-
26 Shortfall Repayment	-	-	-	9,367,355	4,324,797	13,692,152
27 Net Receipts	\$ 11,824,879	\$ 67,653,821	\$ (5,613,527)	\$ (4,559,254)	\$ 36,047,884	\$ 105,353,804
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	102%	106%	104%	106%	111%	105%

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$226,435.80	\$226,435.80	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$72,653.51	\$72,653.51	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$29,303.67	\$29,303.67	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$66,455.01	\$66,455.01	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$355,612.02	\$355,612.02	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$37,213.57	\$37,213.57	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$34,732.63	\$34,732.63	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$1,073,917.85	\$1,073,917.85	\$0.00	\$0.00	\$0.00
CENTER LINE	\$41,907.76	\$41,907.76	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$435,737.35	\$435,737.35	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$743,515.29	\$743,515.29	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$369,277.88	\$369,277.88	\$0.00	\$0.00	\$0.00
DEARBORN	\$1,597,926.78	\$1,597,926.78	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$333,972.78	\$333,972.78	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$269,249.56	\$269,249.56	\$0.00	\$0.00	\$0.00
ECORSE	\$124,027.91	\$124,027.91	\$0.00	\$0.00	\$0.00
FARMINGTON	\$96,561.41	\$96,561.41	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$907,757.18	\$907,757.18	\$0.00	\$0.00	\$0.00
FERNDALE	\$89,320.73	\$89,320.73	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$119,479.62	\$119,479.62	\$0.00	\$0.00	\$0.00
FLINT	\$346,640.81	\$346,640.81	\$0.00	\$0.00	\$0.00
FRASER	\$113,786.71	\$113,786.71	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$159,000.84	\$159,000.84	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GIBRALTAR	\$29,680.36	\$29,680.36	\$0.00	\$0.00	\$0.00
GREENWOOD TOWNSHIP	\$98,085.66	\$98,085.66	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$101,230.59	\$101,230.59	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$159,306.43	\$159,306.43	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$77,316.86	\$77,316.86	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$150,617.03	\$150,617.03	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$69,331.81	\$69,331.81	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$66,384.15	\$66,384.15	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$145,373.36	\$145,373.36	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$64,384.62	\$64,384.62	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$7,670,391.41	\$214,644.82	\$104,701.53	\$101,871.11	\$7,249,173.95
HURON TOWNSHIP	\$136,072.19	\$136,072.19	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$148,892.55	\$148,892.55	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP	\$1,489.05	\$1,489.05	\$0.00	\$0.00	\$0.00
INKSTER	\$316,806.04	\$214,401.07	\$102,404.97	\$0.00	\$0.00
KEEGO HARBOR	\$28,533.18	\$28,533.18	\$0.00	\$0.00	\$0.00
LAPEER	\$270,865.84	\$270,865.84	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$24,056.40	\$24,056.40	\$0.00	\$0.00	\$0.00
LINCOLN PARK	\$198,805.26	\$198,805.26	\$0.00	\$0.00	\$0.00
LIVONIA	\$1,177,325.38	\$1,177,325.38	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$1,392,599.53	\$1,392,599.53	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$168,590.64	\$168,590.64	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MAYFIELD TOWNSHIP	\$3,473.50	\$3,473.50	\$0.00	\$0.00	\$0.00
MELVINDALE	\$108,820.83	\$108,820.83	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$32,325.20	\$32,325.20	\$0.00	\$0.00	\$0.00
NOCWA	\$2,238,222.96	\$2,238,222.96	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$98,921.30	\$98,921.30	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$638,072.28	\$638,072.28	\$0.00	\$0.00	\$0.00
NOVI	\$991,373.14	\$991,373.14	\$0.00	\$0.00	\$0.00
OAK PARK	\$121,965.81	\$121,965.81	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$5,151.69	\$5,151.69	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$104,962.24	\$104,962.24	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$460,929.59	\$460,929.59	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$285,645.72	\$285,645.72	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$65,195.57	\$65,195.57	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$83,920.50	\$83,920.50	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$24,634.21	\$24,634.21	\$0.00	\$0.00	\$0.00
ROMEO	\$26,519.06	\$26,519.06	\$0.00	\$0.00	\$0.00
ROMULUS	\$396,147.44	\$396,147.44	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$234,038.10	\$234,038.10	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$17,847.18	\$17,847.18	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$1,540,363.91	\$1,540,363.91	\$0.00	\$0.00	\$0.00
SOCWA	\$4,554,955.86	\$4,554,955.86	\$0.00	\$0.00	\$0.00
SOUTH ROCKWOOD	\$9,911.06	\$9,911.06	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$206,721.78	\$206,721.78	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ST. CLAIR SHORES	\$282,626.78	\$282,626.78	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$1,540,565.02	\$1,540,565.02	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$59,307.19	\$59,307.19	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$21,684.55	\$21,684.55	\$0.00	\$0.00	\$0.00
TAYLOR	\$425,901.26	\$425,901.26	\$0.00	\$0.00	\$0.00
TRENTON	\$154,382.27	\$154,382.27	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,286,246.45	\$1,286,246.45	\$0.00	\$0.00	\$0.00
UTICA	\$106,972.17	\$106,972.17	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$369,981.62	\$369,981.62	\$0.00	\$0.00	\$0.00
VILLAGE OF ALMONT	\$21,890.81	\$21,890.81	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$71,935.15	\$71,935.15	\$0.00	\$0.00	\$0.00
WARREN	\$957,022.42	\$957,022.42	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$280,970.34	\$280,970.34	\$0.00	\$0.00	\$0.00
WAYNE	\$303,955.80	\$303,955.80	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$2,053,396.60	\$2,053,396.60	\$0.00	\$0.00	\$0.00
WESTLAND	\$1,606,240.39	\$1,095,772.89	\$510,467.50	\$0.00	\$0.00
WIXOM	\$260,253.10	\$260,253.10	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$161,363.49	\$161,363.49	\$0.00	\$0.00	\$0.00
YCUA	\$981,005.00	\$981,005.00	\$0.00	\$0.00	\$0.00
TOTAL WATER ACCOUNTS	\$43,336,444.35	\$35,267,825.29	\$717,574.00	\$101,871.11	\$7,249,173.95

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$0.00	\$0.00	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$32,229,086.73	\$472,500.00	\$472,500.00	\$467,900.00	\$30,816,186.73
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	\$9,027,000.00	\$4,513,500.00	\$4,513,500.00	\$0.00	\$0.00
WAYNE COUNTY N.E.	\$2,083,600.00	\$2,069,800.00	\$13,800.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$8,400.00	\$4,200.00	\$4,200.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$43,561,986.23	\$7,273,899.50	\$5,004,000.00	\$467,900.00	\$30,816,186.73

GLWA Aged Accounts Receivable- IWC

Balances as of 09/30/19

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)	\$18,576.48	\$18,576.48	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$16,214.02	\$10,619.96	\$0.00	\$5,594.06	\$0.00
BLOOMFIELD HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$7,175.74	\$7,175.74	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$630,457.16	\$36,253.88	\$0.00	\$19,066.46	\$575,136.82
CENTER LINE	\$3,501.68	\$3,501.68	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$11,613.68	\$11,613.68	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLAWSON	\$ (3,037.83)	\$0.00	\$0.00	\$ (3,037.83)	\$0.00
CLINTON TOWNSHIP	\$24,259.95	\$24,259.95	\$0.00	\$0.00	\$0.00
DEARBORN	\$70,293.86	\$70,293.86	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$101.40	\$101.40	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$12,303.20	\$12,303.20	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRASER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$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	\$1,123.85	\$1,123.85	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$3,968.12	\$3,968.12	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$1,799.85	\$1,799.85	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$2,998.06	\$2,998.06	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,687,403.03	\$8,039.33	\$0.00	\$4,120.85	\$1,675,242.85
HUNTINGTON WOODS	\$272.09	\$272.09	\$0.00	\$0.00	\$0.00
INDEPENDENCE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INKSTER	\$16,132.51	\$10,572.64	\$0.00	\$5,559.87	\$0.00
KEEGO HARBOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LAKE ORION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LATHRUP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$309.27	\$309.27	\$0.00	\$0.00	\$0.00
LIVONIA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC

Balances as of 09/30/19

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	\$17,672.33	\$17,672.33	\$0.00	\$0.00	\$0.00
MELVINDALE	\$6,901.96	\$6,901.96	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$584.74	\$584.74	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$151,272.94	\$8,696.74	\$0.00	\$4,574.03	\$138,002.17
NOVI	\$16,524.82	\$16,524.82	\$0.00	\$0.00	\$0.00
OAK PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$1,019.07	\$1,019.07	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$260.26	\$260.26	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$421,063.76	\$24,207.56	\$0.00	\$12,731.27	\$384,124.93
REDFORD TOWNSHIP	\$10,502.33	\$10,502.33	\$0.00	\$0.00	\$0.00
ROCHESTER HILLS	\$17,454.32	\$17,454.32	\$0.00	\$0.00	\$0.00
ROMULUS	\$880.49	\$880.49	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$14,217.97	\$14,217.97	\$0.00	\$0.00	\$0.00
ROYAL OAK	\$13,068.77	\$13,068.77	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$887.25	\$887.25	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$11,848.59	\$11,848.59	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SOUTHFIELD (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$3,643.64	\$3,643.64	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$29,896.10	\$29,896.10	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$71,015.49	\$71,015.49	\$0.00	\$0.00	\$0.00
UTICA	\$2,862.86	\$2,862.86	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$1,755.91	\$1,755.91	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$1,331.72	\$1,331.72	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WAYNE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,750.84	\$1,750.84	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$12,097.02	\$12,097.02	\$0.00	\$0.00	\$0.00
WESTLAND	\$43,794.66	\$43,794.66	\$0.00	\$0.00	\$0.00
TOTAL IWC	\$3,362,659.75	\$541,544.27	\$0.00	\$48,608.71	\$2,772,506.77

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
3M COMPANY	\$3,814.59	\$3,814.59	\$0.00	\$0.00	\$0.00
A & R PACKING CO., LLC	\$5,249.53	\$5,249.53	\$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	\$ (5.48)	\$0.00	\$ (5.48)	\$0.00	\$0.00
ADVANCED RESOURCE RECOVERY	\$1,015.72	\$1,015.72	\$0.00	\$0.00	\$0.00
AEVITAS SPECIALITY SERVICES	\$36,537.73	\$25,288.42	\$11,249.31	\$0.00	\$0.00
ALEXANDER & HORNING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$0.00	\$0.00	\$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.	\$4,277.07	\$4,277.07	\$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	\$348.65	\$119.85	\$0.00	\$0.00	\$228.80
BARON INDUSTRIES	\$1,811.73	\$1,811.73	\$0.00	\$0.00	\$0.00
BARTZ BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BATCH BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BAYS MICHIGAN CORPORATION	\$4.83	\$4.83	\$0.00	\$0.00	\$0.00
BEIRUT BAKERY, INC.	\$98.12	\$98.12	\$0.00	\$0.00	\$0.00
BETTER MADE SNACK FOOD	\$19,562.21	\$19,562.21	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BOZEK'S MARKET	\$93.91	\$93.91	\$0.00	\$0.00	\$0.00
BREW DETROIT	\$8,059.11	\$8,049.11	\$10.00	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$ (43.39)	\$0.00	\$0.00	\$0.00	\$ (43.39)
BROOKS BREWING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$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	\$3.00	\$1.38	\$0.00	\$1.62	\$0.00
CF BURGER CREAMERY	\$19,358.37	\$19,358.37	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$2,427.50	\$49.87	\$22.15	\$20.57	\$2,334.91
CINTAS CORP. - MACOMB TWP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$24,763.81	\$24,763.81	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$12,694.02	\$12,694.02	\$0.00	\$0.00	\$0.00
CITY LAUNDRY, INC.	\$ (1.20)	\$0.00	\$0.00	\$ (1.20)	\$0.00
CLASSIC CONTAINER CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COCA-COLA REFRESHMENTS USA,	\$775.86	\$775.86	\$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 09/30/19

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.	\$5,456.92	\$5,456.92	\$0.00	\$0.00	\$0.00
CROSS CHEMICAL COMPANY, INC.	\$ (754.50)	\$0.00	\$0.00	\$0.00	\$ (754.50)
DARLING INGREDIENTS, INC.	\$9,303.98	\$9,303.98	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$0.00	\$0.00	\$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	\$0.00	\$0.00	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$50.79	\$25.61	\$13.99	\$11.19	\$0.00
DETRONIC INDUSTRIES, INC.	\$183.27	\$183.27	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$28,068.70	\$28,068.70	\$0.00	\$0.00	\$0.00
DIVERSIFIED CHEM TECH. INC.	\$132.02	\$132.02	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$2,538.48	\$2,538.48	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$2,425.81	\$2,425.81	\$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.	\$3,736.68	\$3,736.68	\$0.00	\$0.00	\$0.00
EASTERN MARKET BREWING COMPF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$28,710.82	\$0.00	\$28,710.82	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
EQ DETROIT, INC.	\$2,196.23	\$2,196.23	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$9,864.59	\$9,864.59	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.37	\$0.37	\$0.00	\$0.00	\$0.00
ETON ST BREWERY- GRIFFIN CLF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$95.60	\$95.60	\$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.	\$9,823.74	\$9,823.74	\$0.00	\$0.00	\$0.00
FORD NEW MODEL PROGRAM	\$782.87	\$782.87	\$0.00	\$0.00	\$0.00
FOUNDERS BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$347.44	\$347.44	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
G2O ENERGY, LLC	\$15,718.41	\$14,339.11	\$1,379.30	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$12,506.62	\$12,506.62	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$94.12	\$0.00	\$94.12	\$0.00	\$0.00
GREAT BARABOO BREWING CO.	\$(1,802.64)	\$0.00	\$0.00	\$0.00	\$(1,802.64)
HACIENDA MEXICAN FOODS	\$3,084.31	\$1,554.09	\$708.35	\$0.00	\$821.87
HENKEL CORPORATION	\$603.45	\$364.60	\$0.00	\$238.85	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
HOME STYLE FOOD INC.	\$6,599.71	\$6,599.71	\$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.	\$195.32	\$195.32	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$166.23	\$166.23	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$2,073.71	\$2,073.71	\$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	\$525.04	\$525.04	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$2,119.98	\$2,119.98	\$0.00	\$0.00	\$0.00
ITALIAN BUTTER BREAD STICKS	\$17.69	\$17.69	\$0.00	\$0.00	\$0.00
J & G FOOD PRODUCTS, INC.	\$45.54	\$45.54	\$0.00	\$0.00	\$0.00
JAMEX BREWING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
KAR NUT PRODUCTS	\$1,910.63	\$1,910.63	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$1,704.38	\$1,704.38	\$0.00	\$0.00	\$0.00
KUHNHENN BREWING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$247.74	\$247.74	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$ (60.47)	\$0.00	\$0.00	\$ (60.47)	\$0.00
LEAR CORPORATION DBA EAGLE C	\$4,021.12	\$4,021.12	\$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.	\$2,503.84	\$2,503.84	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$15,184.28	\$14,734.84	\$449.44	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MCNICHOLS POLISHING & ANODIZ	\$40.02	\$40.02	\$0.00	\$0.00	\$0.00
MELLO MEATS INC, - KUBISCH S	\$142.30	\$142.30	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$558.16	\$558.16	\$0.00	\$0.00	\$0.00
MIBA HYDRAMECHANICA CORP.	\$75.61	\$75.61	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$97,675.72	\$97,675.72	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MICHIGAN SOY PRODUCTS CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MIDWEST WIRE PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MILANO BAKERY	\$2,095.57	\$2,095.57	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$3,756.07	\$3,756.07	\$0.00	\$0.00	\$0.00
MISTER UNIFORM & MAT RENTALS	\$133.65	\$4.88	\$3.08	\$21.92	\$103.77
MOTOR CITY BREWING WORKS	\$956.99	\$175.22	\$0.00	\$0.00	\$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	\$76.51	\$76.51	\$0.00	\$0.00	\$0.00
OAKWOOD BAKERY	\$163.29	\$163.29	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PELLERITO FOODS INC.	\$1,588.81	\$1,588.81	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$96,263.96	\$96,263.96	\$0.00	\$0.00	\$0.00
PERSONAL UNIFORM SERVICE, IN	\$65.26	\$65.26	\$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 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
PINE TREE ACRES, INC.	\$18,813.78	\$18,813.78	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$160.55	\$160.55	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$1,214.96	\$1,214.96	\$0.00	\$0.00	\$0.00
RAY'S ICE CREAM CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RED SPOT PAINT #409139	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RIVER ROUGE BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROAK BREWING CO. LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS BEER COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS PROD BREWERY	\$1,131.61	\$0.00	\$1,131.61	\$0.00	\$0.00
RTT	\$27,772.36	\$756.08	\$768.90	\$743.76	\$25,503.62
SEAFARE FOODS, INC.	\$36.87	\$36.87	\$0.00	\$0.00	\$0.00
SHERWOOD BREWING COMPANY	\$926.80	\$98.74	\$0.00	\$0.00	\$828.06
SMITH-WATKINS, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$38.75	\$38.75	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$1,622.79	\$148.13	\$78.57	\$70.00	\$1,326.09
THE CROWN GROUP-LIVONIA PLAN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE ROYAL OAK BREWERY	\$(1,162.69)	\$0.00	\$0.00	\$0.00	\$(1,162.69)
TOM LAUNDRY CLEANERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TRAFFIC JAM & SNUG	\$20.66	\$0.00	\$20.66	\$0.00	\$0.00
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

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
U-METCO, INC.	\$1,164.95	\$1,164.95	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$67,526.26	\$67,526.26	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$2,794.27	\$2,794.27	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$13.43	\$13.43	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$320.62	\$320.62	\$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	\$350.96	\$350.96	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$2,252.46	\$2,252.46	\$0.00	\$0.00	\$0.00
USHER OIL SERVICES	\$5,104.89	\$5,104.89	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$12,112.60	\$12,112.60	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$5,243.16	\$5,243.16	\$0.00	\$0.00	\$0.00
VERNOR FOOD PRODUCTS	\$ (36.26)	\$0.00	\$0.00	\$0.00	\$ (36.26)
WIGLEY'S MEAT PROCESS	\$671.64	\$671.64	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$899.30	\$899.30	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$167.91	\$167.91	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$8,136.71	\$8,136.71	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$3,614.31	\$3,614.31	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 09/30/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$692,518.46	\$601,963.61	\$44,634.82	\$1,046.24	\$44,873.79

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 (12 Months)	1,238,797	5,617,100	51,220	6,907,117
FY 2019 Payments (12 Months)	<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 (3 Months)	319,347	1,412,900	12,161	1,744,407
FY 2020 Payments (3 Months)	<u>-</u>	<u>(656,657)</u>	<u>-</u>	<u>(656,657)</u>
				-
Balance as of September 30, 2019	<u>\$ 7,670,392</u>	<u>\$ 32,229,087</u>	<u>\$ 1,687,403</u>	<u>\$ 41,586,882</u>