



Audit Committee

Friday, January 17, 2020 at 8:00 a.m.

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

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
 - A. December 19, 2019 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. Update: Oakland Macomb Interceptor Drain Drainage District (Page 4)
Wastewater Disposal Services Contract Amendment Implementation
 - B. Continued Review - Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan (**Binder 2**)
7. NEW BUSINESS
 - A. Series Ordinance Authorizing Issuance and Sale of Water Supply (Page 6)
System Revenue Bonds
 - B. Series Ordinance Authorizing Issuance and Sale of Sewage Disposal (Page 29)
System Revenue Bonds
 - C. Quarterly Water Residential Assistance Program Report for (Page 52)
October 2019
 - D. Water Residential Assistance Program Reallocation Request for (Page 59)
Uncommitted FY 2019 Funds
8. REPORTS
 - A. Monthly Financial Report for October 2019 (Page 82)
 - B. Quarterly Debt Report (Page 83)
9. LOOK AHEAD
 - Next Audit Committee Meetings
 - A. Regular Meeting February 21, 2020 at 8:00 a.m.
10. INFORMATION
11. OTHER MATTERS
12. ADJOURNMENT



Great Lakes Water Authority

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

Meeting Minutes - Draft

Audit Committee

Thursday, December 19, 2019

3:30 PM

Water Board Building 5th Floor

1. Call To Order

Chairman Baker called the Audit Committee meeting to order at 3:30 p.m., and adjourned the meeting to the call of the Chair.

Chairman Baker called the Audit Committee meeting back to order at 4:00 p.m.

2. Quorum Call

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

3. Approval of Agenda

Chairman Baker requested a Motion to approve the Agenda.

Motion By: Gary Brown

Support: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

4. Approval of Minutes

A. [2019-468](#) Approval of Minutes of December 6, 2019

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [4A Special Audit Committee Meeting Minutes - December 6 2019.pdf](#)

Chairman Baker requested a Motion to approve the December 6, 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

Adedeji Akinkunle addressed the Audit Committee regarding Detroit Bulk Storage.

Joanne Warwick addressed the Audit Committee regarding Detroit Bulk Storage.

Cindy Darrah addressed the Audit Committee regarding Detroit Bulk Storage.

6. Old Business

A. [2019-469](#) Independent Sewer Charges Methodology Consultant Report Closeout

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [6A1 Independent Sewer Charges Methodology Consultant Report.pdf](#)
[6A2 GLWA Raftelis Report 12-16-19 Final Report.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

7. New Business

A. [2019-470](#) Overview - Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7A1 Overview - Proposed FY 2021 & FY 2022 Biennial Budget and Five-Year Financial Plan.pdf](#)
[7A2 Exective Summary Schedules - Biennial Budget & 5 yr plan.pdf](#)
[7A3 FY 2021 Budget Review 121719.pdf](#)
[7A4 FY 2021 O and M Budget One pager 12.17.20191.pdf](#)
[7A5 Personnel Staffing and FTE count FY 2018 - 2025 Update 12-10-19-KI.pdf](#)
[7A6 Process and Calendar FY 2021 and FY 2022 Biennial Budget v12.16.2019.pdf](#)
[7A7 Operations & Maintenance Expense by Cost Category - trend with three years history11x17.pdf](#)
[7A8 Operations & Maintenance Expense by Cost Center - with highest & lowest difference11x17.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

8. Reports

A. [2019-472](#) Monthly Financial Report for September 2019

Sponsors: Nicolette Bateson

Indexes: Finance

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

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

9. Look Ahead

The next regular Audit Committee Meeting will be held on Friday, January 17, 2020 at 8:00 a.m.

10. Information

None

11. Other Matters

None

12. Adjournment

Chairman Baker requested a Motion to Adjourn.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 5:11 p.m.



Financial Services Audit Committee Communication

Date: January 17, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Update: Oakland Macomb Interceptor Drain Drainage District Wastewater Disposal Services Contract Amendment Implementation

Background: Oakland-Macomb Interceptor Drain Drainage District (OMIDDD) entered into a Wastewater Disposal Services Contract with the City of Detroit on October 22, 2009 (Contract). Pursuant to the Regional Sewerage Disposal Lease between the GLWA and the City of Detroit, the City of Detroit assigned the Contract to GLWA on January 1, 2016. The Contract provides for sewage disposal services like any other wastewater member-partner. It also includes a specific Article on the maintenance, repairs, operations and improvement to the Northeast Pump Station, Northeast Interceptor Arm and Interceptor PCI-5 (Article 22). Under normal operations, the Northeast Pump Station, in its entirety, and portions of the Northeast Interceptor Arm and Interceptor PCI-5 transport sewerage flows from OMIDDD's Service Area only (OMIDDD-only Facilities).

On March 13, 2019, the Great Lakes Water Authority (GLWA) Board of Directors approved an amendment to OMIDD Wastewater Disposal Services Contract (the Amendment). The overall intent of the Amendment was to clarify OMIDDD's ability to finance capital improvements to the OMIDDD-only Facilities.

In addition to clarifying OMIDDD's ability to finance improvements, the Amendment also: extended the Contract Term, allowed OMIDDD to maintain the OMIDDD-only Facilities, required OMIDDD to assume responsibility for claims related with the maintenance and improvements to the OMIDDD-only Facilities, required to maintain certain levels of insurance during the Contract Term, reduced the number of votes granted to OMIDDD under the One Water Partnership bylaws, specified the requirements of annual Maintenance and Repair Plans and Improvement Plans drafted by OMIDDD for GLWA's approval, identified the GLWA and OMIDDD's Technical Representatives, amended the Service Area map, set OMIDDD's charges for the next 5 years, and set the amount of OMIDDD's contribution-in-aid to eliminate any existing bond debt.

Analysis: Pursuant to the Amendment, the Parties agreed to three provisions that had financial impacts for FY 2020 and beyond. The three provisions, and their related status are shown in the table below.

Requirement	Status
1) For FY 2020, GLWA will charge an annual flat fee of \$1,341,400 to cover certain operating and maintenance of the OMIDDD-only Facilities. The annual flat fee increases 4% each year. The Parties will reopen the annual flat fee charge in FY 2024.	Implemented for FY 2020 (Note: there were some billing adjustments during the start phase when this contract was implemented. All corrections, adjustments, and related payments were resolved in December 2019.)
2) OMIDDD agreed to pay GLWA a \$11,920,000 contribution in aid to eliminate any existing debt service on the OMIDDD-only Facilities. Per the Amendment "Within one hundred eighty days (180) days of the Effective Date, Customer shall pay to GLWA a one-time contribution in aid of capital in the amount of \$11,920,000, which generally reflects GLWA's determination of net book value of the assets as of the effective date related to the NESPS. "	The Effective Date of the Amendment was July 1, 2019, therefore the agreed upon payment from OMIDDD was due by December 27, 2019 (180 days from the Effective Date). This amount was paid in full by the due date as required.
3) All utilities to the Northeast Sewer Pump Station (NESPS) will be separately metered and charged by GLWA to the NESPS. OMIDDD shall receive a copy of meter readings and utility invoices when billings are submitted from GLWA. GLWA shall not markup the cost of utility services consumed at the NESPS, and such charges shall be a direct pass through charge.	Implemented.

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: January 17, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Bonds an Amount Not to Exceed \$35,000,000 (Ordinance 2020-02)

Background: On May 8, 2019, the Great Lakes Water Authority (“GLWA”) Board of Directors approved the “Resolution of the Great Lakes Water Authority Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds in a principal amount not to exceed \$160,000,000” (the “Notice of Intent”). This will be the third series of water bonds from that Notice of Intent and the combined total will be in an amount not to exceed \$35,000,000.

The approval of the Series Ordinance presented today is the next formal step required by the GLWA Board of Directors in the bond issuance process. The Series Ordinance authorizes the issuance of the Bonds by GLWA, sets forth the guidelines for the Drinking Water Revolving Fund (DWRf) Bonds, designates the Bonds as 2020 SRF-1 Junior Lien Bonds, and authorizes the Chief Executive Officer or the Chief Financial Officer to execute the final terms of the Bonds, paying issuance costs and signing of the Purchase Contract and Sale Order, within the parameters set forth in the Series Ordinance.

Analysis: This series of bonds authorized by this ordinance will be sold through the state of Michigan’s DWRf program and will be used to finance improvements to the Detroit Water and Sewerage Department (DWSD) local water system. The DWSD project will continue DWSD’s program to improve and replace water mains throughout the City. The improvements will include water mains along Grand River Avenue and the replacement of existing lead service piping. Per the Ordinance, this series of bonds will be designated *2020 SRF-1 Junior Lien Bonds*, with a loan amount not to exceed \$35,000,000.

The *2020 SRF-1 Junior Lien Bonds* will also be sold to the Michigan Finance Authority in a separate series. The current program interest rate for the DWRf is 2.00% and is typically payable over a 20-year term however, DWSD qualifies for disadvantaged community status which allows for a 30-year term. Based on the not to exceed amount for this series of \$35.0 million, DWSD could save an estimated \$16.4 million in interest costs and avoided issuance costs, based on a similar open market revenue bond with a 30-year term and 4.50% interest rate, over the life of the 30-year bond issue.

GLWA is the loan applicant on the DWRf loans issued on behalf of DWSD, and DWSD will be the DWRf loan recipient as determined by Michigan Department of Environment, Great Lakes, and

Energy (EGLE). All project costs financed by GLWA, on behalf of DWSD, through the DWRf program and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system.

Budget Impact: The debt service payments on the DWSD local project are anticipated to start in October 2020 with minimal amounts of interest due as a result of the projected draw down schedules. Interest expense on the DWSD loan was included in the FY 2021 Budget.

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the resolution for the Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Bonds an Amount Not to Exceed \$35,000,000 as presented, at its Regular Meeting on February 12, 2020.

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2020-02

**SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF
WATER SUPPLY SYSTEM REVENUE BONDS IN
AN AGGREGATE AMOUNT NOT TO EXCEED \$35,000,0000**

WHEREAS, pursuant to Resolution No. 2015-10-02 adopted by the Board of Directors of the Great Lakes Water Authority (the “Authority”) on October 7, 2015, the Authority Board approved and adopted Master Bond Ordinance No. 2015-01 (as subsequently amended through the date hereof, the “Ordinance”), which authorizes the issuance by the Authority of Water Supply System Revenue Bonds; and

WHEREAS, the Ordinance authorizes the issuance of such Water Supply System Revenue Bonds in one or more Series pursuant to a Series Ordinance authorizing the issuance and sale of such Series; and

WHEREAS, the Authority Board has determined that it is necessary to authorize at this time one or more Series of SRF Junior Lien Bonds (the “2020 SRF-1 Junior Lien Bonds”) to provide moneys to pay the costs of the hereinafter described repairs, extensions, enlargements and improvements to the Local Water System identified in the Detroit Capital Improvement Program (the “2020 SRF-1 Project”).

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE GREAT LAKES WATER AUTHORITY AS FOLLOWS:

Section 1. Authority for this Series Ordinance. This Series Ordinance (the “2020 SRF-1 Series Ordinance”) is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2020 SRF-1 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings, respectively, in this 2020 SRF-1 Series Ordinance as such terms are given in the Ordinance. In addition, the following terms shall have the following meanings unless the context shall clearly indicate some other meaning:

(a) “2020 SRF-1 Junior Lien Bonds” means the Bonds authorized by Section 5 of this 2020 SRF-1 Series Ordinance for the purpose of paying and/or reimbursing costs of the 2020 SRF-1 Project.

(b) “2020 SRF-1 Project” means improvements to the Local Water System, including but not limited to water main replacement and the replacement of existing lead service piping at various locations in the City, including but not limited to the following areas: Schoolcraft Road between Asbury Park and Greenfield and between Greenfield and Grand River; Five Points between Seven Mile and McNichols; West Chicago between the City boundary to the west and Brammel; West Outer Drive between Joy Road and Warren Avenue; Warren Avenue between Heyden and Evergreen and between Evergreen and Southfield Road; Chandler Park Drive between Three Mile and Cadieux; Kelly between Glenwood and Eastwood; East Jefferson Avenue between

Chrysler Drive and Orleans Street, Mount Elliot Street and Beaufait Street, Crane Street and Pennsylvania Street, and Corey Drive and Dickerson; Greenfield Road between West Chicago and Warren; Greenview between Warren and Paul; West Parkway between Plymouth and Tireman; and the Northbound Southfield Freeway Service Drive between Seven Mile and Pembroke.

(c) “Authorized Denomination” means any denomination as determined by an Authorized Officer in the Sale Order.

(d) “Authorized Officer” means either the Chief Executive Officer or the Chief Financial Officer.

(e) “City Authorized Officer” means any officer of DWSD-R designated in a resolution adopted by the Board of Water Commissioners of DWSD-R as authorized to take actions on behalf of the City as described in this 2020 SRF-1 Series Ordinance.

(f) “Construction Fund, Series 2020 SRF-1” means a subaccount of the Construction Fund established in accordance with Section 11 of this 2020 SRF-1 Series Ordinance relating to the construction of the 2020 SRF-1 Project to be paid with the proceeds of the 2020 SRF-1 Junior Lien Bonds.

(g) “Interest Payment Date” means except as otherwise set forth in the Sale Order each April 1 and October 1.

(h) “Maturity Date” means such dates of maturity of the 2020 SRF-1 Junior Lien Bonds as determined in the Sale Order.

(i) “MFA” means the Michigan Finance Authority.

(j) “Person” means any natural person, association, corporation, trust, partnership, joint venture, joint-stock company, municipal corporation, public body or other entity, however organized.

(k) “Project Costs” means the costs of acquiring, constructing, equipping, installing and financing the 2020 SRF-1 Project, including Issuance Costs relating to the 2020 SRF-1 Junior Lien Bonds.

(l) “Purchase Contract” means the Purchase Contract between the MFA and the Authority with respect to the purchase by the MFA and the sale by the Authority of a Series of the 2020 SRF-1 Junior Lien Bonds.

(m) “Regular Record Date” means except as otherwise set forth in the Sale Order the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

(n) “Sale Order” means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2020 SRF-1 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2020 SRF-1 Junior Lien Bonds and to complete the other transactions contemplated herein.

(o) “Supplemental Agreement” means the Supplemental Agreement among the City, the MFA and the State of Michigan acting through the Department of Environment, Great Lakes, and Energy, and approved and agreed to by the Authority, with respect to a Series of the 2020 SRF-1 Junior Lien Bonds.

(p) “Taxable 2020 SRF-1 Junior Lien Bonds” means any 2020 SRF-1 Junior Lien Bonds other than Tax-Exempt 2020 SRF-1 Junior Lien Bonds.

(q) “Tax-Exempt 2020 SRF-1 Junior Lien Bonds” means any 2020 SRF-1 Junior Lien Bonds that are Tax-Exempt Bonds.

Section 3. Approval of 2020 SRF-1 Project. It is hereby determined to be necessary for the public health, benefit and welfare of the area served by the Local Water System to acquire, construct and undertake the 2020 SRF-1 Project, and the 2020 SRF-1 Project is hereby approved and accepted.

Section 4. Estimated Cost and Period of Usefulness of 2020 SRF-1 Project. The Project Costs are estimated by the Authority Board to not exceed \$32,635,000 and the Project Costs are hereby approved and confirmed. The period of usefulness of the 2020 SRF-1 Project is estimated to be not less than 40 years.

Section 5. Authorization of 2020 SRF-1 Junior Lien Bonds.

(a) Authorization of Borrowing. The Authority may borrow an amount not in excess of \$35,000,000, as is finally determined in the Sale Order, and issue the 2020 SRF-1 Junior Lien Bonds in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2020 SRF-1 Junior Lien Bonds, all as finally determined in the Sale Order. The amount of the 2020 SRF-1 Junior Lien Bonds authorized in this Section 5(a) shall include the amount of the net original issue premium, if any.

(b) Purpose of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be issued as Additional Bonds for the purpose of paying and/or reimbursing Project Costs.

Priority of Lien. The 2020 SRF-1 Junior Lien Bonds shall be issued as SRF Junior Lien Bonds.

(c) Insufficient Proceeds. To the extent that proceeds of the SRF-1 Junior Lien Bonds are insufficient to pay Project Costs, the insufficiency shall be paid from the proceeds of future Additional Bonds, if any, and/or moneys of the Local Water System on hand and legally available therefor, as determined by the Board of Water Commissioners of DWSD-R and, in the case of any Additional Bonds, with the concurrence of the Authority Board.

(d) Taxable and Tax-Exempt 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds may be issued as Taxable 2020 SRF-1 Junior Lien Bonds or Tax-Exempt 2020 SRF-1 Junior Lien Bonds, or as separate Series of both, as set forth in the Sale Order.

(e) Source of Payment and Security. The 2020 SRF-1 Junior Lien Bonds shall be payable and secured as provided in Section 8.

(f) Applicability of Ordinance. Except as otherwise provided in this 2020 SRF-1 Series Ordinance or in the Sale Order, all of the provisions of the Ordinance shall apply to the 2020 SRF-1 Junior Lien Bonds as if set forth in full in this 2020 SRF-1 Series Ordinance, the purpose of this 2020 SRF-1 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2020 SRF-1 Junior Lien Bonds for the purposes set forth herein.

Section 6. 2020 SRF-1 Junior Lien Bond Details.

(a) Designation.

- (1) The 2020 SRF-1 Junior Lien Bonds shall bear the designations Water Supply System Revenue Bonds, Series 2020-SRF-1 and shall include such other designations, including, without limitation, designations for multiple subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2020 SRF-1 Series Ordinance.
- (2) If the 2020 SRF-1 Junior Lien Bonds are not issued in 2020, an Authorized Officer is authorized in her discretion to re-designate the year and Series designation of such Series of 2020 SRF-1 Junior Lien Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of such Series of 2020 SRF-1 Junior Lien Bonds. Furthermore, an Authorized Officer is authorized to establish designations within the various funds and accounts established hereunder if necessary in order to differentiate such funds and accounts from other similarly named funds and accounts related to other Bonds.

(b) Numbering. The 2020 SRF-1 Junior Lien Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. The 2020 SRF-1 Junior Lien Bonds shall be issued in the form of Serial Bonds or Term Bonds, or any combination of Serial Bonds and Term Bonds, in any Authorized Denomination, and the principal thereof shall mature on October 1, or such other date as set forth in the Sale Order, in such years and amounts, and shall be or not be subject to redemption prior to maturity, all as shall be determined in the Sale Order subject to the following limitations:

- (1) No 2020 SRF-1 Junior Lien Bonds shall mature later than 40 years after the date of issuance thereof.
- (2) The 2020 SRF-1 Junior Lien Bonds shall only be issued with annual principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2020 SRF-1 Junior Lien Bonds or portions thereof shall bear interest at a rate or rates as set forth in the Sale Order not in excess of 2.50% per annum. Interest on 2020 SRF-1 Junior Lien Bonds shall be payable on each Interest Payment Date.

(e) Payment of Principal and Interest. The principal of, premium, if any, and interest on the 2020 SRF-1 Junior Lien Bonds shall be payable in lawful money of the United States. Except as otherwise provided in the Sale Order, so long as the 2020 SRF-1 Junior Lien Bonds are owned by the MFA, the 2020 SRF-1 Junior Lien Bonds are payable as to principal, redemption premium, if any, and interest at The Bank of New York Mellon Trust Company, N.A., or at such other place as shall be designated in writing to the Authority by the MFA (the MFA's Depository"), and the Authority agrees that it will deposit with the MFA's Depository payments of the principal of, premium, if any, and interest on the 2020 SRF-1 Junior Lien Bonds in immediately available funds by 12:00 noon at least five Business Days prior to the date on which any such payment is due, whether by maturity, redemption or otherwise. If the 2020 SRF-1 Junior Lien Bonds are not registered in the name of the MFA, the principal of and premium, if any, on the 2020 SRF-1 Junior Lien Bonds are payable upon the surrender thereof at the corporate trust office of the Trustee and the interest is payable by check or draft drawn on the Trustee and mailed to the registered owners as of the immediately preceding Regular Record Date at their address shown on the registration books of the Authority maintained by the Trustee.

(f) Dating. The 2020 SRF-1 Junior Lien Bonds shall be dated such date as determined in the Sale Order.

(g) Reserve Requirement. There shall be no Reserve Requirement with respect to the 2020 SRF-1 Junior Lien Bonds.

(h) Exchange. The registered owner of any 2020 SRF-1 Junior Lien Bond may exchange such 2020 SRF-1 Junior Lien Bond for a new 2020 SRF-1 Junior Lien Bond or Bonds of the same interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2020 SRF-1 Junior Lien Bond to be exchanged at the designated office of the Trustee together with an assignment duly executed by the registered owner thereof or his attorney or legal representative in such form as shall be satisfactory to the Trustee. As provided in Section 206 of the Ordinance, the Trustee shall be responsible for the registration, transfer and exchange of 2020 SRF-1 Junior Lien Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2020 SRF-1 Junior Lien Bonds.

(i) Execution and Delivery of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be executed in the name of the Authority by manual or facsimile signature of the Chief Executive Officer of the Authority and countersigned by the manual or facsimile signature of the Secretary of the Authority Board, and shall have the Authority's seal or facsimile thereof affixed or printed thereon. The Chief Financial Officer is authorized to deliver the 2020 SRF-1 Junior Lien Bonds to the MFA upon receiving the purchase price therefor in lawful money of the United States.

(j) Form of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by the Chief Executive Officer within the parameters of this 2020 SRF-1 Series Ordinance:

R-__

**UNITED STATES OF AMERICA
STATE OF MICHIGAN
COUNTIES OF MACOMB, OAKLAND AND WAYNE
GREAT LAKES WATER AUTHORITY
WATER SUPPLY SYSTEM REVENUE BOND,
SERIES 2020-SRF-1**

REGISTERED OWNER: Michigan Finance Authority

PRINCIPAL AMOUNT: \$_____

INTEREST RATE: _____%

ORIGINAL ISSUE DATE:

The Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan (the “Issuer”), upon authorization from the Board of Directors of the Issuer (the “Board”), has issued this Bond. The Issuer, for value received, promises to pay, in lawful money of the United States of America, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above, or so much thereof as shall have been advanced to the Issuer and not prepaid or reduced pursuant to a Purchase Contract between the Issuer and the Michigan Finance Authority (the “MFA”), a Supplemental Agreement by and among the City of Detroit, the MFA and State of Michigan acting through the Department of Environment, Great Lakes, and Energy and approved and agreed to by the Issuer, and the Order of Approval issued by the Department of Environment, Great Lakes, and Energy. The Principal Amount shall be payable on the dates and in the principal installments set forth in Schedule A attached hereto.

In the event less than the Principal Amount of this Bond is disbursed by the MFA, any portion of the Principal Amount is prepaid as provided herein, or any serial principal payment becomes due before the Issuer has received proceeds from corresponding purchased principal installments of at least a like amount, then the MFA may prepare a new serial principal installment repayment schedule which shall be presented to the Issuer and be effective upon receipt as provided in the Purchase Contract.

Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate set forth above, only on that portion of installments of the Principal Amount which have been disbursed by the MFA, shall be payable on _____, 20__ and semiannually on each April 1 and October 1 thereafter (each an “Interest Payment Date”).

If the MFA is not the registered owner of this Bond, principal of this Bond is payable upon presentation and surrender at the designated office of U.S. Bank National Association, as Trustee under the Ordinance (as defined below) or such other trustee as the Issuer may hereafter designate by notice mailed to the registered owner not less than 60 days prior to any Interest Payment Date (the “Trustee”).

Interest on this Bond is payable to the registered owner of record as of the close of business on the 15th day of the month immediately preceding any Interest Payment Date as shown on the registration books kept by the Trustee by check or draft mailed by the Trustee to the registered owner at the registered address. Interest on this Bond shall be computed on the basis of a 360-day year comprised of twelve 30-day months. During the time funds are being drawn down by the Issuer under this Bond, the MFA will periodically provide the Issuer with a statement showing the amount of principal that has been advanced and the date of each advance, which statement shall constitute prima facie evidence of the reported information; provided, that no failure on the part of the MFA to provide such a statement or to reflect a disbursement or the correct amount of a disbursement shall relieve the Issuer of its obligation to repay the outstanding principal amount actually advanced [(subject to any principal forgiveness as provided for herein)], all accrued interest thereon, and any other amount payable with respect thereto in accordance with the terms of this Bond.

In the event of a default in the payment of principal or interest hereon when due, whether at maturity, by redemption or otherwise, the amount of such default shall bear interest (the "additional interest") at a rate equal to the rate of interest that is two percent above the MFA's cost of providing funds (as determined by the MFA) to make payment on the bonds of the MFA issued to provide funds to purchase this Bond but in no event in excess of the maximum rate of interest permitted by law. The additional interest shall continue to accrue until the MFA has been fully reimbursed for all costs incurred by the MFA (as determined by the MFA) as a consequence of the Issuer's default. Such additional interest shall be payable on the interest payment date following demand of the MFA. In the event that (for reasons other than the default in the payment of any municipal obligation purchased by the MFA) the investment of amounts in the reserve account established by the MFA for the bonds of the MFA issued to provide funds to purchase this bond fails to provide sufficient available funds (together with any other funds that may be made available for such purpose) to pay the interest on outstanding bonds of the MFA issued to fund such account, the Issuer shall and hereby agrees to pay on demand only the Issuer's pro rata share (as determined by the MFA) of such deficiency as additional interest on this Bond.

Notwithstanding any other provision of this Bond, so long as the MFA is the owner of this Bond, (a) this Bond is payable as to principal, premium, if any, and interest at The Bank of New York Mellon Trust Company, N.A., or at such other place as shall be designated in writing to the Issuer by the MFA (the "MFA's Depository"); (b) the Issuer agrees that it will deposit with the MFA's Depository payments of the principal of, premium, if any, and interest on this Bond in immediately available funds by 12:00 noon at least five business days prior to the date on which any such payment is due whether by maturity, redemption or otherwise; in the event that the MFA's Depository has not received the Issuer's deposit by 12:00 noon on the scheduled day, the Issuer shall immediately pay to the MFA as invoiced by the MFA an amount to recover the MFA's administrative costs and lost investment earnings attributable to that late payment; and (c) written notice of any redemption of this Bond shall be given by the Issuer and received by the MFA's Depository at least 40 days prior to the date on which redemption is to be made.

This Bond is one of a series of bonds designated "Water Supply System Revenue Bonds, Series 2020-SRF-__" and is issued pursuant to the provisions of (i) Act 233, Public Acts of Michigan, 1955, as amended ("Act 233"), and Act 94, Public Acts of Michigan, 1933, as amended ("Act 94"), (ii) Master Bond Ordinance No. 2015-01 adopted by the Board on October 7, 2015, as

amended (the “Bond Ordinance”), (iii) the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Bonds in an Aggregate Amount not to Exceed \$35,000,000, adopted by the Board on _____, 2020 (the “Series Ordinance”), and (iv) a Sale Order of the Chief Executive Officer of the Issuer dated _____, 2020 (the “Sale Order,” and, collectively with the Bond Ordinance and the Series Ordinance, the “Ordinance”). This Bond is issued for the purposes set forth in the Series Ordinance and the Sale Order.

For the prompt payment of the principal of and interest on this Bond, and other bonds issued by the Issuer pursuant to the Bond Ordinance, the Issuer has irrevocably pledged the Pledged Assets (as defined in the Bond Ordinance), which includes the revenues of the Water System (as defined in the Bond Ordinance), after provision is made for reasonable and necessary expenses of operation, maintenance and administration of the Water System (the “Net Revenues”), and a statutory lien on the Net Revenues and Pledged Assets is hereby recognized and acknowledged. Such lien is a third lien, subject to obligations heretofore and hereafter issued or incurred under the Bond Ordinance secured by a first or second lien on the Pledged Assets. This Bond is of equal standing on a parity with all other obligations heretofore and hereafter issued or incurred under the Bond Ordinance and secured by a third lien on the Pledged Assets.

For a complete statement of the revenues from which and the conditions under which this Bond is payable, a statement of the conditions under which Additional Bonds (as defined in the Bond Ordinance) of senior or equal standing and Additional Bonds of junior standing may hereafter be issued and the general covenants and provisions pursuant to which this Bond is issued, reference is made to the Bond Ordinance.

This Bond is subject to redemption prior to maturity at the option of the Issuer and with the prior written consent of and upon such terms as may be required by the MFA. That portion of this Bond called for redemption shall not bear interest after the date fixed for redemption, provided funds are on hand with the Trustee to redeem the same.

THIS BOND IS ISSUED UNDER ACT 233 AND ACT 94. IT IS A SELF-LIQUIDATING BOND AND IS NOT A GENERAL OBLIGATION OF THE ISSUER AND DOES NOT CONSTITUTE AN INDEBTEDNESS OF THE ISSUER WITHIN ANY CONSTITUTIONAL OR STATUTORY LIMITATION, BUT IS PAYABLE, BOTH AS TO PRINCIPAL AND INTEREST SOLELY FROM THE PLEDGED ASSETS OF THE WATER SYSTEM. THE PAYMENT OF THE PRINCIPAL OF AND INTEREST ON THIS BOND ARE SECURED BY A STATUTORY LIEN ON THE PLEDGED ASSETS AS DESCRIBED HEREIN.

The Issuer has covenanted and agreed, and hereby covenants and agrees, to fix and maintain, or cause to be fixed and maintained, at all times while any bonds payable from the Pledged Assets of the Water System shall be outstanding, such rates for service furnished by the Water System as shall be sufficient to provide for payment of the interest upon and the principal of this Bond and all other Bonds (as defined in the Bond Ordinance) assumed or issued and to be issued under the Bond Ordinance as and when the same shall become due and payable, to create and maintain a bond redemption fund therefor, including a bond reserve for Bonds other than this Bond, to provide for the payment of expenses of administration and operation and such expenses for maintenance of the Water System as are necessary to preserve the same in good repair and

working order, and to provide for such other expenditures and funds for the Water System, all as are required by the Bond Ordinance.

This Bond is transferable only upon the books of the Issuer kept for that purpose at the office of the Trustee by the registered owner hereof in person, or by his attorney duly authorized in writing, upon the surrender of this Bond together with a written instrument of transfer satisfactory to the Trustee duly executed by the registered owner or his attorney duly authorized in writing, and thereupon a new registered bond or bonds of the same type, in the same aggregate principal amount and of the same maturity shall be issued to the transferee in exchange therefor as provided in the Ordinance and upon the payment of the charges, if any, therein prescribed.

It is hereby certified and recited that all acts, conditions and things required by law precedent to and in the issuance of this Bond have been done and performed by regular and due time and form as required by law.

This Bond is not valid or obligatory for any purpose until the Trustee's Certificate of Authentication hereon has been executed by the Trustee.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan, has caused this Bond to be signed in its name by the facsimile signatures of its Chief Executive Officer and its Secretary of the Board, and its corporate seal or a facsimile thereof to be printed, impressed or otherwise reproduced hereon, all as of the Original Issue Date.

GREAT LAKES WATER AUTHORITY

By: _____
Chief Executive Officer

Countersigned:

By: _____
Secretary, Board of Directors

[Seal]

CERTIFICATE OF AUTHENTICATION

This Bond is authenticated as the bond designated by the Issuer as “Water Supply System Revenue Bond, Series 2020-SRF-1”.

U.S. Bank National Association,
Trustee

By:_____

Date of Authentication: _____, 2020

ASSIGNMENT

For value received, the undersigned sells, assigns and transfers unto _____ this Bond and all rights hereunder and hereby irrevocably appoints _____ attorney to transfer this Bond on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

Signature

NOTICE: The signature to this assignment must correspond with the name as it appears on the face of this Bond in every particular.

Schedule A

The principal amounts and maturity dates applicable to the Bond to which this Schedule A is attached are as follows:

Date

Amount

Based on the schedule provided above unless revised as provided in this paragraph, repayment of the Principal Amount shall be made according to such schedule until the full Principal Amount disbursed to the Issuer is repaid; provided, however, that the Issuer shall have no obligation to repay any serial principal installment for which the Issuer did not receive a disbursement of Principal Amount by the date such serial principal installment is due. In the event the Order of Approval issued by the Department of Environment, Great Lakes, and Energy (the "Order") approves a principal amount of assistance less than the amount of the Bond, the MFA shall only disburse principal up to the amount stated in the Order. In the event (1) that the payment schedule described above provides for payment of a total principal amount greater than the amount of assistance approved by the Order, (2) that less than the principal amount of assistance approved by the Order is disbursed to the Issuer by the MFA or (3) of prepayment [or principal forgiveness] of the Bond, the MFA shall prepare a new payment schedule that shall be effective upon receipt by the Issuer.

END OF BOND FORM

Section 7. Concerning the Securities Depository.

(a) As used herein:

“Beneficial Owner” means any Person who indirectly owns 2020 SRF-1 Junior Lien Bonds pursuant to the indirect ownership system maintained by a securities depository (the “Securities Depository”) and its Participants, commonly known as the “Book-Entry Only System.”

“Participant” means any Person whose ownership of 2020 SRF-1 Junior Lien Bonds is shown on books of the Securities Depository.

(b) The 2020 SRF-1 Junior Lien Bonds will initially be registered in the name of the MFA, or such other purchasers as designated in the Sale Order. In the event 2020 SRF-1 Junior Lien Bonds are later to be registered in the name of a Securities Depository or its nominee, neither the Authority nor the Trustee shall have any responsibility or obligation to any Participant or to any Beneficial Owner with respect to any matter, including the following:

- (1) the accuracy of the records of the Securities Depository, its nominee or any Participant with respect to any ownership interest in 2020 SRF-1 Junior Lien Bonds,
- (2) the delivery to any Participant, Beneficial Owner or any other Person other than the Securities Depository of any notice with respect to: any 2020 SRF-1 Junior Lien Bonds, including any notice of redemption, or
- (3) the payment to any Participant, Beneficial Owner or any other Person, other than the Securities Depository of any amount with respect to the principal (and premium, if any) of or interest on any 2020 SRF-1 Junior Lien Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2020 SRF-1 Junior Lien Bonds only to or upon the order of the MFA, or the Securities Depository, as applicable, and all such payments shall be valid and effective fully to satisfy and discharge the Authority’s obligations with respect to the principal (and premium, if any) of, and interest on such 2020 SRF-1 Junior Lien Bonds to the extent of the sum or sums so paid.

(d) If 2020 SRF-1 Junior Lien Bonds become registered in the name of the Securities Depository and (1) the Authority receives a written notice from the Securities Depository to the effect the Securities Depository is unable or unwilling to discharge its responsibilities or (2) the Authority determines that it is in the best interests of the Beneficial Owners of 2020 SRF-1 Junior Lien Bonds that they be able to obtain 2020 SRF-1 Junior Lien Bonds in certificated form, then, in either event, the Authority shall notify the Trustee and, in the case of clause, (2), the Securities Depository.

(e) Upon discontinuance of the use of the Book-Entry Only System maintained by the Securities Depository, if any, pursuant to subsection (d), above and upon receipt of notice from the Securities Depository containing sufficient information, the Authority shall execute and the Trustee shall authenticate and deliver 2020 SRF-1 Junior Lien Bonds in certificated form to

Beneficial Owners in exchange for the beneficial interests of such Beneficial Owners in corresponding principal amounts and in any Authorized Denominations.

(f) Notwithstanding any other provision of this 2020 SRF-1 Series Ordinance to the contrary, so long as any 2020 SRF-1 Junior Lien Bond is registered in the name of the Securities Depository or its nominee:

- (1) all payments with respect to the principal, premium, if any, and interest on such 2020 SRF-1 Junior Lien Bond and all notices of redemption, tender and otherwise with respect to such 2020 SRF-1 Junior Lien Bond shall be made and given, respectively, to the Securities Depository as provided in the letter of representations from the Authority to the Securities Depository with respect to such 2020 SRF-1 Junior Lien Bonds or any master letter of representations from the Authority to the Securities Depository;
- (2) if less than all of the 2020 SRF-1 Junior Lien Bonds of the same type of any maturity are to be redeemed, then the particular 2020 SRF-1 Junior Lien Bonds or portions of 2020 SRF-1 Junior Lien Bonds of such type and maturity to be redeemed shall be selected by the Securities Depository in any such manner as the Securities Depository may determine;
- (3) all payments with respect to principal of the 2020 SRF-1 Junior Lien Bonds and premium, if any and interest on the 2020 SRF-1 Junior Lien Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and
- (4) if a 2020 SRF-1 Junior Lien Bond is redeemed or tendered in part, then all amounts payable in respect of such redemption or tender shall be paid without presentation and surrender of such 2020 SRF-1 Junior Lien Bond pursuant to the procedures of the Securities Depository.

Section 8. Payment of 2020 SRF-1 Junior Lien Bonds; Confirmation of Statutory Lien.

(a) The 2020 SRF-1 Junior Lien Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2020 SRF-1 Junior Lien Bonds, the statutory lien upon the whole of the Pledged Assets established by Act 94 and the pledge created in Section 501 of the Ordinance is hereby confirmed in favor of the 2020 SRF-1 Junior Lien Bonds as follows: Such lien in favor of the 2020 SRF-1 Junior Lien Bonds shall be a statutory third lien on the Pledged Assets of equal standing and Priority of Lien with all issued, to be issued and outstanding SRF Junior Lien Bonds.

Section 9. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2020 SRF-1 Series Ordinance, all of the provisions relative to funds and accounts, their maintenance, the flow of funds and other details relative thereto, shall remain as specifically set forth in the Ordinance.

Section 10. Disposition of Proceeds.

(a) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2020 SRF-1 Junior Lien Bonds there shall be immediately deposited in the SRF Junior Lien Debt Service Account, an amount equal to any accrued interest received on the delivery of the 2020 SRF-1 Junior Lien Bonds and any capitalized interest on the 2020 SRF-1 Junior Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the SRF Junior Lien Debt Service Account for payment of the next maturing interest payment on the 2020 SRF-1 Junior Lien Bonds.

(b) Construction Fund. The balance of the proceeds of the 2020 SRF-1 Junior Lien Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 11.

Section 11. Construction Fund.

(a) A subaccount of the Detroit Local Construction Account of the Construction Fund established by the Ordinance shall be established for the 2020 SRF-1 Junior Lien Bonds and designated the "Construction Fund, Series 2020 SRF-1," and shall be established and maintained as a separate depository account with a Custodian as designated by a City Authorized Officer.

(b) Moneys in the Construction Fund, Series 2020 SRF-1 shall be applied solely to payment of Project Costs (or to the reimbursement of Project Costs paid by the Authority or the City from other funds prior to the issuance of the 2020 SRF-1 Junior Lien Bonds).

(1) Payments or reimbursements for Project Costs for construction, either on account or otherwise, shall not be made unless the registered engineer in charge of such work shall file with a City Authorized Officer a signed statement to the effect that the work has been completed in accordance with the plans and specifications therefor, that it was done in accordance with the contract therefor, that such work is satisfactory and that such work has not been previously paid for.

(2) Payment or reimbursement for Project Costs consisting of Issuance Costs and engineering, legal and financial costs shall be made upon submission of appropriate documentation to a City Authorized Officer.

Section 12. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2020 SRF-1 Junior Lien Bonds, that so long as any of the Tax-Exempt 2020 SRF-1 Junior Lien Bonds remain outstanding and unpaid as to either principal or interest, the Authority shall, to the extent permitted by law, take all actions within its control or cause the City to take all actions within its control to maintain, and will refrain from taking any action and cause the City from taking any actions within its control which would impair, the exclusion of the interest on the Tax-Exempt 2020 SRF-1 Junior Lien Bonds from gross income for federal income tax purposes under the Code.

(b) The actions referred to in subsection (a), above include, but are not limited to actions relating to any required rebate of arbitrage earnings and the expenditure and investment of proceeds of Tax-Exempt 2020 SRF-1 Junior Lien Bonds and moneys deemed to be proceeds of Tax-Exempt 2020 SRF-1 Junior Lien Bonds, and to prevent Tax-Exempt 2020 SRF-1 Junior Lien Bonds from being or becoming “private activity bonds” as that term is used in the Code.

Section 13. Sale of 2020 SRF-1 Junior Lien Bonds; Purchase Contract; Expiration of Referendum Period.

(a) The 2020 SRF-1 Junior Lien Bonds shall be sold by negotiated sale to the MFA pursuant to a Purchase Contract in customary form with such changes thereto as an Authorized Officer shall determine are in the best interests of the Authority, within the parameters established by this 2020 SRF-1 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer’s execution of the Purchase Contract to the MFA.

(b) The Authority Board hereby determines that the sale of the 2020 SRF-1 Junior Lien Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2020 SRF-1 Junior Lien Bonds to receive a subsidized interest rate through participation in the MFA’s Drinking Water Revolving Fund Program.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the MFA to purchase the 2020 SRF-1 Junior Lien Bonds subject to the following limitations:

- (1) The interest rate with respect to any Series of the 2020 SRF-1 Junior Lien Bonds shall not exceed 2.50%.
- (2) The aggregate purchaser’s discount at which any Series of the 2020 SRF-1 Junior Lien Bonds shall be sold to the MFA shall not exceed 2.00%.

(d) An Authorized Officer shall confirm in the Sale Order that there was no petition meeting the requirements of Section 33 of Act 94 that was filed with the Secretary of the Authority Board within 45 days of the date of publication of the notice of intent to issue bonds with respect to the 2020 SRF-1 Junior Lien Bonds as required by Section 33 of Act 94.

Section 14. Delegation of Authority to and Authorization of Actions of Authorized Officers.

(a) An Authorized Officer shall make all determinations herein provided to be made in the Sale Order and shall make all such determinations in consultation with DWSD-R in accordance with the best interests of the Authority within the parameters of this 2020 SRF-1 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2020 SRF-1 Series Ordinance, an Authorized Officer shall determine the aggregate principal amount of 2020 SRF-1 Junior Lien Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2020 SRF-1 Series Ordinance, on the basis of her evaluation of the maximum amount of 2020 SRF-1 Junior Lien Bonds which can be sold, given anticipated interest rates and the revenue coverage requirements with respect to the 2020 SRF-1 Junior Lien Bonds and for any other reasons the Authorized Officer deems appropriate.

- (1) Such determination shall also include the redemption provisions for the 2020 SRF-1 Junior Lien Bonds.
- (2) An Authorized Officer shall also determine and establish, in accordance with this 2020 SRF-1 Series Ordinance, the maturities of each Series of the 2020 SRF-1 Junior Lien Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities.

(c) An Authorized Officer is authorized, if necessary, to file applications and to pay the related fees, if any, to the Michigan Department of Treasury at her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2020 SRF-1 Junior Lien Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2020 SRF-1 Junior Lien Bonds as authorized herein, and as required by the Michigan Department of Treasury or Act 34.

(d) An Authorized Officer shall determine in the Sale Order that the requirements set forth in Section 207 of the Ordinance with respect to the issuance of the 2020 SRF-1 Junior Lien Bonds as Additional Bonds have been satisfied.

(e) An Authorized Officer is hereby authorized and directed to do and perform any and all other acts and things with respect to the 2020 SRF-1 Junior Lien Bonds which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2020 SRF-1 Series Ordinance, the authorizations therein and herein contained including without limitation the securing of ratings by bond rating agencies, and the incurring of reasonable fees costs and expenses incidental to the foregoing, for and on behalf of the Authority.

Section 15. Advancement of Project Costs. At the direction of an Authorized Officer, the Authority may advance certain Project Costs from the Authority's funds prior to the issuance of the 2020 SRF-1 Junior Lien Bonds to the extent that such costs are expenditures appropriate for reimbursement under applicable law, including the Code in the case of Tax-Exempt 2020 SRF-1 Junior Lien Bonds.

Section 16. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2020 SRF-1 Junior Lien Bonds as permitted or required by the Ordinance or law are hereby ratified, confirmed and approved.

Section 17. Additional Authorization. The Chief Executive Officer, the Chief Financial Officer, the Chief Administrative and Compliance Officer and the General Counsel of the Authority, any such officials acting in an interim or acting capacity to such officers, their deputies and staff, or any of them, are hereby authorized to execute and deliver such certificates, Supplemental Agreements, other agreements, documents, instruments, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2020 SRF-1 Junior Lien Bonds and otherwise give effect to the transactions contemplated by this 2020 SRF-1 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 18. 2020 SRF-1 Series Ordinance a Contract. The provisions of this 2020 SRF-1 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2020 SRF-1 Junior Lien Bond.

Section 19. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2020 SRF-1 Junior Lien Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2020 SRF-1 Junior Lien Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2020 SRF-1 Junior Lien Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2020 SRF-1 Junior Lien Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2020 SRF-1 Junior Lien Bonds or other available funds.

(d) An Authorized Officer is authorized to engage financial and other consultants as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2020 SRF-1 Junior Lien Bonds and to pay the fees and expenses thereof from the proceeds of the 2020 SRF-1 Junior Lien Bonds or other available funds.

Section 20. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2020 SRF-1 Series Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the other provisions of this 2020 SRF-1 Series Ordinance. The section and paragraph headings in this 2020 SRF-1 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2020 SRF-1 Series Ordinance.

Section 21. Publication and Recordation. This 2020 SRF-1 Series Ordinance shall be published in full in the Detroit Legal News, a newspaper of general circulation within the geographic boundaries of the Authority qualified under State law to publish legal notices, promptly after its adoption, and shall be maintained in the official records of the Authority and such recording authenticated by the signatures of the Chairperson and Secretary of the Authority Board.

Section 22. Repeal. All ordinances, resolutions, indentures or orders, or parts thereof, in conflict with the provisions of this 2020 SRF-1 Series Ordinance are, to the extent of such conflict, repealed.

Section 23. Effective Date. This 2020 SRF-1 Series Ordinance shall be effective upon adoption.

Adopted and signed on the ____ day of _____, 2020.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

BLOOMFIELD 63818-19 2736977v2

Great Lakes Water Authority
Resolution 2020-
RE: Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System
Revenue Bonds in an Amount not to Exceed \$35,000,000
Ordinance 2020-02

By Board Member: _____

Whereas There has been presented to the Board of Directors of the Great Lakes Water Authority (the “Authority”) an ordinance entitled “Series Ordinance Authorizing the Issuance and Sale of Water Supply System Revenue Bonds in an Amount not to Exceed \$35,000,000” (the “2020 SRF-1 Series Ordinance”), which ordinance is a Series Ordinance as defined and described in Master Bond Ordinance No. 2015-01 adopted by the Board of Directors on October 7, 2015, as amended on December 9, 2015, January 27, 2016 and August 10, 2016.

Whereas The Articles of Incorporation of the Authority provide that at least 5 of the 6 members of the Authority Board must vote to approve the 2020 SRF-1 Series Ordinance.

Now, Therefore Be It:

Resolved That the 2020 SRF-1 Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2020 SRF-1 Series Ordinance in the form approved; **And Be it Further**

Resolved That an affirmative vote of at least 5 members of the Authority Board is necessary for the passage of this Resolution.

Adopted by the Great Lakes Water Authority Board on: _____, 2020



Financial Services Audit Committee Communication

Date: January 17, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Bonds an Amount Not to Exceed \$35,000,000 (Ordinance 2020-01)

Background: On March 8, 2017, the Great Lakes Water Authority (“GLWA”) Board of Directors approved Resolution 2017-185, “Resolution of the Great Lakes Water Authority Authorizing Publication of Notice of Intent to Issue Sewage Disposal System Revenue Bonds in a principal amount not to exceed \$275,000,000” (the “Notice of Intent”). This is the fourth series of sewer bonds from that Notice of Intent in the amount not to exceed \$35,000,000.

The approval of the Series Ordinance presented today is the next formal step required by the GLWA Board of Directors in the bond issuance process. The Series Ordinance authorizes the issuance of the Bonds by GLWA, sets forth the guidelines for the State Revolving Fund (SRF) Bonds, designates the Bonds as 2020 SRF-1 Junior Lien Bonds, and authorizes the Chief Executive Officer or the Chief Financial Officer to execute the final terms of the Bonds, paying issuance costs and signing of the Purchase Contract and Sale Order, within the parameters set forth in the Series Ordinance.

Analysis: This series of bonds authorized by this ordinance will be sold through the state of Michigan’s SRF program and will be used to finance improvements to the GLWA’s regional system. The project funded will include the second phase of improvements to the Detroit River Interceptor (DRI). The first phase of the project (\$17,510,000) was also funded with an SRF bond issue. Per the Ordinance, this series of bonds will be designated *2020 SRF-1 Junior Lien Bonds*, with a loan amount not to exceed \$35,000,000.

The 2020 SRF-1 Junior Lien Bonds will be sold to the Michigan Finance Authority in a separate series. The current program interest rate is 2.00% and is typically payable over a 20-year term. Based on the project amount of \$35.0 million, GLWA could save an estimated \$22.7 million in interest costs and avoided issuance costs, based on a similar open market revenue bond with a 30-year term and 4.50% interest rate, over the life of the 30-year bond issue. This will afford savings to both GLWA and its members.

Budget Impact: The debt service payments on the DRI project are anticipated to start in October 2020 with minimal amounts of interest due as a result of the projected draw down schedules. Interest expense on this loan was included in the FY 2021 Budget.

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the resolution for the Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Bonds, an Amount Not to Exceed \$35,000,000 as presented, at its Regular Meeting on February 12, 2020.

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2020-01

**SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF
SEWAGE DISPOSAL SYSTEM REVENUE BONDS IN
AN AGGREGATE AMOUNT NOT TO EXCEED \$35,000,0000**

WHEREAS, pursuant to Resolution No. 2015-10-03 adopted by the Board of Directors of the Great Lakes Water Authority (the “Authority”) on October 7, 2015, the Authority Board approved and adopted Master Bond Ordinance No. 2015-02 (as subsequently amended through the date hereof, the “Ordinance”), which authorizes the issuance by the Authority of Sewage Disposal System Revenue Bonds; and

WHEREAS, the Ordinance authorizes the issuance of such Sewage Disposal System Revenue Bonds in one or more Series pursuant to a Series Ordinance authorizing the issuance and sale of such Series; and

WHEREAS, the Authority Board has determined that it is necessary to authorize at this time one or more Series of SRF Junior Lien Bonds (the “2020 SRF-1 Junior Lien Bonds”) to provide moneys to pay the costs of the hereinafter described repairs, extensions, enlargements and improvements to the Regional Sewer System identified in the Capital Improvement Program (the “2020 SRF-1 Project”).

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE GREAT LAKES WATER AUTHORITY AS FOLLOWS:

Section 1. Authority for this Series Ordinance. This Series Ordinance (the “2020 SRF-1 Series Ordinance”) is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2020 SRF-1 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings, respectively, in this 2020 SRF-1 Series Ordinance as such terms are given in the Ordinance. In addition, the following terms shall have the following meanings unless the context shall clearly indicate some other meaning:

(a) “2020 SRF-1 Junior Lien Bonds” means the Bonds authorized by Section 5 of this 2020 SRF-1 Series Ordinance for the purpose of paying and/or reimbursing costs of the 2020 SRF-1 Project.

(b) “2020 SRF-1 Project” means improvements to the Regional Sewer System, including but not limited to improvements to the North Interceptor East Arm and Detroit River Interceptor Crossover Tunnel.

(c) “Authorized Denomination” means any denomination as determined by an Authorized Officer in the Sale Order.

(d) “Authorized Officer” means either the Chief Executive Officer or the Chief Financial Officer.

(e) “Construction Fund, Series 2020 SRF-1” means a subaccount of the Construction Fund established in accordance with Section 11 of this 2020 SRF-1 Series Ordinance relating to the construction of the 2020 SRF-1 Project to be paid with the proceeds of the 2020 SRF-1 Junior Lien Bonds.

(f) “Interest Payment Date” means except as otherwise set forth in the Sale Order each April 1 and October 1.

(g) “Maturity Date” means such dates of maturity of the 2020 SRF-1 Junior Lien Bonds as determined in the Sale Order.

(h) “MFA” means the Michigan Finance Authority.

(i) “Person” means any natural person, association, corporation, trust, partnership, joint venture, joint-stock company, municipal corporation, public body or other entity, however organized.

(j) “Project Costs” means the costs of acquiring, constructing, equipping, installing and financing the 2020 SRF-1 Project, including Issuance Costs relating to the 2020 SRF-1 Junior Lien Bonds.

(k) “Purchase Contract” means the Purchase Contract between the MFA and the Authority with respect to the purchase by the MFA and the sale by the Authority of a Series of the 2020 SRF-1 Junior Lien Bonds.

(l) “Regular Record Date” means except as otherwise set forth in the Sale Order the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

(m) “Sale Order” means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2020 SRF-1 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2020 SRF-1 Junior Lien Bonds and to complete the other transactions contemplated herein.

(n) “Supplemental Agreement” means the Supplemental Agreement among the Authority, the MFA and the State of Michigan acting through the Department of Environment, Great Lakes, and Energy, with respect to a Series of the 2020 SRF-1 Junior Lien Bonds.

(o) “Taxable 2020 SRF-1 Junior Lien Bonds” means any 2020 SRF-1 Junior Lien Bonds other than Tax-Exempt 2020 SRF-1 Junior Lien Bonds.

(p) “Tax-Exempt 2020 SRF-1 Junior Lien Bonds” means any 2020 SRF-1 Junior Lien Bonds that are Tax-Exempt Bonds.

Section 3. Approval of 2020 SRF-1 Project. It is hereby determined to be necessary for the public health, benefit and welfare of the area served by the Regional Sewer System to

acquire, construct and undertake the 2020 SRF-1 Project, and the 2020 SRF-1 Project is hereby approved and accepted.

Section 4. Estimated Cost and Period of Usefulness of 2020 SRF-1 Project. The Project Costs are estimated by the Authority Board to not exceed \$31,000,000 and the Project Costs are hereby approved and confirmed. The period of usefulness of the 2020 SRF-1 Project is estimated to be not less than 40 years.

Section 5. Authorization of 2020 SRF-1 Junior Lien Bonds.

(a) Authorization of Borrowing. The Authority may borrow an amount not in excess of \$35,000,000, as is finally determined in the Sale Order, and issue the 2020 SRF-1 Junior Lien Bonds in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2020 SRF-1 Junior Lien Bonds, all as finally determined in the Sale Order. The amount of the 2020 SRF-1 Junior Lien Bonds authorized in this Section 5(a) shall include the amount of the net original issue premium, if any.

(b) Purpose of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be issued as Additional Bonds for the purpose of paying and/or reimbursing Project Costs.

(c) Priority of Lien. The 2020 SRF-1 Junior Lien Bonds shall be issued as SRF Junior Lien Bonds.

(d) Insufficient Proceeds. To the extent that proceeds of SRF-1 Junior Lien Bonds are insufficient to pay Project Costs, the insufficiency shall be paid from the proceeds of future Additional Bonds, if any, and/or moneys of the Regional Water System on hand and legally available therefor, as determined by the Authority Board.

(e) Taxable and Tax-Exempt 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds may be issued as Taxable 2020 SRF-1 Junior Lien Bonds or Tax-Exempt 2020 SRF-1 Junior Lien Bonds, or as separate Series of both, as set forth in the Sale Order.

(f) Source of Payment and Security. The 2020 SRF-1 Junior Lien Bonds shall be payable and secured as provided in Section 8.

(g) Applicability of Ordinance. Except as otherwise provided in this 2020 SRF-1 Series Ordinance or in the Sale Order, all of the provisions of the Ordinance shall apply to the 2020 SRF-1 Junior Lien Bonds as if set forth in full in this 2020 SRF-1 Series Ordinance, the purpose of this 2020 SRF-1 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2020 SRF-1 Junior Lien Bonds for the purposes set forth herein.

Section 6. 2020 SRF-1 Junior Lien Bond Details.

(a) Designation.

- (1) The 2020 SRF-1 Junior Lien Bonds shall bear the designations Sewage Disposal System Revenue Bonds, Series 2020-SRF-1 and shall include such other designations, including, without limitation, designations for multiple

subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2020 SRF-1 Series Ordinance.

- (2) If the 2020 SRF-1 Junior Lien Bonds are not issued in 2020, an Authorized Officer is authorized in her discretion to re-designate the year and Series designation of such Series of 2020 SRF-1 Junior Lien Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of such Series of 2020 SRF-1 Junior Lien Bonds. Furthermore, an Authorized Officer is authorized to establish designations within the various funds and accounts established hereunder if necessary in order to differentiate such funds and accounts from other similarly named funds and accounts related to other Bonds.

(b) Numbering. The 2020 SRF-1 Junior Lien Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. The 2020 SRF-1 Junior Lien Bonds shall be issued in the form of Serial Bonds or Term Bonds, or any combination of Serial Bonds and Term Bonds, in any Authorized Denomination, and the principal thereof shall mature on October 1, or such other date as set forth in the Sale Order, in such years and amounts, and shall be or not be subject to redemption prior to maturity, all as shall be determined in the Sale Order subject to the following limitations:

- (1) No 2020 SRF-1 Junior Lien Bonds shall mature later than 40 years after the date of issuance thereof.
- (2) The 2020 SRF-1 Junior Lien Bonds shall only be issued with annual principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2020 SRF-1 Junior Lien Bonds or portions thereof shall bear interest at a rate or rates as set forth in the Sale Order not in excess of 2.50% per annum. Interest on 2020 SRF-1 Junior Lien Bonds shall be payable on each Interest Payment Date.

(e) Payment of Principal and Interest. The principal of, premium, if any, and interest on the 2020 SRF-1 Junior Lien Bonds shall be payable in lawful money of the United States. Except as otherwise provided in the Sale Order, so long as the 2020 SRF-1 Junior Lien Bonds are owned by the MFA, the 2020 SRF-1 Junior Lien Bonds are payable as to principal, redemption premium, if any, and interest at The Bank of New York Mellon Trust Company, N.A., or at such other place as shall be designated in writing to the Authority by the MFA (the MFA's Depository"), and the Authority agrees that it will deposit with the MFA's Depository payments of the principal of, premium, if any, and interest on the 2020 SRF-1 Junior Lien Bonds in immediately available funds by 12:00 noon at least five Business Days prior to the date on which any such payment is due, whether by maturity, redemption or otherwise. If the 2020 SRF-1 Junior Lien Bonds are not registered in the name of the MFA, the principal of and premium, if any, on the 2020 SRF-1 Junior Lien Bonds are payable upon the surrender thereof at the corporate trust office of the Trustee and the interest is payable by check or draft drawn on the Trustee and mailed to the registered owners

as of the immediately preceding Regular Record Date at their address shown on the registration books of the Authority maintained by the Trustee.

(f) Dating. The 2020 SRF-1 Junior Lien Bonds shall be dated such date as determined in the Sale Order.

(g) Reserve Requirement. There shall be no Reserve Requirement with respect to the 2020 SRF-1 Junior Lien Bonds.

(h) Exchange. The registered owner of any 2020 SRF-1 Junior Lien Bond may exchange such 2020 SRF-1 Junior Lien Bond for a new 2020 SRF-1 Junior Lien Bond or Bonds of the same interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2020 SRF-1 Junior Lien Bond to be exchanged at the designated office of the Trustee together with an assignment duly executed by the registered owner thereof or his attorney or legal representative in such form as shall be satisfactory to the Trustee. As provided in Section 206 of the Ordinance, the Trustee shall be responsible for the registration, transfer and exchange of 2020 SRF-1 Junior Lien Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2020 SRF-1 Junior Lien Bonds.

(i) Execution and Delivery of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be executed in the name of the Authority by manual or facsimile signature of the Chief Executive Officer of the Authority and countersigned by the manual or facsimile signature of the Secretary of the Authority Board, and shall have the Authority's seal or facsimile thereof affixed or printed thereon. The Chief Financial Officer is authorized to deliver the 2020 SRF-1 Junior Lien Bonds to the MFA upon receiving the purchase price therefor in lawful money of the United States.

(j) Form of 2020 SRF-1 Junior Lien Bonds. The 2020 SRF-1 Junior Lien Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by the Chief Executive Officer within the parameters of this 2020 SRF-1 Series Ordinance:

R-__

**UNITED STATES OF AMERICA
STATE OF MICHIGAN
COUNTIES OF MACOMB, OAKLAND AND WAYNE
GREAT LAKES WATER AUTHORITY
SEWAGE DISPOSAL SYSTEM REVENUE BOND,
SERIES 2020-SRF-1**

REGISTERED OWNER: Michigan Finance Authority

PRINCIPAL AMOUNT: \$_____

INTEREST RATE: _____%

ORIGINAL ISSUE DATE:

The Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan (the “Issuer”), upon authorization from the Board of Directors of the Issuer (the “Board”), has issued this Bond. The Issuer, for value received, promises to pay, in lawful money of the United States of America, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above, or so much thereof as shall have been advanced to the Issuer and not prepaid or reduced pursuant to a Purchase Contract between the Issuer and the Michigan Finance Authority (the “MFA”), a Supplemental Agreement by and among the Authority, the MFA and State of Michigan acting through the Department of Environment, Great Lakes, and Energy, and the Order of Approval issued by the Department of Environment, Great Lakes, and Energy. The Principal Amount shall be payable on the dates and in the principal installments set forth in Schedule A attached hereto.

In the event less than the Principal Amount of this Bond is disbursed by the MFA, any portion of the Principal Amount is prepaid as provided herein, or any serial principal payment becomes due before the Issuer has received proceeds from corresponding purchased principal installments of at least a like amount, then the MFA may prepare a new serial principal installment repayment schedule which shall be presented to the Issuer and be effective upon receipt as provided in the Purchase Contract.

Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate set forth above, only on that portion of installments of the Principal Amount which have been disbursed by the MFA, shall be payable on _____, 20__ and semiannually on each April 1 and October 1 thereafter (each an “Interest Payment Date”).

If the MFA is not the registered owner of this Bond, principal of this Bond is payable upon presentation and surrender at the designated office of U.S. Bank National Association, as Trustee under the Ordinance (as defined below) or such other trustee as the Issuer may hereafter designate by notice mailed to the registered owner not less than 60 days prior to any Interest Payment Date (the “Trustee”).

Interest on this Bond is payable to the registered owner of record as of the close of business on the 15th day of the month immediately preceding any Interest Payment Date as shown on the registration books kept by the Trustee by check or draft mailed by the Trustee to the registered owner at the registered address. Interest on this Bond shall be computed on the basis of a 360-day year comprised of twelve 30-day months. During the time funds are being drawn down by the Issuer under this Bond, the MFA will periodically provide the Issuer with a statement showing the amount of principal that has been advanced and the date of each advance, which statement shall constitute prima facie evidence of the reported information; provided, that no failure on the part of the MFA to provide such a statement or to reflect a disbursement or the correct amount of a disbursement shall relieve the Issuer of its obligation to repay the outstanding principal amount actually advanced [(subject to any principal forgiveness as provided for herein)], all accrued interest thereon, and any other amount payable with respect thereto in accordance with the terms of this Bond.

In the event of a default in the payment of principal or interest hereon when due, whether at maturity, by redemption or otherwise, the amount of such default shall bear interest (the "additional interest") at a rate equal to the rate of interest that is two percent above the MFA's cost of providing funds (as determined by the MFA) to make payment on the bonds of the MFA issued to provide funds to purchase this Bond but in no event in excess of the maximum rate of interest permitted by law. The additional interest shall continue to accrue until the MFA has been fully reimbursed for all costs incurred by the MFA (as determined by the MFA) as a consequence of the Issuer's default. Such additional interest shall be payable on the interest payment date following demand of the MFA. In the event that (for reasons other than the default in the payment of any municipal obligation purchased by the MFA) the investment of amounts in the reserve account established by the MFA for the bonds of the MFA issued to provide funds to purchase this bond fails to provide sufficient available funds (together with any other funds that may be made available for such purpose) to pay the interest on outstanding bonds of the MFA issued to fund such account, the Issuer shall and hereby agrees to pay on demand only the Issuer's pro rata share (as determined by the MFA) of such deficiency as additional interest on this Bond.

Notwithstanding any other provision of this Bond, so long as the MFA is the owner of this Bond, (a) this Bond is payable as to principal, premium, if any, and interest at The Bank of New York Mellon Trust Company, N.A., or at such other place as shall be designated in writing to the Issuer by the MFA (the "MFA's Depository"); (b) the Issuer agrees that it will deposit with the MFA's Depository payments of the principal of, premium, if any, and interest on this Bond in immediately available funds by 12:00 noon at least five business days prior to the date on which any such payment is due whether by maturity, redemption or otherwise; in the event that the MFA's Depository has not received the Issuer's deposit by 12:00 noon on the scheduled day, the Issuer shall immediately pay to the MFA as invoiced by the MFA an amount to recover the MFA's administrative costs and lost investment earnings attributable to that late payment; and (c) written notice of any redemption of this Bond shall be given by the Issuer and received by the MFA's Depository at least 40 days prior to the date on which redemption is to be made.

This Bond is one of a series of bonds designated "Sewage Disposal System Revenue Bonds, Series 2020-SRF-__" and is issued pursuant to the provisions of (i) Act 233, Public Acts of Michigan, 1955, as amended ("Act 233"), and Act 94, Public Acts of Michigan, 1933, as amended ("Act 94"), (ii) Master Bond Ordinance No. 2015-02 adopted by the Board on October 7,

2015, as amended (the “Bond Ordinance”), (iii) the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Bonds in an Aggregate Amount not to Exceed \$35,000,000, adopted by the Board on _____, 2020 (the “Series Ordinance”), and (iv) a Sale Order of the Chief Executive Officer of the Issuer dated _____, 2020 (the “Sale Order,” and, collectively with the Bond Ordinance and the Series Ordinance, the “Ordinance”). This Bond is issued for the purposes set forth in the Series Ordinance and the Sale Order.

For the prompt payment of the principal of and interest on this Bond, and other bonds issued by the Issuer pursuant to the Bond Ordinance, the Issuer has irrevocably pledged the Pledged Assets (as defined in the Bond Ordinance), which includes the revenues of the Sewer System (as defined in the Bond Ordinance), after provision is made for reasonable and necessary expenses of operation, maintenance and administration of the Sewer System (the “Net Revenues”), and a statutory lien on the Net Revenues and Pledged Assets is hereby recognized and acknowledged. Such lien is a third lien, subject to obligations heretofore and hereafter issued or incurred under the Bond Ordinance secured by a first or second lien on the Pledged Assets. This Bond is of equal standing on a parity with all other obligations heretofore and hereafter issued or incurred under the Bond Ordinance and secured by a third lien on the Pledged Assets.

For a complete statement of the revenues from which and the conditions under which this Bond is payable, a statement of the conditions under which Additional Bonds (as defined in the Bond Ordinance) of senior or equal standing and Additional Bonds of junior standing may hereafter be issued and the general covenants and provisions pursuant to which this Bond is issued, reference is made to the Bond Ordinance.

This Bond is subject to redemption prior to maturity at the option of the Issuer and with the prior written consent of and upon such terms as may be required by the MFA. That portion of this Bond called for redemption shall not bear interest after the date fixed for redemption, provided funds are on hand with the Trustee to redeem the same.

THIS BOND IS ISSUED UNDER ACT 233 AND ACT 94. IT IS A SELF-LIQUIDATING BOND AND IS NOT A GENERAL OBLIGATION OF THE ISSUER AND DOES NOT CONSTITUTE AN INDEBTEDNESS OF THE ISSUER WITHIN ANY CONSTITUTIONAL OR STATUTORY LIMITATION, BUT IS PAYABLE, BOTH AS TO PRINCIPAL AND INTEREST SOLELY FROM THE PLEDGED ASSETS OF THE SEWER SYSTEM. THE PAYMENT OF THE PRINCIPAL OF AND INTEREST ON THIS BOND ARE SECURED BY A STATUTORY LIEN ON THE PLEDGED ASSETS AS DESCRIBED HEREIN.

The Issuer has covenanted and agreed, and hereby covenants and agrees, to fix and maintain, or cause to be fixed and maintained, at all times while any bonds payable from the Pledged Assets of the Sewer System shall be outstanding, such rates for service furnished by the Sewer System as shall be sufficient to provide for payment of the interest upon and the principal of this Bond and all other Bonds (as defined in the Bond Ordinance) assumed or issued and to be issued under the Bond Ordinance as and when the same shall become due and payable, to create and maintain a bond redemption fund therefor, including a bond reserve for Bonds other than this Bond, to provide for the payment of expenses of administration and operation and such expenses for maintenance of the Sewer System as are necessary to preserve the same in good repair and

working order, and to provide for such other expenditures and funds for the Sewer System, all as are required by the Bond Ordinance.

This Bond is transferable only upon the books of the Issuer kept for that purpose at the office of the Trustee by the registered owner hereof in person, or by his attorney duly authorized in writing, upon the surrender of this Bond together with a written instrument of transfer satisfactory to the Trustee duly executed by the registered owner or his attorney duly authorized in writing, and thereupon a new registered bond or bonds of the same type, in the same aggregate principal amount and of the same maturity shall be issued to the transferee in exchange therefor as provided in the Ordinance and upon the payment of the charges, if any, therein prescribed.

It is hereby certified and recited that all acts, conditions and things required by law precedent to and in the issuance of this Bond have been done and performed by regular and due time and form as required by law.

This Bond is not valid or obligatory for any purpose until the Trustee's Certificate of Authentication hereon has been executed by the Trustee.

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IN WITNESS WHEREOF, the Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan, has caused this Bond to be signed in its name by the facsimile signatures of its Chief Executive Officer and its Secretary of the Board and its corporate seal or a facsimile thereof to be printed, impressed or otherwise reproduced hereon, all as of the Original Issue Date.

GREAT LAKES WATER AUTHORITY

By: _____
Chief Executive Officer

Countersigned:

By: _____
Secretary, Board of Directors

[Seal]

CERTIFICATE OF AUTHENTICATION

This Bond is authenticated as the bond designated by the Issuer as “Sewage Disposal System Revenue Bond, Series 2020-SRF-1”.

U.S. Bank National Association,
Trustee

By:_____

Date of Authentication: _____, 2020

ASSIGNMENT

For value received, the undersigned sells, assigns and transfers unto _____ this Bond and all rights hereunder and hereby irrevocably appoints _____ attorney to transfer this Bond on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

Signature

NOTICE: The signature to this assignment must correspond with the name as it appears on the face of this Bond in every particular.

Schedule A

The principal amounts and maturity dates applicable to the Bond to which this Schedule A is attached are as follows:

Date

Amount

Based on the schedule provided above unless revised as provided in this paragraph, repayment of the Principal Amount shall be made according to such schedule until the full Principal Amount disbursed to the Issuer is repaid; provided, however, that the Issuer shall have no obligation to repay any serial principal installment for which the Issuer did not receive a disbursement of Principal Amount by the date such serial principal installment is due. In the event the Order of Approval issued by the Department of Environment, Great Lakes, and Energy (the "Order") approves a principal amount of assistance less than the amount of the Bond, the MFA shall only disburse principal up to the amount stated in the Order. In the event (1) that the payment schedule described above provides for payment of a total principal amount greater than the amount of assistance approved by the Order, (2) that less than the principal amount of assistance approved by the Order is disbursed to the Issuer by the MFA or (3) of prepayment [or principal forgiveness] of the Bond, the MFA shall prepare a new payment schedule that shall be effective upon receipt by the Issuer.

END OF BOND FORM

Section 7. Concerning the Securities Depository.

(a) As used herein:

“Beneficial Owner” means any Person who indirectly owns 2020 SRF-1 Junior Lien Bonds pursuant to the indirect ownership system maintained by a securities depository (the “Securities Depository”) and its Participants, commonly known as the “Book-Entry Only System.”

“Participant” means any Person whose ownership of 2020 SRF-1 Junior Lien Bonds is shown on books of the Securities Depository.

(b) The 2020 SRF-1 Junior Lien Bonds will initially be registered in the name of the MFA, or such other purchasers as designated in the Sale Order. In the event 2020 SRF-1 Junior Lien Bonds are later to be registered in the name of a Securities Depository or its nominee, neither the Authority nor the Trustee shall have any responsibility or obligation to any Participant or to any Beneficial Owner with respect to any matter, including the following:

- (1) the accuracy of the records of the Securities Depository, its nominee or any Participant with respect to any ownership interest in 2020 SRF-1 Junior Lien Bonds,
- (2) the delivery to any Participant, Beneficial Owner or any other Person other than the Securities Depository of any notice with respect to: any 2020 SRF-1 Junior Lien Bonds, including any notice of redemption, or
- (3) the payment to any Participant, Beneficial Owner or any other Person, other than the Securities Depository of any amount with respect to the principal (and premium, if any) of or interest on any 2020 SRF-1 Junior Lien Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2020 SRF-1 Junior Lien Bonds only to or upon the order of the MFA, or the Securities Depository, as applicable, and all such payments shall be valid and effective fully to satisfy and discharge the Authority’s obligations with respect to the principal (and premium, if any) of, and interest on such 2020 SRF-1 Junior Lien Bonds to the extent of the sum or sums so paid.

(d) If 2020 SRF-1 Junior Lien Bonds become registered in the name of the Securities Depository and (1) the Authority receives a written notice from the Securities Depository to the effect the Securities Depository is unable or unwilling to discharge its responsibilities or (2) the Authority determines that it is in the best interests of the Beneficial Owners of 2020 SRF-1 Junior Lien Bonds that they be able to obtain 2020 SRF-1 Junior Lien Bonds in certificated form, then, in either event, the Authority shall notify the Trustee and, in the case of clause, (2), the Securities Depository.

(e) Upon discontinuance of the use of the Book-Entry Only System maintained by the Securities Depository, if any, pursuant to subsection (d), above and upon receipt of notice from the Securities Depository containing sufficient information, the Authority shall execute and the Trustee shall authenticate and deliver 2020 SRF-1 Junior Lien Bonds in certificated form to

Beneficial Owners in exchange for the beneficial interests of such Beneficial Owners in corresponding principal amounts and in any Authorized Denominations.

(f) Notwithstanding any other provision of this 2020 SRF-1 Series Ordinance to the contrary, so long as any 2020 SRF-1 Junior Lien Bond is registered in the name of the Securities Depository or its nominee:

- (1) all payments with respect to the principal, premium, if any, and interest on such 2020 SRF-1 Junior Lien Bond and all notices of redemption, tender and otherwise with respect to such 2020 SRF-1 Junior Lien Bond shall be made and given, respectively, to the Securities Depository as provided in the letter of representations from the Authority to the Securities Depository with respect to such 2020 SRF-1 Junior Lien Bonds or any master letter of representations from the Authority to the Securities Depository;
- (2) if less than all of the 2020 SRF-1 Junior Lien Bonds of the same type of any maturity are to be redeemed, then the particular 2020 SRF-1 Junior Lien Bonds or portions of 2020 SRF-1 Junior Lien Bonds of such type and maturity to be redeemed shall be selected by the Securities Depository in any such manner as the Securities Depository may determine;
- (3) all payments with respect to principal of the 2020 SRF-1 Junior Lien Bonds and premium, if any and interest on the 2020 SRF-1 Junior Lien Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and
- (4) if a 2020 SRF-1 Junior Lien Bond is redeemed or tendered in part, then all amounts payable in respect of such redemption or tender shall be paid without presentation and surrender of such 2020 SRF-1 Junior Lien Bond pursuant to the procedures of the Securities Depository.

Section 8. Payment of 2020 SRF-1 Junior Lien Bonds; Confirmation of Statutory Lien.

(a) The 2020 SRF-1 Junior Lien Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2020 SRF-1 Junior Lien Bonds, the statutory lien upon the whole of the Pledged Assets established by Act 94 and the pledge created in Section 501 of the Ordinance is hereby confirmed in favor of the 2020 SRF-1 Junior Lien Bonds as follows: Such lien in favor of the 2020 SRF-1 Junior Lien Bonds shall be a statutory third lien on the Pledged Assets of equal standing and Priority of Lien with all issued, to be issued and outstanding SRF Junior Lien Bonds.

Section 9. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2020 SRF-1 Series Ordinance, all of the provisions relative to funds and accounts, their maintenance, the flow of funds and other details relative thereto, shall remain as specifically set forth in the Ordinance.

Section 10. Disposition of Proceeds.

(a) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2020 SRF-1 Junior Lien Bonds there shall be immediately deposited in the SRF Junior Lien Debt Service Account, an amount equal to any accrued interest received on the delivery of the 2020 SRF-1 Junior Lien Bonds and any capitalized interest on the 2020 SRF-1 Junior Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the SRF Junior Lien Debt Service Account for payment of the next maturing interest payment on the 2020 SRF-1 Junior Lien Bonds.

(b) Construction Fund. The balance of the proceeds of the 2020 SRF-1 Junior Lien Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 11.

Section 11. Construction Fund.

(a) A subaccount of the Authority Regional Construction Account of the Construction Fund established by the Ordinance shall be established for the 2020 SRF-1 Junior Lien Bonds and designated the "Construction Fund, Series 2020 SRF-1," and shall be established and maintained as a separate depository account with a Custodian as designated by the Chief Financial Officer.

(b) Moneys in the Construction Fund, Series 2020 SRF-1 shall be applied solely to payment of Project Costs (or to the reimbursement of Project Costs paid by the Authority from other funds prior to the issuance of the 2020 SRF-1 Junior Lien Bonds).

(1) Payments or reimbursements for Project Costs for construction, either on account or otherwise, shall not be made unless the registered engineer in charge of such work shall file with an Authorized Officer a signed statement to the effect that the work has been completed in accordance with the plans and specifications therefor, that it was done in accordance with the contract therefor, that such work is satisfactory and that such work has not been previously paid for.

(2) Payment or reimbursement for Project Costs consisting of Issuance Costs and engineering, legal and financial costs shall be made upon submission of appropriate documentation to an Authorized Officer.

Section 12. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2020 SRF-1 Junior Lien Bonds, that so long as any of the Tax-Exempt 2020 SRF-1 Junior Lien Bonds remain outstanding and unpaid as to either principal or interest, the Authority shall, to the extent permitted by law, take all actions within its control to maintain, and will refrain from taking any action which would impair, the exclusion of the interest on the Tax-Exempt 2020 SRF-1 Junior Lien Bonds from gross income for federal income tax purposes under the Code.

(b) The actions referred to in subsection (a), above include, but are not limited to actions relating to any required rebate of arbitrage earnings and the expenditure and investment of

proceeds of Tax-Exempt 2020 SRF-1 Junior Lien Bonds and moneys deemed to be proceeds of Tax-Exempt 2020 SRF-1 Junior Lien Bonds, and to prevent Tax-Exempt 2020 SRF-1 Junior Lien Bonds from being or becoming “private activity bonds” as that term is used in the Code.

Section 13. Sale of 2020 SRF-1 Junior Lien Bonds; Purchase Contract; Expiration of Referendum Period.

(a) The 2020 SRF-1 Junior Lien Bonds shall be sold by negotiated sale to the MFA pursuant to a Purchase Contract in customary form with such changes thereto as an Authorized Officer shall determine are in the best interests of the Authority, within the parameters established by this 2020 SRF-1 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer’s execution of the Purchase Contract to the MFA.

(b) The Authority Board hereby determines that the sale of the 2020 SRF-1 Junior Lien Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2020 SRF-1 Junior Lien Bonds to receive a subsidized interest rate through participation in the MFA’s State Revolving Fund Program.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the MFA to purchase the 2020 SRF-1 Junior Lien Bonds subject to the following limitations:

- (1) The interest rate with respect to any Series of the 2020 SRF-1 Junior Lien Bonds shall not exceed 2.50%.
- (2) The aggregate purchaser’s discount at which any Series of the 2020 SRF-1 Junior Lien Bonds shall be sold to the MFA shall not exceed 2.00%.

(d) An Authorized Officer shall confirm in the Sale Order that there was no petition meeting the requirements of Section 33 of Act 94 that was filed with the Secretary of the Authority Board within 45 days of the date of publication of the notice of intent to issue bonds with respect to the 2020 SRF-1 Junior Lien Bonds as required by Section 33 of Act 94.

Section 14. Delegation of Authority to and Authorization of Actions of Authorized Officers.

(a) An Authorized Officer shall make all determinations herein provided to be made in the Sale Order and shall make all such determinations in accordance with the best interests of the Authority within the parameters of this 2020 SRF-1 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2020 SRF-1 Series Ordinance, an Authorized Officer shall determine the aggregate principal amount of 2020 SRF-1 Junior Lien Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2020 SRF-1 Series Ordinance, on the basis of her evaluation of the maximum amount of 2020 SRF-1 Junior Lien Bonds which can be sold, given anticipated interest rates and the revenue coverage requirements with respect to the 2020 SRF-1 Junior Lien Bonds and for any other reasons the Authorized Officer deems appropriate.

- (1) Such determination shall also include the redemption provisions for the 2020 SRF-1 Junior Lien Bonds.
- (2) An Authorized Officer shall also determine and establish, in accordance with this 2020 SRF-1 Series Ordinance, the maturities of each Series of the 2020 SRF-1 Junior Lien Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities.

(c) An Authorized Officer is authorized, if necessary, to file applications and to pay the related fees, if any, to the Michigan Department of Treasury at her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2020 SRF-1 Junior Lien Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2020 SRF-1 Junior Lien Bonds as authorized herein, and as required by the Michigan Department of Treasury or Act 34.

(d) An Authorized Officer shall determine in the Sale Order that the requirements set forth in Section 207 of the Ordinance with respect to the issuance of the 2020 SRF-1 Junior Lien Bonds as Additional Bonds have been satisfied.

(e) An Authorized Officer is hereby authorized and directed to do and perform any and all other acts and things with respect to the 2020 SRF-1 Junior Lien Bonds which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2020 SRF-1 Series Ordinance, the authorizations therein and herein contained including without limitation the securing of ratings by bond rating agencies, and the incurring of reasonable fees costs and expenses incidental to the foregoing, for and on behalf of the Authority.

Section 15. Advancement of Project Costs. At the direction of an Authorized Officer, the Authority may advance certain Project Costs from the Authority's funds prior to the issuance of the 2020 SRF-1 Junior Lien Bonds to the extent that such costs are expenditures appropriate for reimbursement under applicable law, including the Code in the case of Tax-Exempt 2020 SRF-1 Junior Lien Bonds.

Section 16. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2020 SRF-1 Junior Lien Bonds as permitted or required by the Ordinance or law are hereby ratified, confirmed and approved.

Section 17. Additional Authorization. The Chief Executive Officer, the Chief Financial Officer, the Chief Administrative and Compliance Officer and the General Counsel of the Authority, any such officials acting in an interim or acting capacity to such officers, their deputies and staff, or any of them, are hereby authorized to execute and deliver such certificates, Supplemental Agreements, other agreements, documents, instruments, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2020 SRF-1 Junior Lien Bonds and otherwise give effect to the transactions contemplated by this 2020 SRF-1 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 18. 2020 SRF-1 Series Ordinance a Contract. The provisions of this 2020 SRF-1 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2020 SRF-1 Junior Lien Bond.

Section 19. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2020 SRF-1 Junior Lien Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2020 SRF-1 Junior Lien Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2020 SRF-1 Junior Lien Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2020 SRF-1 Junior Lien Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2020 SRF-1 Junior Lien Bonds or other available funds.

(d) An Authorized Officer is authorized to engage financial and other consultants as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2020 SRF-1 Junior Lien Bonds and to pay the fees and expenses thereof from the proceeds of the 2020 SRF-1 Junior Lien Bonds or other available funds.

Section 20. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2020 SRF-1 Series Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the other provisions of this 2020 SRF-1 Series Ordinance. The section and paragraph headings in this 2020 SRF-1 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2020 SRF-1 Series Ordinance.

Section 21. Publication and Recordation. This 2020 SRF-1 Series Ordinance shall be published in full in the Detroit Legal News, a newspaper of general circulation within the geographic boundaries of the Authority qualified under State law to publish legal notices, promptly after its adoption, and shall be maintained in the official records of the Authority and such recording authenticated by the signatures of the Chairperson and Secretary of the Authority Board.

Section 22. Repeal. All ordinances, resolutions, indentures or orders, or parts thereof, in conflict with the provisions of this 2020 SRF-1 Series Ordinance are, to the extent of such conflict, repealed.

Section 23. Effective Date. This 2020 SRF-1 Series Ordinance shall be effective upon adoption.

Adopted and signed on the ____ day of _____, 2020.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

BLOOMFIELD 63818-18 2755394v1

Great Lakes Water Authority
Resolution 2020-
RE: Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal
System Revenue Bonds in an Amount not to Exceed \$35,000,000
Ordinance 2020-01

By Board Member: _____

Whereas There has been presented to the Board of Directors of the Great Lakes Water Authority (the “Authority”) an ordinance entitled “Series Ordinance Authorizing the Issuance and Sale of Sewage Disposal System Revenue Bonds in an Amount not to Exceed \$35,000,000” (the “2020 SRF-1 Series Ordinance”), which ordinance is a Series Ordinance as defined and described in Master Bond Ordinance No. 2015-02 adopted by the Board of Directors on October 7, 2015, as amended on December 9, 2015, January 27, 2016 and August 10, 2016.

Whereas The Articles of Incorporation of the Authority provide that at least 5 of the 6 members of the Authority Board must vote to approve the 2020 SRF-1 Series Ordinance.

Now, Therefore Be It:

Resolved That the 2020 SRF-1 Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2020 SRF-1 Series Ordinance in the form approved; **And Be it Further**

Resolved That an affirmative vote of at least 5 members of the Authority Board is necessary for the passage of this Resolution.

Adopted by the Great Lakes Water Authority Board on: _____, 2020

The Quarterly WRAP Report includes the following:

1. Community Participation
2. Approved Program Changes
3. Current Year Budget Allocations
4. Current & Historical Activity
5. Reallocation Activity

The Water Residential Assistance Program (“WRAP”) provides sustainable funding for qualifying low-income residents served by the Great Lakes Water Authority’s (“GLWA”) customers. The program is funded by GLWA at an amount equal to 0.5 percent of budgeted revenues with the budgeted FY 2020 funding level of \$4.9 million combined for water and sewer services.

The scope of funding uses includes a) payment assistance and b) water audit and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut off can receive assistance with paying down arrears and receive \$25 toward monthly bill payment assistance annually up to \$1,000. High volume water users can receive a one-time home audit and home water conservation services up to \$1,000. Maximum annual assistance per household is \$2,000. To participate in WRAP, an applicant must have household gross incomes at or below 150% of the federal poverty income thresholds. Customers with water usage at or above 120% of the average residential usage are eligible to participate in a water audit and install water conservation measures. WRAP participants are also encouraged to participate in both financial coaching and water conservation workshops as well as other support services. The program is administered by Wayne Metro Community Action Agency (“Wayne Metro”), a nonprofit agency.

The WRAP began assisting residents in the GLWA service area on March 1, 2016 and to date has committed over \$13 million in assistance and conservation funds to qualified WRAP participants. WRAP has the potential to serve over 100 communities within the GLWA service area, but to assist qualified households, each community must opt into the program and sign a Memorandum of Agreement (MOA) with Wayne Metro.

Community Participation

A community participating in WRAP must receive water and/or sewer service from GLWA. Eligible communities must formally opt into the program by signing a memorandum of agreement with Wayne Metro. To date, 76 communities have opted into WRAP. A list of current participating communities is presented in **Table 1 – WRAP Participating Communities**.

Table 1 – WRAP Participating Communities

This table shows the level of participation that each community has chosen. Option 1 includes bill assistance, arrearage assistance and conservation. Option 2 includes bill assistance and conservation and Option 3 includes conservation only.

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Wayne County						
Allen Park	X					
Belleville						X
Brownstown Township	X					
Canton Township	X					
Dearborn	X					
Dearborn Heights	X					
Detroit	X					
Ecorse	X					
Flat Rock	X					
Garden City	X					
Gibraltar		X				
Grosse Ile						X
Grosse Pointe						X
Grosse Pointe Farms						X
Grosse Pointe Park						X
Grosse Pointe Shores	X					
Grosse Pointe Woods					X	
Hamtramck	X					
Harper Woods		X				
Huron Township						X
Inkster		X				
Lincoln Park		X				
Livonia	X					
Melvindale	X					
Northville	X					
Northville Township					X	
Plymouth		X				
Plymouth Township						X
Redford Township	X					
River Rouge	X					
Riverview						X
Rockwood						X
Romulus		X				
Southgate	X					
Sumpter Township						X
Taylor		X				
Trenton	X					
Van Buren Township	X					
Wayne	X					
Westland	X					
Woodhaven		X				

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Oakland County						
Auburn Hills					X	
Berkley	X					
Beverly Hills	X					
Bingham Farms	X					
Birmingham	X					
Bloomfield Hills	X					
Bloomfield Township						X
Clawson	X					
Commerce Township	X					
Farmington	X					
Farmington Hills	X					
Ferndale	X					
Hazel Park		X				
Huntington Woods	X					
Keego Harbor	X					
Lake Orion					X	
Lathrup Village	X					
Madison Heights	X					
Novi						X
Oak Park		X				
Orchard Lake	X					
Orion Township	X					
Oxford	X					
Pleasant Ridge	X					
Pontiac	X					
Rochester Hills						X
Royal Oak	X					
Royal Oak Township	X					
Southfield	X					
Sylvan Lake						X
Troy					X	
Walled Lake				X		
Waterford Township				X		
West Bloomfield Twp.						
Wixom						

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Macomb County						
Centerline	X					
Chesterfield Township	X					
Clinton Township		X				
Eastpointe	X					
Fraser	X					
Harrison Township				X		
Lenox Township				X		
Macomb Township	X					
New Haven	X					
Roseville					X	
Shelby Township	X					
St. Clair Shores	X					
Sterling Heights	X					
Utica	X					
Warren	X					
Washington Township		X				

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Washtenaw County						
Augusta Township	X					
Pittsfield Township	X					
Superior Township	X					
Ypsilanti	X					
Ypsilanti Township	X					

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Lapeer County						
Almont		X				
Imlay City					X	
Lapeer	X					

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Genesee County						
Flint	X					

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
St. Clair County						
Burtchville Twp.					X	

Member Partner	Option #1	Option #2	Option #3	In Progress	No Response	Not Opted In
Monroe County						
Ash Township	X					
Berlin Township					X	
South Rockwood					X	

Approved Program Changes

As a first-of-its-kind assistance program in the state of Michigan, changes to WRAP may be required as the program matures. Following is a summary of program changes made to WRAP since 2016, as approved by the GLWA Board of Directors.

November 30, 2016:

Allow customer communities to opt into program features that best meet the needs of their community. This is captured in the three options below:

Option 1

- Assistance up to \$300 per year in the form of \$25 monthly bill credits. (Applicable if client continues to pay all current monthly/quarterly charges).
- Up to \$700 in arrearage assistance to be paid 50% (up to \$350) after six months in the program, and 50% (up to \$350) after one year. Enrollees are eligible for a second-year arrearage assistance totaling \$700.
- One-time home water audit for households above 120% of average usage.
- Home repairs up to \$1,000 per household to fix minor plumbing issues leading to high usage (finding and fixing leaks, upgrading water using fixtures) and/or minor lead replacement assistance.

Option 2

- Assistance up to \$300 per year in the form of \$25 monthly bill credits. (Applicable if client continues to pay all current monthly/quarterly charges).
- One-time home water audit for households above 120% of average usage.
- Home repairs up to \$1,000 per household to fix minor plumbing issues leading to high usage (finding and fixing leaks, upgrading water using fixtures) and/or minor lead replacement assistance.

Option 3

- One-time home water audit for households above 120% of average usage.
- Home repairs up to \$1,000 per household to fix minor plumbing issues leading to high usage (finding and fixing leaks, upgrading water using fixtures) and/or minor lead replacement assistance.

August 22, 2018:

Removal of the 120% usage requirement for the lead fixture replacement for in-home faucets that pre-date the lead-free plumbing code change.

January 23, 2019:

Extend the 2-year time limitation to provide monthly bill assistance to senior citizens and disabled citizens.

Current Budget and Allocations

Consistent with the previous fiscal years funding allocation for WRAP, the FY 2020 budgeted allocation is based on the proportionality of the revenues derived from each county and the City of Detroit, based on the approved FY 2020 water and sewer service charges and budget.

Table 2 - FY 2020 WRAP Budget and Allocations

This table shows the allocation of the FY 2020 budgeted WRAP funds, which is reflective of the approved FY 2020 budget of \$4.9 million.

Community	Budgeted Direct Assistance	Budgeted Conservation Assistance	Budgeted Administration Costs	Total Budgeted Revenue	Allocation
WAYNE COUNTY					
CITY OF DETROIT	\$1,405,874	\$351,469	\$210,900	\$1,968,243	40.43%
SUBURBAN	685,847	171,462	102,900	960,209	19.72%
TOTAL WAYNE COUNTY	\$2,091,722	\$522,930	\$313,800	\$2,928,452	62.86%
OAKLAND COUNTY	825,138	206,285	82,600	1,114,023	22.88%
MACOMB COUNTY	533,093	133,273	53,320	719,687	14.78%
GENESEE COUNTY	17,528	4,382	1,753	23,663	0.49%
WASHTENAW COUNTY	39,556	9,889	3,960	53,405	1.10%
LAPEER COUNTY	12,225	3,056	1,223	16,504	0.34%
MONROE COUNTY	6,262	1,565	627	8,454	0.17%
ST. CLAIR COUNTY	2,897	724	290	3,912	0.08%
TOTAL	\$3,528,422	\$882,105	\$457,573	\$4,868,100	100.00%

Current & Historical Activity

Monies are transferred from GLWA to Wayne Metro as needed to fund the program and support the WRAP Assistance and Conservation efforts. Wayne Metro maintains records of this activity which are reviewed and monitored by GLWA. Following are summaries of this activity FY 2020 and prior fiscal years.

Table 3 – WRAP Activity for FY 2020

This table summarizes the budgeted assistance and conservation funds for the City of Detroit and the participating counties within the GLWA service area for FY 2020 as well as the program activity through October 31, 2019.

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

Table 4 – WRAP Activity March 2, 2016 through October 31, 2019

This table shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit as of October 31, 2019. From March 1, 2016 to October 31, 2019, \$21.3 million (including FY 2020 allocations) was budgeted for WRAP bill assistance and conservation assistance and \$14.2 million was utilized by WRAP participants during that time. As of October 31, 2019, the suburban counties still had uncommitted funds (combined assistance and conservation) of over \$4.9 million. The City of Detroit had uncommitted funds of \$1.8 million and the City of Flint had uncommitted funds of \$335,935.

Table 4

TOTAL Activity March 1, 2016 to October 31, 2019

Row	Sources (Net Revenues)	Detroit	Out-Wayne	Oakland	Macomb	Washtenaw	St. Clair	Lapeer	Monroe	Genesee	City of Flint	Total
1	FY 2016 Assistance Budget Allocation											
2	Bill and Arrearage Assistance	\$ 1,238,736	\$ 748,629	\$ 740,155	\$ 379,764	\$ 35,419	\$ 3,051	\$ 10,080	\$ 5,093	\$ 63,842	\$ -	\$ 3,224,769
3	Home Audit and Repairs	288,022	174,066	172,096	88,300	8,235	709	2,344	1,184	14,500	-	749,457
4	Total FY 2016 Assistance Budget Allocation	\$ 1,526,758	\$ 922,695	\$ 912,250	\$ 468,064	\$ 43,654	\$ 3,760	\$ 12,424	\$ 6,277	\$ 78,342	\$ -	\$ 3,974,226
5	FY 2017 Assistance Budget Allocation											
6	Bill and Arrearage Assistance	\$ 1,278,103	\$ 806,833	\$ 774,825	\$ 400,804	\$ 37,998	\$ 2,431	\$ 10,059	\$ 5,561	\$ -	\$ -	\$ 3,316,615
7	Home Audit and Repairs	297,856	188,029	180,570	93,406	8,855	578	2,344	1,296	-	-	772,934
8	Total FY 2017 Assistance Budget Allocation	\$ 1,575,960	\$ 994,862	\$ 955,395	\$ 494,209	\$ 46,853	\$ 3,009	\$ 12,403	\$ 6,858	\$ -	\$ -	\$ 4,089,549
9	FY 2018 Assistance Budget Allocation											
10	Bill and Arrearage Assistance	\$ 1,303,229	\$ 848,677	\$ 827,662	\$ 429,388	\$ 40,961	\$ 2,604	\$ 9,970	\$ 5,908	\$ 28,679	\$ -	\$ 3,497,078
11	Home Audit and Repairs	303,712	197,780	192,883	100,067	9,546	607	2,323	1,377	6,684	-	814,979
12	Total FY 2018 Assistance Budget Allocation	\$ 1,606,941	\$ 1,046,457	\$ 1,020,545	\$ 529,455	\$ 50,507	\$ 3,211	\$ 12,294	\$ 7,285	\$ 35,363	\$ -	\$ 4,312,057
13	FY 2019 Assistance Budget Allocation											
14	Bill and Arrearage Assistance	\$ 1,405,432	\$ 818,952	\$ 866,319	\$ 452,003	\$ 39,783	\$ 2,862	\$ 11,131	\$ 6,392	\$ -	\$ 17,202	\$ 3,620,075
15	Home Audit and Repairs	327,530	190,853	201,892	105,337	9,271	667	2,594	1,490	-	4,009	843,643
16	Total FY 2019 Assistance Budget Allocation	\$ 1,732,962	\$ 1,009,805	\$ 1,068,211	\$ 557,340	\$ 49,054	\$ 3,529	\$ 13,725	\$ 7,882	\$ -	\$ 21,211	\$ 4,463,718
17	FY 2020 Assistance Budget Allocation											
18	Bill and Arrearage Assistance	\$ 1,405,874	\$ 685,847	\$ 825,138	\$ 533,093	\$ 39,556	\$ 2,897	\$ 12,225	\$ 6,262	\$ -	\$ 17,528	\$ 3,528,422
19	Home Audit and Repairs	351,469	171,462	206,285	133,273	9,889	724	3,056	1,565	-	4,382	882,105
20	Total FY 2020 Assistance Budget Allocation	\$ 1,757,343	\$ 857,309	\$ 1,031,423	\$ 666,367	\$ 49,445	\$ 3,622	\$ 15,281	\$ 7,827	\$ -	\$ 21,910	\$ 4,410,527
21	FY 2016-2020 Assistance Available	\$ 8,199,964	\$ 4,831,128	\$ 4,987,824	\$ 2,715,435	\$ 239,513	\$ 17,130	\$ 66,127	\$ 36,129	\$ 113,705	\$ 43,121	\$ 21,250,077
22	Reallocation of Uncommitted Funds											
23	Reallocation of Uncommitted Funds from FY 2016 (1)											
24	Bill and Arrearage Assistance Reallocated to Detroit	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Uncommitted FY 2016 Conservation Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	Bill and Arrearage Assistance Reallocated to Flint	\$ -	\$ -	\$ -	\$ -	\$ (35,419)	\$ (3,051)	\$ (10,080)	\$ (5,093)	\$ (63,842)	\$ 117,485	\$ -
27	Total Reallocation of Uncommitted Funds from FY 2016	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ (35,419)	\$ (3,051)	\$ (10,080)	\$ (5,093)	\$ (63,842)	\$ 117,485	\$ -
28	Reallocation of Uncommitted Funds from FY 2017 (2)											
29	FY 2017 Reallocation of Assistance Funds	\$ 549,784	\$ (486,355)	\$ (268,078)	\$ (262,634)	\$ (28,401)	\$ (2,431)	\$ (10,059)	\$ (5,561)	\$ -	\$ 307,535	\$ (206,200)
30	FY 2017 Reallocation of Conservation Funds	237,197	(71,911)	(62,120)	(6,248)	(5,866)	(405)	(1,641)	(907)	-	118,100	206,200
31	Total Reallocation of Uncommitted Funds from FY 2017	\$ 786,981	\$ (558,266)	\$ (330,198)	\$ (268,882)	\$ (34,267)	\$ (2,836)	\$ (11,700)	\$ (6,468)	\$ -	\$ 425,635	\$ -
32	Proposed Reallocation of Uncommitted Funds from FY 2018 (3)											
33	FY 2018 Reallocation of Assistance Funds	\$ 438,750	\$ (298,775)	\$ (313,067)	\$ (241,763)	\$ (28,966)	\$ (2,604)	\$ (9,970)	\$ (5,908)	\$ (28,679)	\$ 236,250	\$ (254,732)
34	FY 2018 Reallocation of Conservation Funds	355,650	(96,982)	(116,197)	(59,108)	(9,145)	(607)	(2,323)	(1,377)	(6,684)	191,505	254,732
35	Total Proposed Reallocation of Uncommitted Funds from FY 2018	\$ 794,400	\$ (395,757)	\$ (429,264)	\$ (300,871)	\$ (38,111)	\$ (3,211)	\$ (12,293)	\$ (7,285)	\$ (35,363)	\$ 427,755	\$ -
36	Proposed Reallocation of Uncommitted Funds from FY 2019											
37	FY 2019 Reallocation of Assistance Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (0)
38	FY 2019 Reallocation of Conservation Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (0)
39	Total Proposed Reallocation of Uncommitted Funds from FY 2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40	NET FY 2016-2020 Assistance Available	\$ 11,446,177	\$ 3,158,753	\$ 3,637,199	\$ 1,790,366	\$ 131,716	\$ 8,033	\$ 32,054	\$ 17,283	\$ 14,500	\$ 1,013,996	\$ 21,250,077
41	Uses 3/01/2016 to 10/31/2019											
42	Home Audits and Repair Paid to Date	1,622,444	260,359	221,319	160,434	3,542	-	-	-	-	122,109	2,390,207
43	Bill Assistance and Arrearages Paid to Date	4,233,579	761,140	1,082,452	372,502	20,046	-	-	-	-	342,374	6,811,894
44	Total Uses 3/01/2016 to 10/31/2019	\$ 5,856,023	\$ 1,021,499	\$ 1,303,771	\$ 532,936	\$ 23,589	\$ -	\$ -	\$ -	\$ -	\$ 464,483	\$ 9,202,102
45	Less: Committed Funds 3/01/2016 to 10/31/2019											
46	Future Bill Assistance	\$ 1,550,179	\$ 156,557	\$ 7,953	\$ 24,635	\$ 10,002	\$ -	\$ -	\$ -	\$ 48,258	\$ 1,797,585	\$ -
47	Future Arrearage Assistance	2,198,692	520,302	226,920	75,731	10,037	-	-	-	-	165,320	3,197,002
48	Total Committed Funds 3/01/2016 to 10/31/2019	\$ 3,748,872	\$ 676,859	\$ 234,873	\$ 100,366	\$ 20,039	\$ -	\$ -	\$ -	\$ -	\$ 213,578	\$ 4,994,587
49	Total Expenditures/Committed Funds	\$ 9,604,895	\$ 1,698,358	\$ 1,538,644	\$ 633,302	\$ 43,628	\$ -	\$ -	\$ -	\$ -	\$ 678,061	\$ 14,196,689
50	Uncommitted Funds as of 10/31/2019 (line 39 - line 48)	\$ 1,841,482	\$ 1,460,394	\$ 2,098,555	\$ 1,157,064	\$ 88,089	\$ 8,033	\$ 32,054	\$ 17,283	\$ 14,500	\$ 335,935	\$ 7,053,389
51	Summary of Uncommitted Funds 10/31/2019											
52	Uncommitted Conservation	\$ 538,993	\$ 492,939	\$ 554,089	\$ 294,593	\$ 27,243	\$ 2,273	\$ 8,698	\$ 4,629	\$ 14,500	\$ 195,887	\$ 2,133,843
53	Uncommitted Assistance	1,302,490	967,456	1,544,466	862,471	60,845	5,759	23,356	12,654	-	140,048	4,919,545
	Total Uncommitted Funds as of 10/31/2019	\$ 1,841,482	\$ 1,460,394	\$ 2,098,555	\$ 1,157,064	\$ 88,089	\$ 8,033	\$ 32,054	\$ 17,283	\$ 14,500	\$ 335,935	\$ 7,053,389

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

Previous Reallocation of Uncommitted Funds

After the completion of each fiscal year, Wayne Metro recommends to the GLWA Board of Directors the reallocation of uncommitted assistance and conservation funds to those member partners that have fully committed their annual budgeted funds due to the increased need within their community.

Table 5 – Total WRAP Reallocation of Uncommitted Funds

This table summarizes the Board authorized reallocation of uncommitted FY 2016 to FY 2018 WRAP funds to the City of Detroit and the City of Flint. To date, \$3,246,213 has been reallocated to Detroit and \$970,875 to the City of Flint from the other counties within GLWA.

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



Financial Services Audit Committee Communication

Date: January 17, 2020

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

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

Background: After the completion of each fiscal year, Wayne Metro recommends to the GLWA Board of Directors the reallocation of uncommitted assistance and conservation funds to those member partners that have fully committed its annual budgeted funds, due to the increased need within their community. Included in this memo is the recommended reallocation for the uncommitted FY 2019.

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

Table 1 – WRAP Activity for FY 2019

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

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

Table 2 – Total WRAP Activity March 2, 2016 to June 30, 2019

Table 2

TOTAL Activity March 1, 2016 to June 30, 2019

Row	Sources (Net Revenues)	Detroit	Out-Wayne	Oakland	Macomb	Washtenaw	St. Clair	Lapeer	Monroe	Genesee	City of Flint	Total
1	FY 2016 Assistance Budget Allocation											
2	Bill and Arrearage Assistance	\$ 1,238,736	\$ 748,629	\$ 740,155	\$ 379,764	\$ 35,419	\$ 3,051	\$ 10,080	\$ 5,093	\$ 63,842	\$ -	\$ 3,224,769
3	Home Audit and Repairs	288,022	174,066	172,096	88,300	8,234	709	2,344	1,184	14,500	-	749,457
4	Total FY 2016 Assistance Budget Allocation	\$ 1,526,759	\$ 922,695	\$ 912,251	\$ 468,064	\$ 43,654	\$ 3,760	\$ 12,424	\$ 6,277	\$ 78,342	\$ -	\$ 3,974,226
5	FY 2017 Assistance Budget Allocation											
6	Bill and Arrearage Assistance	\$ 1,278,103	\$ 806,833	\$ 774,825	\$ 400,804	\$ 39,998	\$ 2,431	\$ 10,059	\$ 5,561	\$ -	\$ -	\$ 3,316,615
7	Home Audit and Repairs	297,856	188,029	180,570	93,406	8,855	578	2,344	1,296	-	-	772,934
8	Total FY 2017 Assistance Budget Allocation	\$ 1,575,960	\$ 994,862	\$ 955,395	\$ 494,209	\$ 48,853	\$ 3,009	\$ 12,403	\$ 6,858	\$ -	\$ -	\$ 4,089,549
9	FY 2018 Assistance Budget Allocation											
10	Bill and Arrearage Assistance	\$ 1,303,229	\$ 848,677	\$ 827,662	\$ 429,388	\$ 40,961	\$ 2,604	\$ 9,970	\$ 5,908	\$ 28,679	\$ -	\$ 3,497,078
11	Home Audit and Repairs	303,712	197,780	192,883	100,067	9,546	607	2,323	1,377	6,684	-	814,979
12	Total FY 2018 Assistance Budget Allocation	\$ 1,606,941	\$ 1,046,457	\$ 1,020,545	\$ 529,455	\$ 50,507	\$ 3,211	\$ 12,294	\$ 7,285	\$ 35,363	\$ -	\$ 4,312,057
13	FY 2019 Assistance Budget Allocation											
14	Bill and Arrearage Assistance	\$ 1,405,432	\$ 818,952	\$ 866,319	\$ 452,003	\$ 39,783	\$ 2,862	\$ 11,131	\$ 6,392	\$ -	\$ 17,202	\$ 3,620,075
15	Home Audit and Repairs	327,530	190,853	201,892	105,337	9,771	667	2,594	1,490	-	4,009	843,643
16	Total FY 2019 Assistance Budget Allocation	\$ 1,732,962	\$ 1,009,805	\$ 1,068,211	\$ 557,340	\$ 49,054	\$ 3,529	\$ 13,725	\$ 7,882	\$ -	\$ 21,211	\$ 4,463,718
17	NET FY 2016-2019 Assistance Available	\$ 6,442,621	\$ 3,973,819	\$ 3,956,402	\$ 2,049,068	\$ 190,069	\$ 13,509	\$ 50,846	\$ 28,301	\$ 113,705	\$ 21,211	\$ 16,839,550
18	Reallocation of Uncommitted Funds											
19	Reallocation of Uncommitted Funds from FY 2016 (1)	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Bill and Arrearage Assistance Reallocated to Detroit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Uncommitted FY 2016 Conservation Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Bill and Arrearage Assistance Reallocated to Flint	\$ -	\$ -	\$ -	\$ -	\$ (35,419)	\$ (3,051)	\$ (10,080)	\$ (5,093)	\$ (63,842)	\$ 117,485	\$ -
23	Total Reallocation of Uncommitted Funds from FY 2016	\$ 1,664,833	\$ (718,353)	\$ (591,163)	\$ (355,316)	\$ (35,419)	\$ (3,051)	\$ (10,080)	\$ (5,093)	\$ (63,842)	\$ 117,485	\$ -
24	Reallocation of Uncommitted Funds from FY 2017 (2)	\$ 549,784	\$ (486,355)	\$ (268,078)	\$ (262,634)	\$ (28,401)	\$ (2,431)	\$ (10,059)	\$ (5,561)	\$ -	\$ 307,535	\$ (206,200)
25	FY 2017 Reallocation of Assistance Funds	\$ 237,197	\$ (71,911)	\$ (62,120)	\$ (6,248)	\$ (5,866)	\$ (405)	\$ (1,641)	\$ (907)	\$ -	\$ 118,100	\$ 206,200
26	FY 2017 Reallocation of Conservation Funds	\$ 786,981	\$ (558,266)	\$ (330,198)	\$ (268,882)	\$ (34,267)	\$ (2,836)	\$ (11,700)	\$ (6,468)	\$ -	\$ 425,635	\$ -
27	Total Reallocation of Uncommitted Funds from FY 2017	\$ 438,750	\$ (298,775)	\$ (313,067)	\$ (241,763)	\$ (28,966)	\$ (2,604)	\$ (9,970)	\$ (5,908)	\$ (28,679)	\$ 236,250	\$ (254,732)
28	Future Bill Assistance	\$ 355,650	\$ (96,982)	\$ (116,197)	\$ (59,108)	\$ (9,145)	\$ (607)	\$ (2,323)	\$ (1,377)	\$ (6,684)	\$ 191,505	\$ 254,732
29	FY 2018 Reallocation of Conservation Funds	\$ 794,400	\$ (395,757)	\$ (429,264)	\$ (300,871)	\$ (38,111)	\$ (3,211)	\$ (12,293)	\$ (7,285)	\$ (35,363)	\$ 427,755	\$ -
30	Total Reallocation of Uncommitted Funds from FY 2018 (3)	\$ 3,246,213	\$ (1,672,375)	\$ (1,350,625)	\$ (925,069)	\$ (107,797)	\$ (9,097)	\$ (34,073)	\$ (18,846)	\$ (99,205)	\$ 970,875	\$ -
31	NET FY 2016-2019 Assistance Available	\$ 9,688,834	\$ 2,301,444	\$ 2,605,777	\$ 1,123,999	\$ 82,272	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 992,086	\$ 16,839,550
32	Uses 3/01/2016 to 6/30/2019											
33	Home Audits and Repair Paid to Date	1,454,318	259,759	221,369	159,776	3,067	-	-	-	-	122,109	2,220,398
34	Bill Assistance and Arrearages Paid to Date	4,247,810	698,962	970,804	311,922	19,735	-	-	-	-	153,083	6,402,318
35	Total Uses 3/01/2016 to 6/30/2019	\$ 5,702,128	\$ 958,721	\$ 1,192,173	\$ 471,698	\$ 22,802	\$ -	\$ -	\$ -	\$ -	\$ 275,192	\$ 8,622,716
36	Less: Committed Funds 3/01/2016 to 6/30/2019											
37	Future Bill Assistance	\$ 1,176,727	\$ 134,477	\$ 36,696	\$ 40,212	\$ 3,006	\$ -	\$ -	\$ -	\$ -	\$ 106,399	\$ 1,497,516
38	Future Arrearage Assistance	2,015,579	484,900	209,878	70,043	14,136	-	-	-	-	182,740	2,977,276
39	Total Committed Funds 3/01/2016 to 6/30/2019	\$ 3,192,306	\$ 619,377	\$ 246,574	\$ 110,255	\$ 17,142	\$ -	\$ -	\$ -	\$ -	\$ 289,138	\$ 4,474,792
40	Total Expenditures/Committed Funds	\$ 8,894,435	\$ 1,578,098	\$ 1,438,747	\$ 581,953	\$ 39,945	\$ -	\$ -	\$ -	\$ -	\$ 564,331	\$ 13,097,508
41	Uncommitted Funds as of 6/30/2019 (line 31 - line 40)	\$ 794,400	\$ 723,345	\$ 1,167,029	\$ 542,046	\$ 42,327	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 427,756	\$ 3,742,042
42	Summary of Uncommitted Funds 6/30/2019											
43	Uncommitted Conservation	\$ 355,650	\$ 322,077	\$ 347,754	\$ 161,978	\$ 17,829	\$ 1,549	\$ 5,641	\$ 3,063	\$ 14,500	\$ 191,505	\$ 1,421,547
44	Uncommitted Assistance	438,750	401,268	819,275	380,068	24,498	2,862	11,131	6,392	-	236,251	2,320,495
45	Total Uncommitted Funds as of 6/30/2019	\$ 794,400	\$ 723,345	\$ 1,167,029	\$ 542,046	\$ 42,327	\$ 4,411	\$ 16,772	\$ 9,455	\$ 14,500	\$ 427,756	\$ 3,742,042

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

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

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

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

Wayne Metro Reallocation Recommendations

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

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

Table 4 – Proposed WRAP Reallocation

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

Budget Impact: None

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the Wayne Metro recommendation to 1) approve the reallocation of the uncommitted FY 2019 assistance funds of \$1,680,580; \$690,100 to Detroit and \$371,562 to Flint for direct assistance, \$359,761 to Community Outreach to increase program participation in suburban communities and with the remaining \$259,157 transferred to conservation funding 2) approve the reallocation of the uncommitted FY 2019 conservation funds in the amount of \$333,336 together with the \$259,157 transferred funds from FY 2019 uncommitted assistance funds together totaling \$592,493 be reallocated to Detroit in the amount of \$492,493 and to Flint in the amount of \$100,000.



Wayne Metropolitan
Community Action Agency
Established 1971



LHSA
A Community Action Agency



January 10, 2020

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

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

Dear GLWA Board of Directors and Sue McCormick,

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

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

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

We respectfully request that GLWA Board of Directors:

1. **Approve a WRAP funding reallocation as follows:**
 - a. **Direct Assistance (\$1,680,580)**
 - i. **City of Detroit New Enrollments: \$690,100**
 - ii. **Genesee County (Flint) New Enrollments: \$ 371,562**
 - iii. **Outreach – Oakland, Macomb & Others: \$359,761**
 - iv. **Conservation: \$259,157**
 - b. **Conservation- (Including Reallocated Direct Assistance) (\$592,493):**
 - i. **City of Detroit: Conservation: \$ 492,493**
 - ii. **Genesee county (Flint): Conservation: \$100,000**

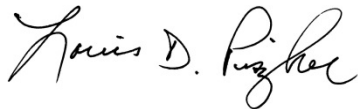
In advocating for this reallocation, it is worth noting:

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

Please find attached:

1. A funding allocation request table

Sincerely,

A handwritten signature in black ink, reading "Louis D. Piszker". The signature is fluid and cursive, with the first name "Louis" and last name "Piszker" clearly legible.

Louis D. Piszker, CEO
Wayne Metro CAA



WRAP Program Update & Request for Reallocation

January 17, 2020



Mission & Vision

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



Enrollments & Participation

As of October 31, 2019

- **19,000 enrolled, 12,000+ are Detroiters**
- **74% community participation rate achieved**
 - 76 of 103 eligible municipalities are opted in.
 - ✓ 10 opted out
 - ✓ 3 Pending
- **\$ 18.7 M total funding committed**
 - \$14.2M GLWA Funding
 - \$4.5M Supplemental Funding



Program Updates



WRAP Program Design Updates

Direct Assistance

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



WRAP Program Design Updates

Program Supplies

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

Outreach

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



WRAP Program Updates

Access to Services

- Soft launch
✓ November 2019
- Full implementation
✓ February 2020

Coming Soon...
WRAP APP

NEW Online Application

- 10 min to apply and upload docs
- 30 min approval process



Winning WRAP Team



Ms. Taneka Hicks



Temeko Manica
Direct Service Specialist

FY 2019 Reallocation Request



Previously Reallocated Funds

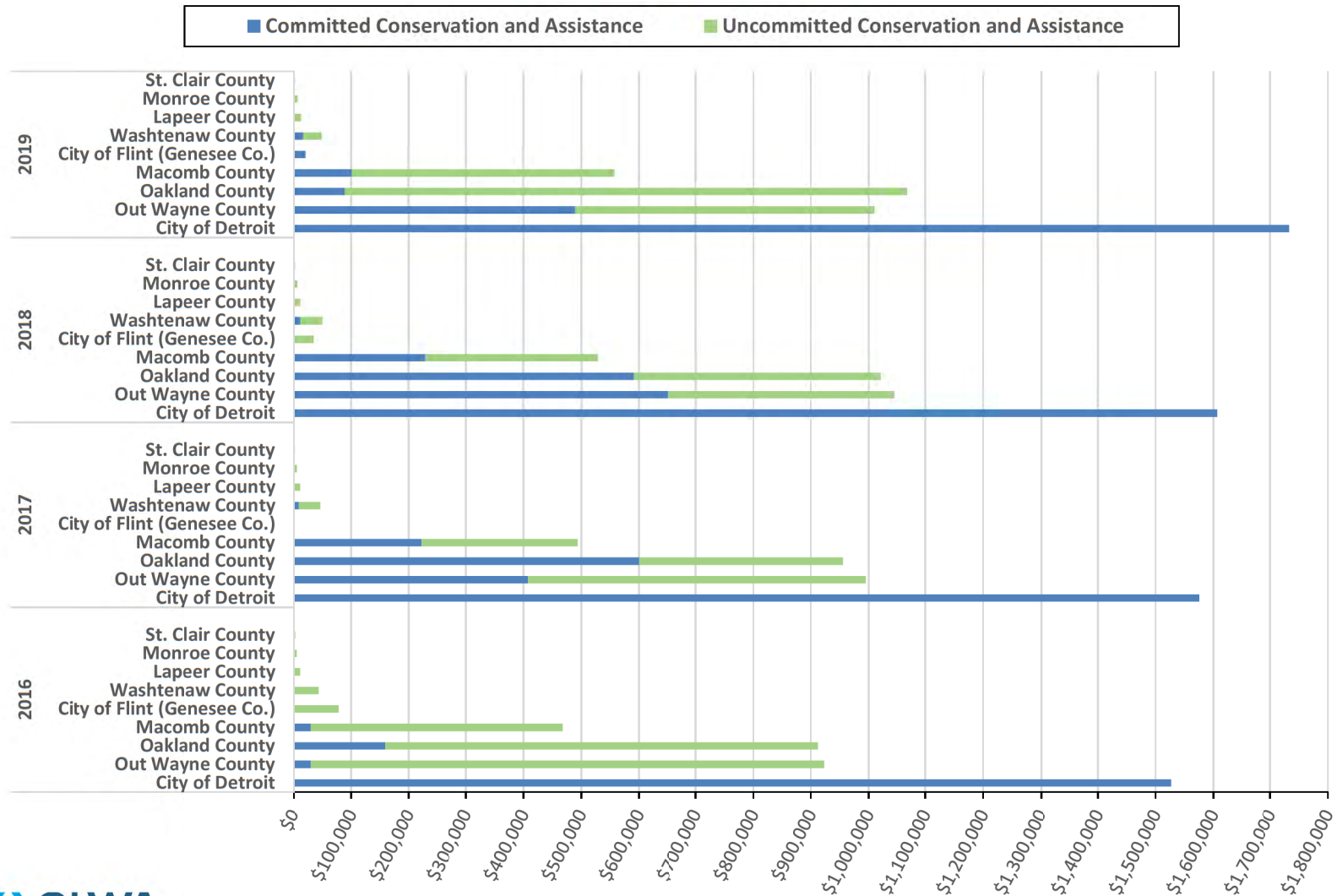
FY 2016 to FY 2018

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



Commitment Trends

FY 2016 to FY 2019



FY 2019 WRAP Commitments

July 1, 2018 to June 30, 2019

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

Reallocation Request

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

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

TOTAL: \$2,013,916



FY 2019 WRAP

Reallocation Request

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

FY 2020 WRAP Commitments

As of October 31, 2019

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

Questions?



GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

October 2019

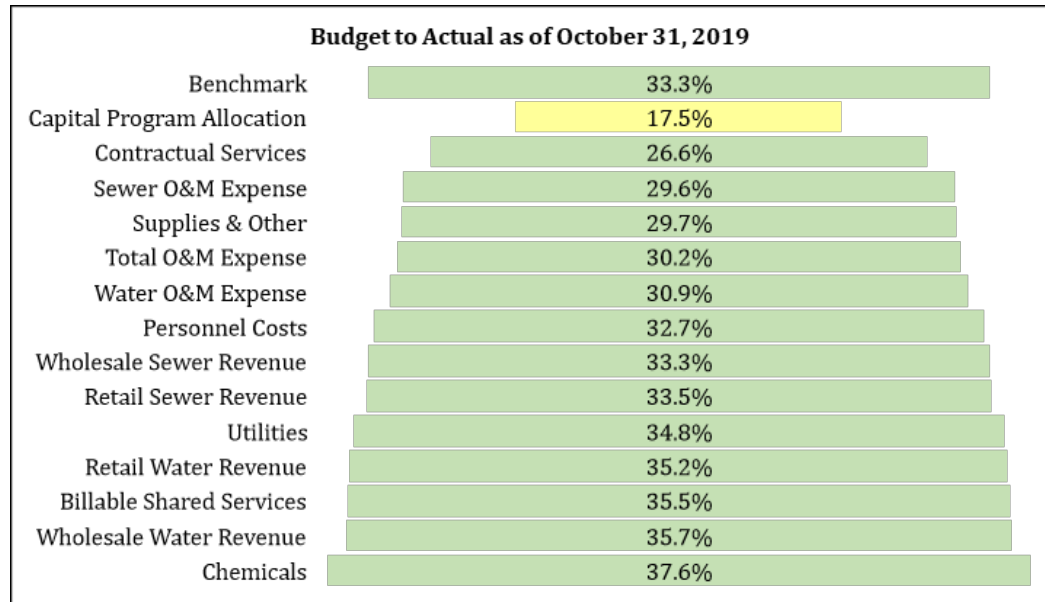
**Presented to the
Great Lakes Water Authority
Audit Committee on January 17, 2020**

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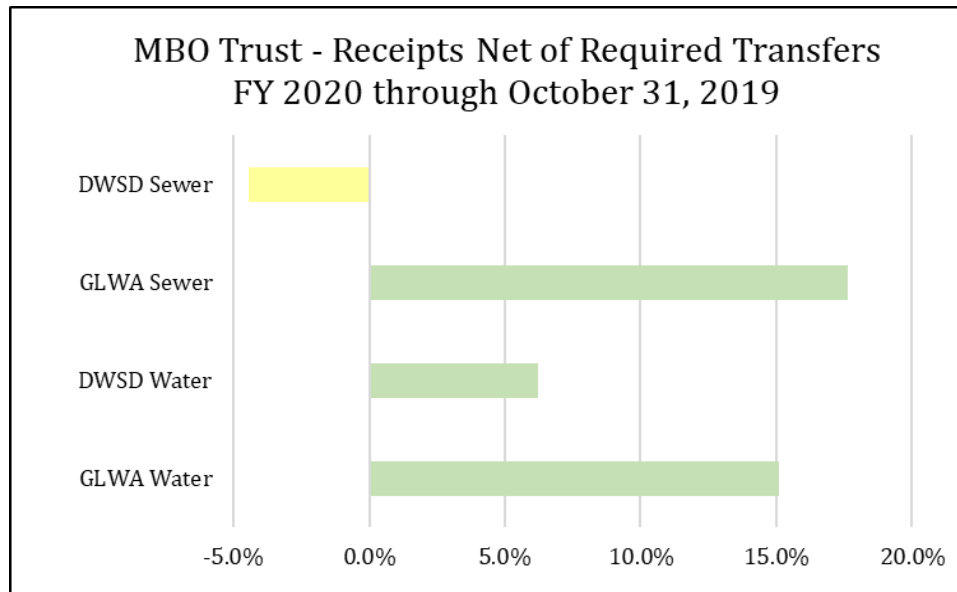
Revenue and Expense Budget to Actual¹ – Pro-rata Benchmark of 33.3%

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 cash flows also report positive net cash receipts through October. DWSD Sewer reported positive cash flows of \$2.2 million reducing the cumulative FY 2020 DWSD Sewer shortfall to \$4.1 million. Looking ahead, DWSD proactively addressed the FY 2020 Sewer shortfall in December 2019 with an Operations & Maintenance transfer back to the Sewer Receiving Fund of \$2.6 million and budgeted, monthly Operations & Maintenance transfer reductions of \$1 million.

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 October 2019, the pro-rata benchmark is 33.3% (4 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 30.9%. The *sewer* system O&M expenses, at 29.6%, 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 30.7%; while the *sewer* system is at 31.8%. 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 October 31, 2018, of \$2.6 million (FY 2019 ended with a small surplus). In order to achieve the goal of positive, net cash flows for FY 2019, DWSD reduced its *sewer* system O&M transfers in May and June. The transfers reduced were \$5,676,792 each for a total of \$11,353,584. For FY 2020, the DWSD *water* system has budgetary surplus of \$2.2 million and the DWSD *sewer* system has a budgetary shortfall of \$4.1 million through October 31, 2019.
7. **Improvement & Extension (I&E) Fund Transfer Pending:** The contribution to the I&E Fund is for improvements, enlargements, extensions or betterment of the Water System. Transfers to the I&E Fund from net revenues typically occur later in the year or after year end close when final net revenue is validated.
8. **Other Revenue Requirements:** The remaining revenue requirements for *both* systems are funded on a 1/12th basis each month in accordance with the Master Bond Ordinance.
9. **Overall:** Total revenue requirements for *both* systems are in line with the benchmark.

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

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

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

	FY2019 AMENDED BUDGET	FY 2019 THRU 10/31/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 10/31/2019	Percent Year-to- Date
Water System							
Revenues							
Wholesale Customer Charges	\$ 307,383	\$ 113,914	37.1%	\$ 309,285	\$ 309,285	\$ 110,973	35.9%
Retail Services Agreement	20,181	6,775	33.6%	21,296	21,296	7,099	33.3%
Investment Earnings	9,425	2,952	31.3%	9,084	9,084	1,584	17.4%
Other Revenues	-	17	0.0%	-	-	-	0.0%
Total Revenues	\$ 336,989	\$ 123,658	36.7%	\$ 339,664	\$ 339,664	\$ 119,656	35.2%
Revenue Requirements							
Operations & Maintenance Expense	\$ 121,563	\$ 46,460	38.2%	\$ 131,491	\$ 131,491	\$ 40,680	30.9%
O&M Legacy Pension	6,048	2,016	33.3%	6,048	6,048	2,016	33.3%
Debt Service	131,242	44,493	33.9%	137,558	137,558	42,259	30.7%
Accelerated Legacy Pension	6,268	2,089	33.3%	6,268	6,268	2,089	33.3%
Extraordinary Repair & Replacement							
Deposit	-	-	0.0%	-	-	-	0.0%
Lease Payment	22,500	7,500	33.3%	22,500	22,500	7,500	33.3%
Operating Reserve Deposit	-	-	0.0%	3,976	3,976	1,325	0.0%
Water Residential Assistance Program	1,673	558	33.3%	1,698	1,698	566	33.3%
Improvement & Extension Fund							
Transfer Pending	47,695	15,898	33.3%	30,126	30,126	10,042	33.3%
Total Revenue Requirements	\$ 336,989	\$ 119,014	35.3%	\$ 339,664	\$ 339,664	\$ 106,478	31.3%
Net Difference		\$ 4,644				\$ 13,178	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 11,328				\$ 6,434	
Revenue Requirement Variance		(6,685)				6,743	
Overall Variance		\$ 4,644				\$ 13,178	

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

	FY 2019 AMENDED BUDGET	FY 2019 THRU 10/31/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 THRU 10/31/2019	Percent Year-to- Date
Sewer System							
Revenues							
Wholesale Customer Charges	\$ 271,296	\$ 91,651	33.8%	\$ 272,324	\$ 272,324	\$ 91,530	33.6%
Retail Services Agreement	181,159	61,003	33.7%	185,807	185,807	61,936	33.3%
Industrial Waste Control Charges	15,001	3,112	20.7%	13,744	13,744	2,795	20.3%
Pollutant Surcharges	-	2,067	0.0%	-	-	2,140	0.0%
Investment Earnings	6,879	3,035	44.1%	8,731	8,731	2,584	29.6%
Other Revenues	-	176	0.0%	-	-	178	0.0%
Total Revenues	\$ 474,335	\$ 161,044	34.0%	\$ 480,605	\$ 480,605	\$ 161,163	33.5%
Revenue Requirements							
Operations & Maintenance Expense	\$ 191,079	\$ 50,265	26.3%	\$ 187,057	\$ 187,057	\$ 55,449	29.6%
O&M Legacy Pension	10,824	3,608	33.3%	10,824	10,824	3,608	33.3%
Debt Service	208,389	68,938	33.1%	215,739	215,739	68,669	31.8%
Accelerated Legacy Pension	11,621	3,874	33.3%	11,621	11,621	3,874	33.3%
Extraordinary Repair & Replacement							
Deposit	-	-	0.0%	-	-	-	0.0%
Lease Payment	27,500	9,167	33.3%	27,500	27,500	9,167	33.3%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program	2,374	791	33.3%	2,403	2,403	801	33.3%
DWSD Budget Shortfall Pending	-	(2,628)	0.0%	-	-	4,105	0.0%
Improvement & Extension Fund							
Transfer Pending	22,548	7,516	33.3%	25,462	25,462	8,487	33.3%
Total Revenue Requirements	\$ 474,335	\$ 141,530	29.8%	\$ 480,605	\$ 480,605	\$ 154,159	32.1%
Net Difference		\$ 19,514				\$ 7,003	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 2,932				\$ 961	
Revenue Requirement Variance		16,582				6,042	
Overall Variance		\$ 19,514				\$ 7,003	

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of October 31, 2019, is 33.3% (four 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 AMENDED BUDGET	FY 2019 ACTIVITY THRU 10/31/2018	Percent Year-to- Date	FY 2020 BOARD ADOPTED BUDGET	FY 2020 AMENDED BUDGET	FY 2020 ACTIVITY THRU 10/31/2019	Percent Year-to- Date
Water	\$ 66,596	\$ 23,481	35.3%	\$ 66,021	\$ 66,021	\$ 21,297	32.3%
Sewer	118,319	37,141	31.4%	115,985	115,985	34,882	30.1%
Centralized	99,045	28,991	29.3%	106,914	106,914	30,840	28.8%
Administrative	28,683	8,216	28.6%	29,628	29,628	9,301	31.4%
Employee Benefits	-	(1,104)	0.0%	-	-	(191)	0.0%
Total O&M Budget	\$ 312,642	\$ 96,725	30.9%	\$ 318,548	\$ 318,548	\$ 96,129	30.2%

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 30.2% which is reasonably within the pro-rata benchmark of 33.3%. This positive variance equates to a dollar amount of \$10.1 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 32.7% through October 2019.

Utilities: The overall category is higher than the benchmark; coming in at 34.8% through October 2019. This variance is not unexpected as usage varies throughout the year. Electric is higher than the benchmark; coming in at 38.7%. This increase is primarily due to the pumps being required to run longer than normal as a result of the wet weather that Michigan has been experiencing. Both gas and water service are lower than the benchmark; coming in at 19.8% (gas) and 23.4% (water service). 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 37.6% through October 2019. While variances in this category are not unexpected as usage varies throughout the year, the variance for October 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 29.7% through October 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 26.6% through October 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 17.5% through October 2019. A review of this category is being conducted.

Shared Services: This category is slightly higher than the benchmark; coming in at 35.5% through October 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	FY 2019 AMENDED	FY 2019 ACTIVITY	Percent Year-to-Date	FY 2019 ACTIVITY	Percent Year-to-Date	FY 2020 AMENDED	FY 2020 PRORATED	FY 2020 ACTIVITY	Percent Year-to-Date	PRORATED BUDGET
Entity-wide	BUDGET	THRU 10/31/2018	at 10/31/2018	THRU 6/30/2019	at 6/30/2019	BUDGET	AMENDED BUDGET (4 MONTHS)	THRU 10/31/2019		LESS FY 2020 ACTIVITY
Salaries & Wages	\$ 63,631	\$ 19,696	31.0%	\$ 59,922	32.9%	\$ 68,301	\$ 22,767	\$ 21,588	31.6%	\$ 1,179
Workforce Development	751	240	32.0%	794	30.3%	1,014	338	295	29.1%	43
Overtime	7,612	2,471	32.5%	7,554	32.7%	6,140	2,047	2,502	40.7%	(455)
Employee Benefits	23,656	8,391	35.5%	21,998	38.1%	23,005	7,668	8,481	36.9%	(813)
Transition Services	8,572	3,103	36.2%	8,322	37.3%	6,630	2,210	1,682	25.4%	528
Employee Benefits Fund	-	(1,104)	0.0%	-	0.0%	-	-	(191)	0.0%	191
Personnel Costs	104,221	32,797	31.5%	98,589	33.3%	105,091	35,030	34,357	32.7%	673
Electric	39,019	14,316	36.7%	39,103	36.6%	38,386	12,795	14,845	38.7%	(2,049)
Gas	6,631	1,722	26.0%	6,568	26.2%	6,444	2,148	1,275	19.8%	873
Sewage Service	2,491	668	26.8%	2,094	31.9%	1,847	616	631	34.2%	(15)
Water Service	3,648	1,492	40.9%	3,631	41.1%	4,658	1,553	1,091	23.4%	461
Utilities	51,789	18,199	35.1%	51,396	35.4%	51,334	17,111	17,842	34.8%	(731)
Chemicals	13,385	4,675	34.9%	13,276	35.2%	13,899	4,633	5,222	37.6%	(589)
Supplies & Other	36,226	8,547	23.6%	37,121	23.0%	36,392	12,131	10,824	29.7%	1,307
Contractual Services	100,856	35,524	35.2%	101,873	34.9%	115,307	38,436	30,614	26.6%	7,822
Capital Program Allocation	(3,356)	(550)	16.4%	(3,381)	16.3%	(5,414)	(1,805)	(946)	17.5%	(859)
Shared Services	(9,005)	(2,466)	27.4%	(7,139)	34.5%	(5,025)	(1,675)	(1,784)	35.5%	109
Unallocated Reserve	18,524	-	0.0%	-	0.0%	6,965	2,322	-	0.0%	2,322
Total Expenses	\$ 312,642	\$ 96,725	30.9%	\$ 291,734	33.2%	\$ 318,548	\$ 106,183	\$ 96,129	30.2%	\$ 10,054

The Basic Financial Statements report includes the following four tables.

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

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

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

Statement of Net Position – All Funds Combined

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

Table 1 – Statement of Net Position - All Funds Combined
As of October 31, 2019
(\$000)

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2019
Assets				
Cash (a)	\$ 156,637	\$ 198,035	\$ 354,672	\$ 571,015
Investments (a)	393,058	294,126	687,185	460,078
Accounts Receivable	92,155	78,340	170,495	208,914
Due from (to) Other Funds (b)	(809)	809	-	2,890
Other Assets (c)	594,014	450,824	1,044,838	1,046,518
Cash Held FBO DWSD Advance (d)	-	3,483	3,483	
Capital Assets, net of Depreciation	1,345,664	2,305,535	3,651,199	3,747,784
Construction Work in Process (e)	485,945	337,261	823,206	786,405
Total assets	3,066,664	3,668,412	6,735,077	6,823,603
Deferred Outflows (f)	92,493	176,375	268,867	273,596
Liabilities				
Liabilities - Short-Term (g)	135,296	171,940	307,236	321,270
Due to (from) Other Funds (b)	-	-	-	2,890
Other Liabilities (h)	2,799	6,347	9,145	9,097
Cash Held FBO DWSD (d)	4,360	-	4,360	2,807
Liabilities - Long-Term (i)	3,031,671	3,739,147	6,770,819	6,853,419
Total liabilities	3,174,126	3,917,434	7,091,560	7,189,483
Deferred Inflows (f)	59,047	47,114	106,161	108,541
Total net position (j)	\$ (74,016)	\$ (119,760)	\$ (193,776)	\$ (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 October 31, 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 October 31, 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 October 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 October 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 Four Months ended October 31, 2019
(\$000)**

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- type Activities	Comparative June 30, 2019
Revenue						
Wholesale customer charges	\$ 113,191	94.1%	\$ 91,530	57.7%	\$ 204,721	\$ 584,172
Local system charges	7,099	5.9%	61,936	39.1%	69,034	201,341
Industrial waste charges	-	0.0%	2,795	1.8%	2,795	9,106
Pollutant surcharges	-	0.0%	2,140	1.3%	2,140	5,933
Other revenues		0.0%	178	0.1%	178	528
Total Revenues	\$ 120,290	100%	\$ 158,579	100%	\$ 278,868	\$ 801,079
Operating expenses						
Operations and Maintenance	40,819	33.9%	55,987	35.3%	96,806	293,863
Depreciation	45,330	37.7%	53,694	33.9%	99,024	309,115
Total operating expenses	86,148	71.6%	109,682	69.2%	195,830	602,978
Operating income	34,141	28.4%	48,897	30.8%	83,038	198,101
Total Nonoperating (revenue) expense	31,275	26.0%	44,715	28.2%	75,990	220,170
Increase/(Decrease) in Net Position	2,866	2.4%	4,182	2.6%	7,048	(22,070)
Net position (deficit), beginning of year	(76,882)		(123,943)		(200,825)	(178,755)
Net position (deficit), end of year	\$ (74,016)		\$ (119,760)		\$ (193,776)	\$ (200,825)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is \$2.8 million.
- ✓ Wholesale water customer charges of \$113.1 million account for 94.1% of Water System revenues.
- ✓ Operating expenses of \$86.1 million represent 71.6% of total operating revenue. Depreciation is the largest operating expense at \$45.3 million or 52.6% of operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$34.1 million or 28.4% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$29.7 million (this equates to the bonded debt interest expense less the offset from DWSD contractual obligation income).

Sewage Disposal Fund

- ✓ The increase in the Sewage Disposal Fund Net Position is \$4.1 million.
- ✓ Wholesale customer charges of \$91.5 million account for 57.7% 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 \$61.9 million account for 39.1% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$109.7 million represent 69.2% of total operating revenue. Depreciation is the largest operating expense at \$53.7 million or 49.0% of total operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$48.9 million or 30.8% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$38.8 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 October 2019 Financial Report Binder. Explanatory notes follow this schedule.

**Table 3 – Supplemental Schedule of Operations & Maintenance Expenses
– All Funds Combined
For the Four Months ended October 31, 2019
(\$000)**

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- type Activities	Percent of Total
Operating expenses						
Personnel						
Salaries & Wages	8,210	20.1%	15,356	27.4%	23,565	24.3%
Overtime	1,526	3.7%	976	1.7%	2,501	2.6%
Benefits	5,187	12.7%	3,104	5.5%	8,290	8.6%
Total Personnel	\$ 14,922	36.6%	\$ 19,435	34.7%	\$ 34,357	35.5%
Utilities						
Electric	9,897	24.2%	4,947	8.8%	14,845	15.3%
Gas	80	0.2%	1,196	2.1%	1,275	1.3%
Sewage	100	0.2%	531	0.9%	631	0.7%
Water		0.0%	1,090	1.9%	1,091	1.1%
Total Utilities	\$ 10,077	24.7%	\$ 7,765	13.9%	\$ 17,842	18.4%
Chemicals	2,014	4.9%	3,207	5.7%	5,222	5.4%
Supplies and other	3,790	9.3%	7,034	12.6%	10,824	11.2%
Contractual services	12,275	30.1%	19,016	34.0%	31,292	32.3%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(587)	-1.4%	(359)	-0.6%	(946)	-1.0%
Shared services allocation	(1,673)	-4.1%	(111)	-0.2%	(1,784)	-1.8%
Operations and Maintenance Expenses	\$ 40,819	100.0%	\$ 55,987	100.0%	\$ 96,806	100.0%

Totals may be off due to rounding.

- ✓ Core expenses for water and sewage disposal systems are utilities (18.4% of total O&M expenses) and chemicals (5.4%).
- ✓ Personnel costs (35.5% 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 (32.3%) includes:
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$5.0 million); and
 - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenance, field, planning and other services.

Supplemental Schedule of Nonoperating Expenses – All Funds Combined

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

**Table 4 – Supplemental Schedule of Nonoperating Expenses – All Funds Combined
For the Four Months ended October 31, 2019
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2019
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (7,449)	\$ (6,064)	\$ (13,514)	\$ (40,673)
Interest income DWSD Shortfall	-	(505)	(505)	(1,104)
Investment earnings	(2,139)	(2,628)	(4,768)	(26,518)
Other nonoperating revenue	(7)	(4)	(12)	(420)
Interest expense				-
Bonded debt	37,168	44,853	82,021	250,966
Lease obligation	5,844	7,143	12,988	39,264
Other obligations	1,622	524	2,146	6,368
Total interest expense	44,634	52,520	97,154	296,597
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	6,527
Capital Contribution	-	-	-	-
Amortization, issuance costs, debt	(5,368)	618	(4,751)	(3,995)
Amortization, raw water rights	1,189	-	1,189	3,567
(Gain) loss on disposal of capital assets	(1)	204	203	(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	\$ 31,275	\$ 44,715	\$ 75,990	\$ 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:

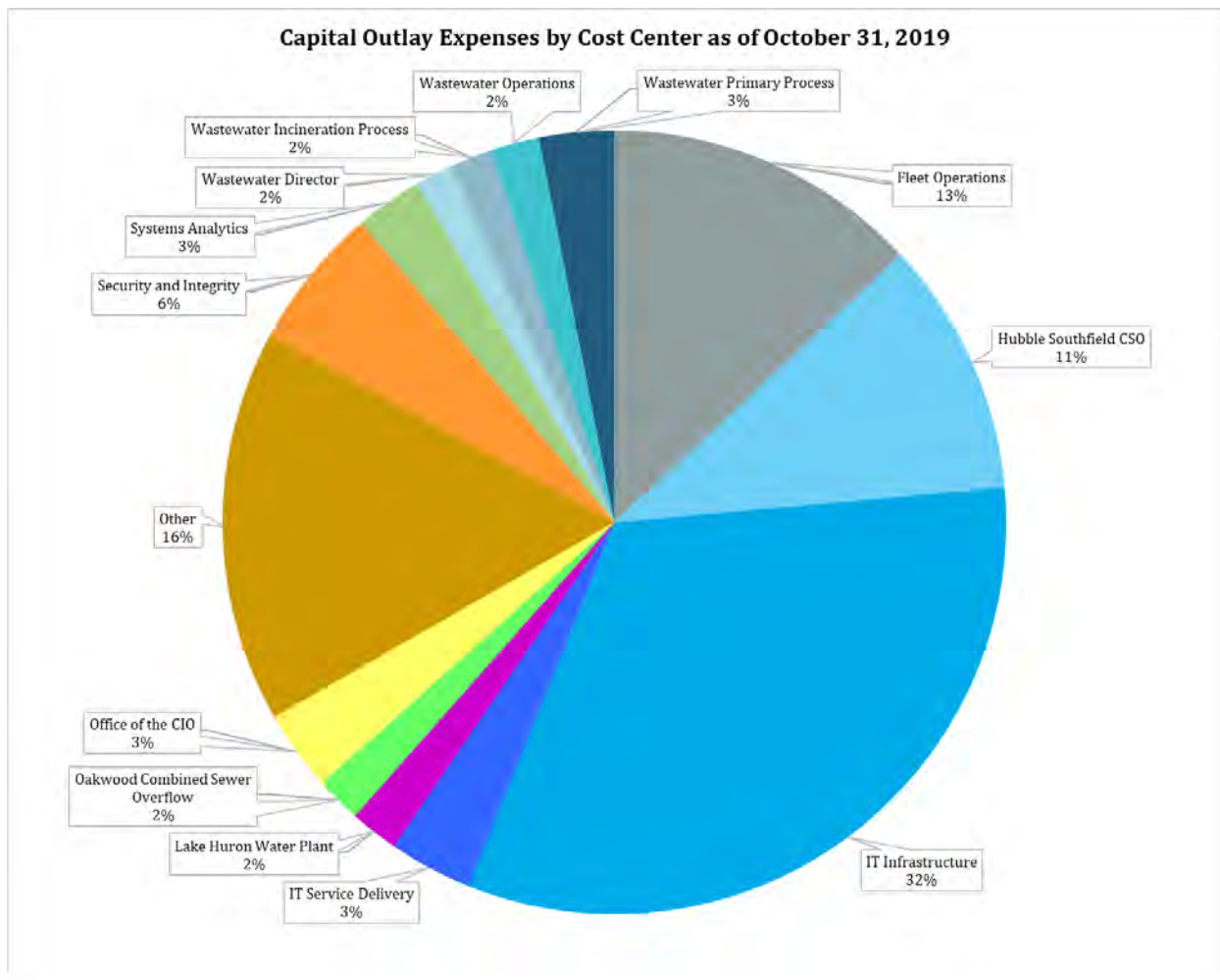
- ✓ Legacy Pension expense is reflected as income due to changes in actuarial assumptions and rates from the June 30, 2018 City of Detroit General Retirement System Component II audited financial statement.
- ✓ Sewer Other Non-operating expense includes the 2018 MOU Item 8a from June 27, 2018 for a final 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 October 31, 2019, total capital outlay spend is \$5.1 million. Following this chart is a sample list of projects and purchases from the total spend of \$5.1 million:



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

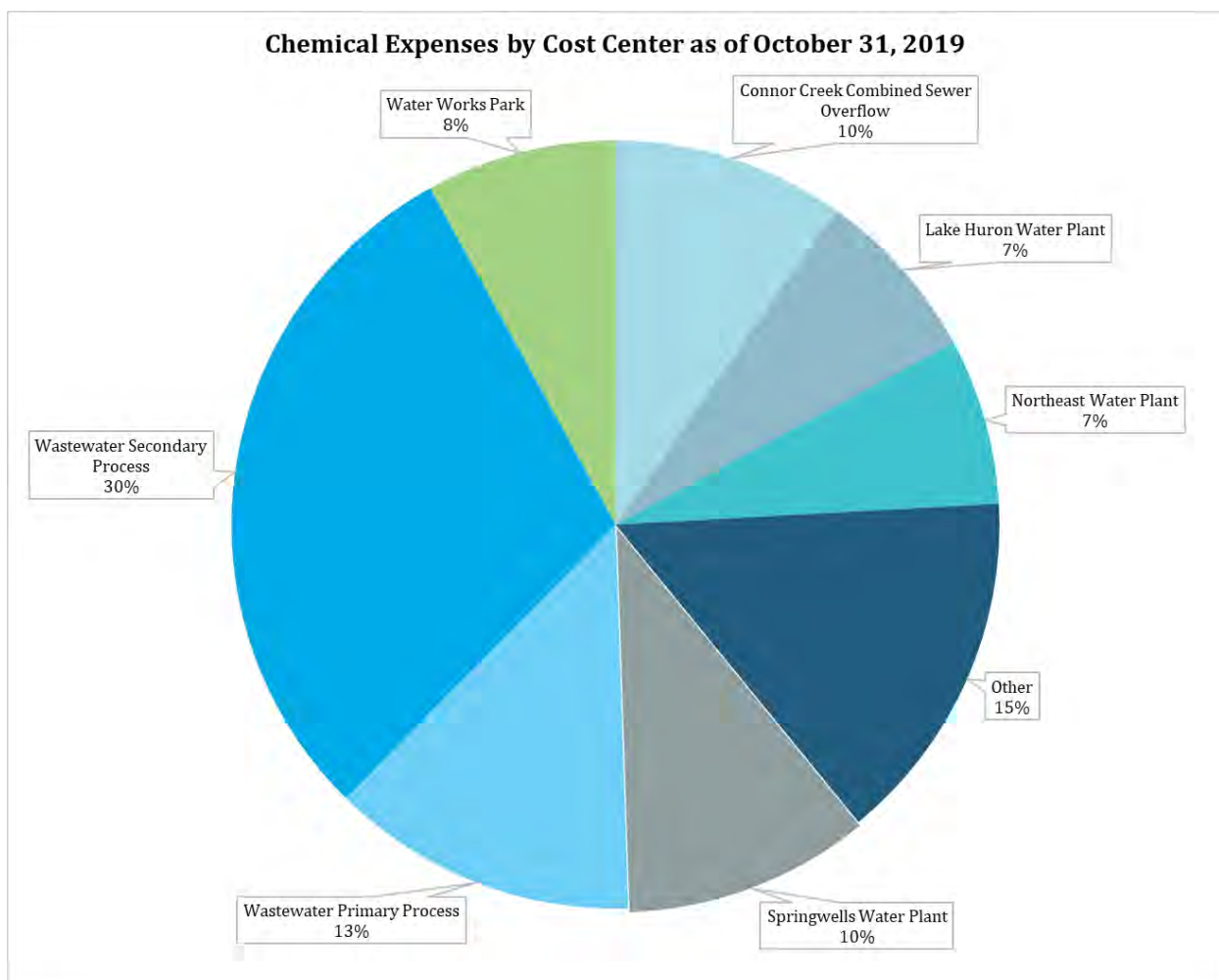
Water Operations: Trucks (225k); Skid steer loader (\$44k) under ‘other’ for the Southwest Water Plant and Seepex Cavity Pump (\$36k) at Lake Huron Water Plant.

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

Centralized & Administrative Facilities: Low voltage wiring services (\$1.3m); trucks and vehicles (\$444k); security infrastructure improvements (\$303k); IT software (\$227k); IT & 17th floor renovation and furniture (\$153k); Transmitters (\$72k); Sewer meter support (\$66k); 2nd Floor furniture at CSF (\$49k); IT Premium hardware support (\$50k); IT computers (\$40k); 'Other' category expenses include: Furniture for Water Quality team (\$36k); bathroom renovation (\$65k) for the Logistics and Materials team and IT monitors, computers, etc. (\$59k).

Chart 2 – Chemical Spend – Water and Sewer System Combined

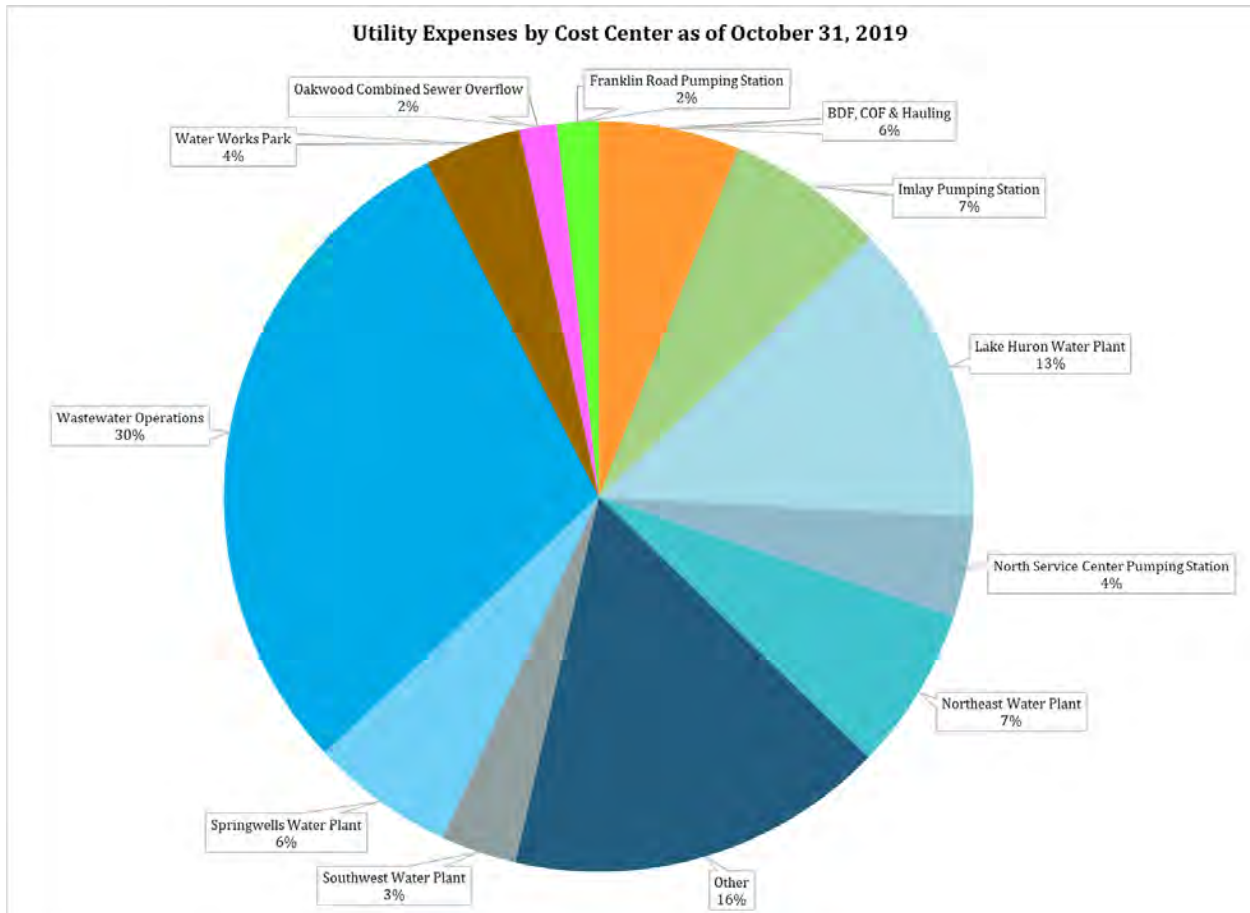
Chemical spend is \$5.2 million through October 31, 2019. The allocation is shown in the chart below and remains consistent with prior periods.



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 \$17.8 million through October 31, 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 September 2019.

Chart 1 – Bank Reconciliation Completion Status

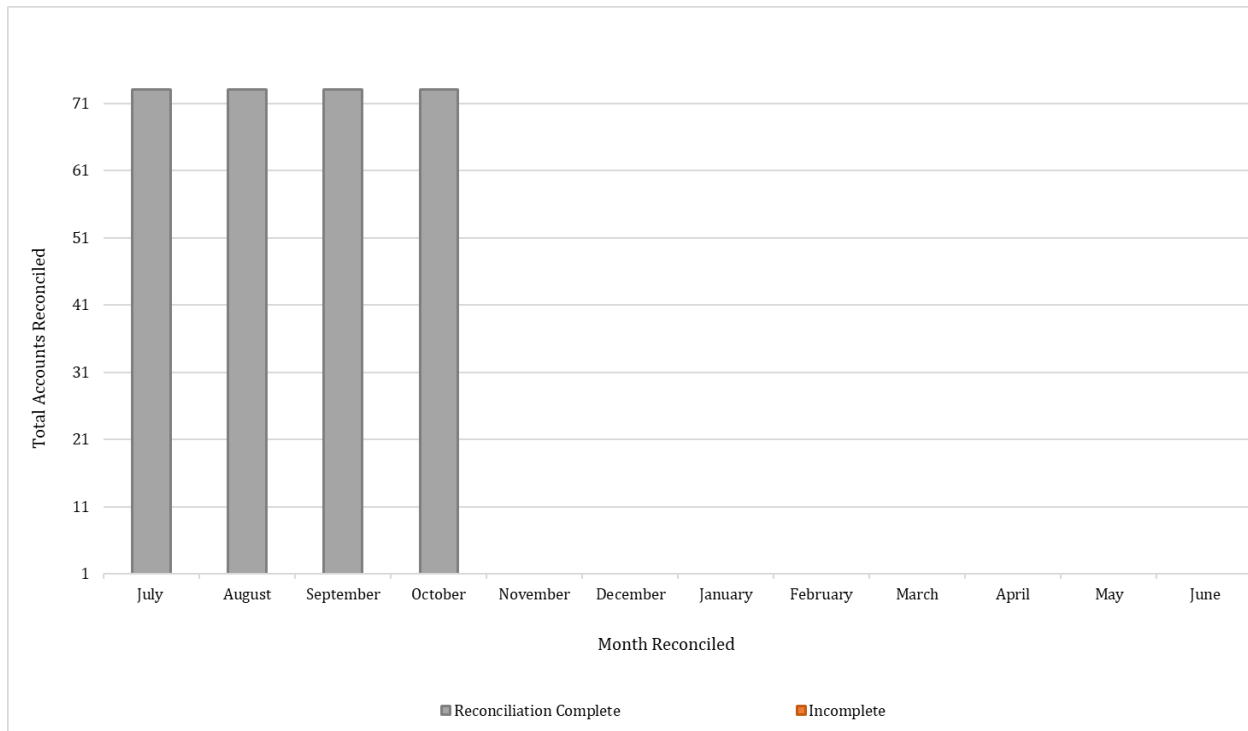


Table 1 – Fiscal Year 2020 GL Cash Account Rollforward

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 October 31, 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 Four Months Ended October 31, 2019

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 13,178	\$ 7,003	\$ 20,181
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	3,814	6,825	10,639
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	12,540	29,880	42,420
Accelerated pension B&C notes obligation portion (g)	59	132	191
Lease payment (h)	1,656	2,024	3,680
WRAP (i)	148	226	374
DWSD short term allocation (j)	-	4,105	4,105
Improvement & Extension Fund (j)	11,229	7,948	19,177
Nonbudgeted financial reporting categories adjustments			
Depreciation (k)	(45,330)	(53,694)	(99,024)
Amortization (k)	4,179	(618)	3,561
Other nonoperating income (k)	7	5	12
Other nonoperating expense (k)	-	-	-
Gain(loss) on disposal of capital assets (k)	1	(204)	(203)
Raw water rights (l)	829	-	829
Investment earnings construction fund (m)	556	550	1,106
Net Position Increase/(Decrease) per Financial Statements (b)	\$ 2,866	\$ 4,182	\$ 7,048

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 \$539 thousand in Sewer Improvement and Extension Fund expenses relating to repairs paid for through the Sewer Improvement and Extension Fund. The Water Improvement and Extension Fund also reflects \$138

thousand in Water Improvement and Extension expenses relating to repairs paid for through the Water Improvement and Extension Fund. These are consolidated expenses for financial reporting purposes but are not reflected in the current Operations and Maintenance budget expenses.

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

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

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

Construction Work in Progress

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

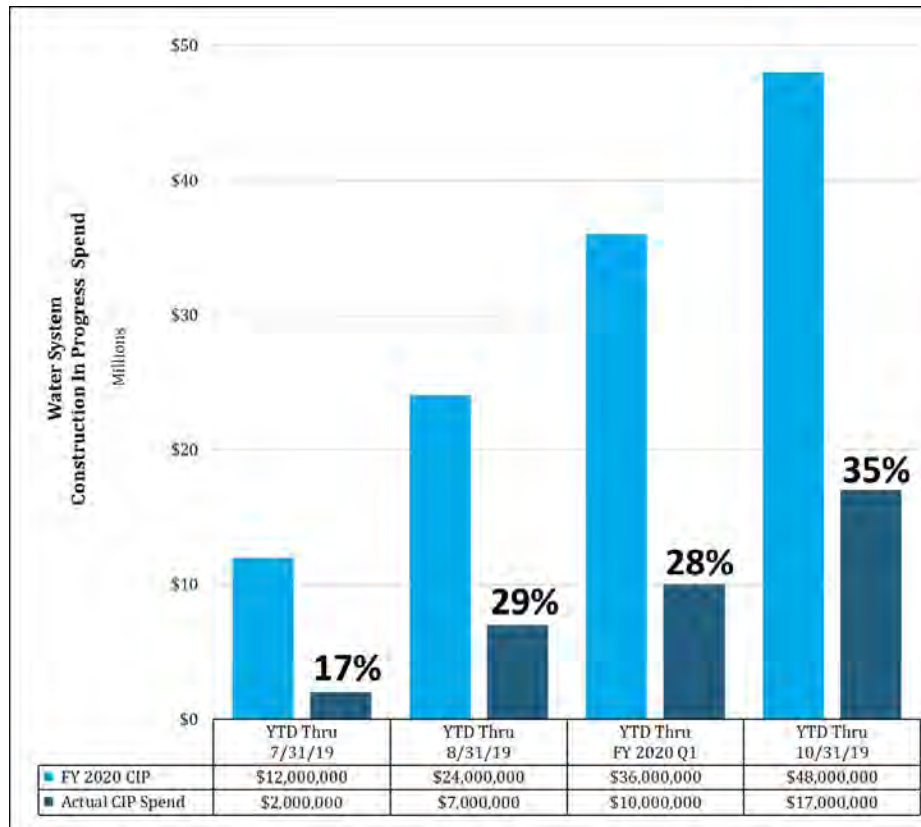
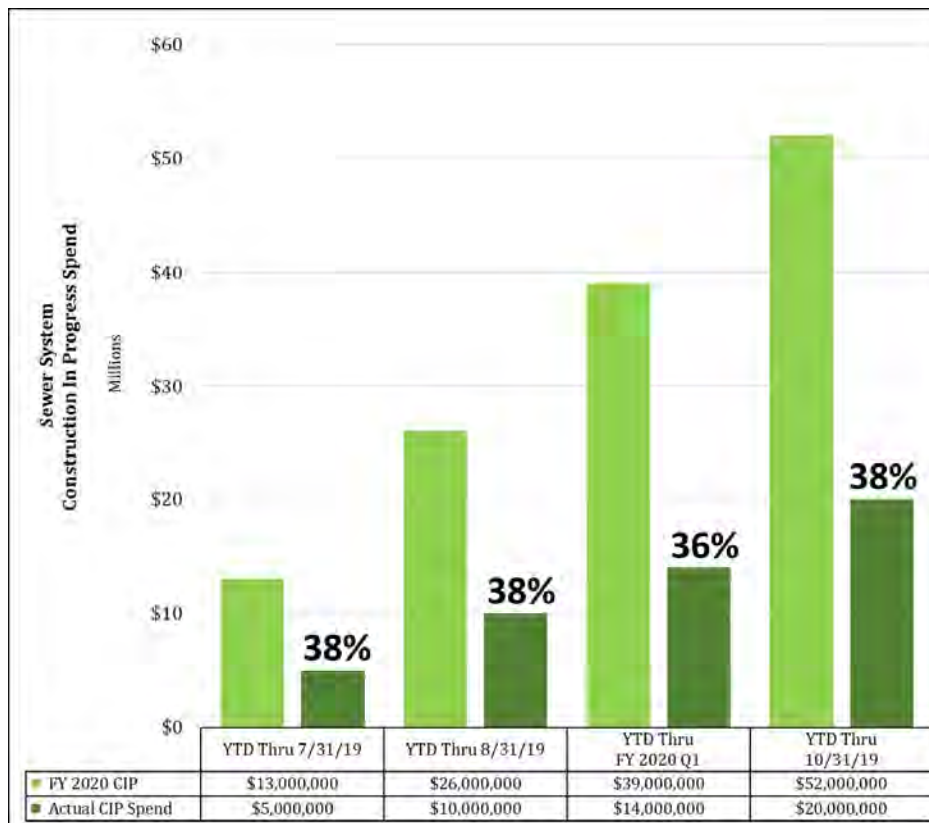
This report presents quarterly and monthly CWIP spending trends against a prorated spending plan. The prorated spending plan is calculated by dividing the total fiscal year 2020 board-approved CIP plan by twelve equal months. It should be noted that these interim reports are prepared on a modified cash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

Chart 1 – Water System Construction in Work in Progress Spend

As of October 2019, the Water system incurred over \$17 million of construction costs to date. While this is only 35% of the fiscal year 2020 prorated spending plan through October, future months are anticipated to increase closer to plan.

Chart 2 – Sewer System Construction in Work in Progress Spend

As of October 2019, the Sewer system incurred over \$20 million of construction costs to date. While this is only 38% of the fiscal year 2020 prorated spending plan through October, 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 October 1, 2019. MBO transfers for water totaling \$50.1 million have been transferred to GLWA accounts.

Table 2 – GLWA FY 2020 Sewer MBO Transfers reflects the required transfers for FY 2020 completed through October 1, 2019. MBO transfers for sewer totaling \$71.8 million have been transferred to GLWA accounts.

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

Table 1 – GLWA FY 2020 Water MBO Transfers

WATER							
	Operations & Maintenance	Pension Sub Account	Pension Obligation	WRAP	Budget Stabilization (For Benefit of 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
October 2019	10,957,542	504,000	891,308	165,067	-	-	12,517,917
Total FY 2020	\$43,830,168	\$2,016,000	\$3,565,232	\$660,268	\$0	\$0	\$50,071,668

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
October 2019	15,588,100	902,000	1,223,959	240,608	-	-	17,954,667
Total FY 2020	\$62,352,400	\$3,608,000	\$4,895,836	\$962,432	\$0	\$0	\$71,818,668

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 (4 month)	43,830,168	2,016,000	3,565,232	660,268	-	-	50,071,668
Life to Date	\$469,886,976	\$26,186,300	\$45,551,024	\$8,941,168	\$2,686,900	\$606,000	\$553,858,368
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 (4 month)	62,352,400	3,608,000	4,895,836	962,432	-	-	71,818,668
Life to Date	\$721,235,592	\$46,932,800	\$62,323,428	\$11,772,028	\$8,246,100	\$779,600	\$851,289,548

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 October 1, 2019. MBO transfers for Water totaling \$19.3 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 October 1, 2019. MBO transfers for Sewer totaling \$31.6 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. DWSD has also requested that for December 2019 – June 2020, \$1 million be withheld each month from the Operations & Maintenance transfer to address FY 2020 projected shortfall in retail revenue collections.

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

Table 4 – DWSD FY 2020 Water MBO Transfers

WATER					
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Water</u>	
FY 2020					
July 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333	\$	4,823,866
August 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333		4,823,866
September 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333		4,823,866
October 2019	\$ 2,888,533	\$ 356,000	\$ 1,579,333		4,823,866
Total FY 2020	\$ 11,554,132	\$ 1,424,000	\$ 6,317,332	\$	19,295,464

Table 5 – DWSD FY 2020 Sewer MBO Transfers

SEWER					
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Sewer</u>	
FY 2020					
July 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275	\$	7,888,900
August 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275		7,888,900
September 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275		7,888,900
October 2019	\$ 5,778,625	\$ 238,000	\$ 1,872,275		7,888,900
Total FY 2020	\$ 23,114,500	\$ 952,000	\$ 7,489,100	\$	31,555,600

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 (4 month)				
MBO/Lease Requirement	11,554,132	1,424,000	7,500,000	20,478,132
Offset to Debt Service	-	-	(1,182,668)	(1,182,668)
Net MBO Transfer	11,554,132	1,424,000	6,317,332	19,295,464
Life-to-Date				
MBO/Lease Requirement	141,880,136	18,493,100	97,500,000	257,873,236
Offset to Debt Service	-	-	(9,356,768)	(9,356,768)
Total Water	\$ 141,880,136	\$ 18,493,100	\$ 88,143,232	\$ 248,516,468
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 (4 month)				
MBO/Lease Requirement	23,114,500	952,000	9,166,667	33,233,167
Offset to Debt Service	-	-	(1,677,567)	(1,677,567)
Total MBO Transfer	23,114,500	952,000	7,489,100	31,555,600
Life-to-Date				
MBO/Lease Requirement	201,710,312	12,387,800	119,166,667	333,264,779
Offset to Debt Service	-	-	(35,250,731)	(35,250,731)
Total Sewer	\$ 201,710,312	\$ 12,387,800	\$ 83,915,936	\$ 298,014,048

* **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:

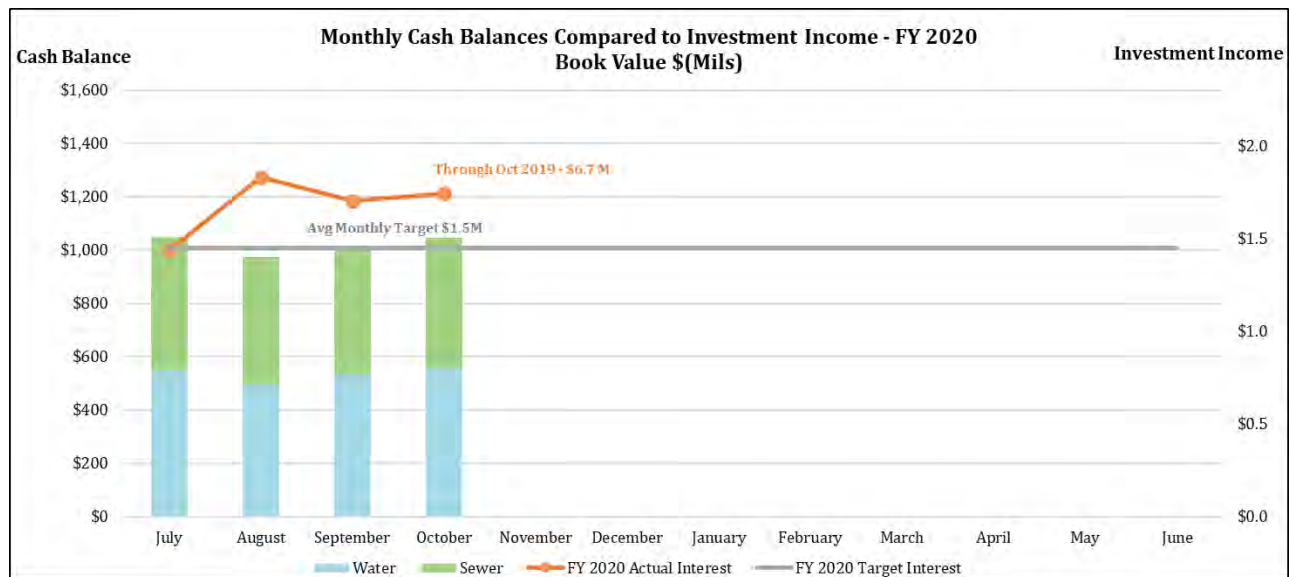
1. Monthly Cash Balances Compared to Investment Income
2. Cash Balance Detail

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 October 2019 of \$6.7 million is 39% 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 October 2019



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$549	\$494	\$536	\$555								
Sewer	\$501	\$479	\$464	\$489								
Total	\$1,050	\$973	\$1,000	\$1,044								
Investment Income	\$1.4	\$1.8	\$1.7	\$1.7								

Cash Balance Detail

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

Funds Held Within Trust:

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

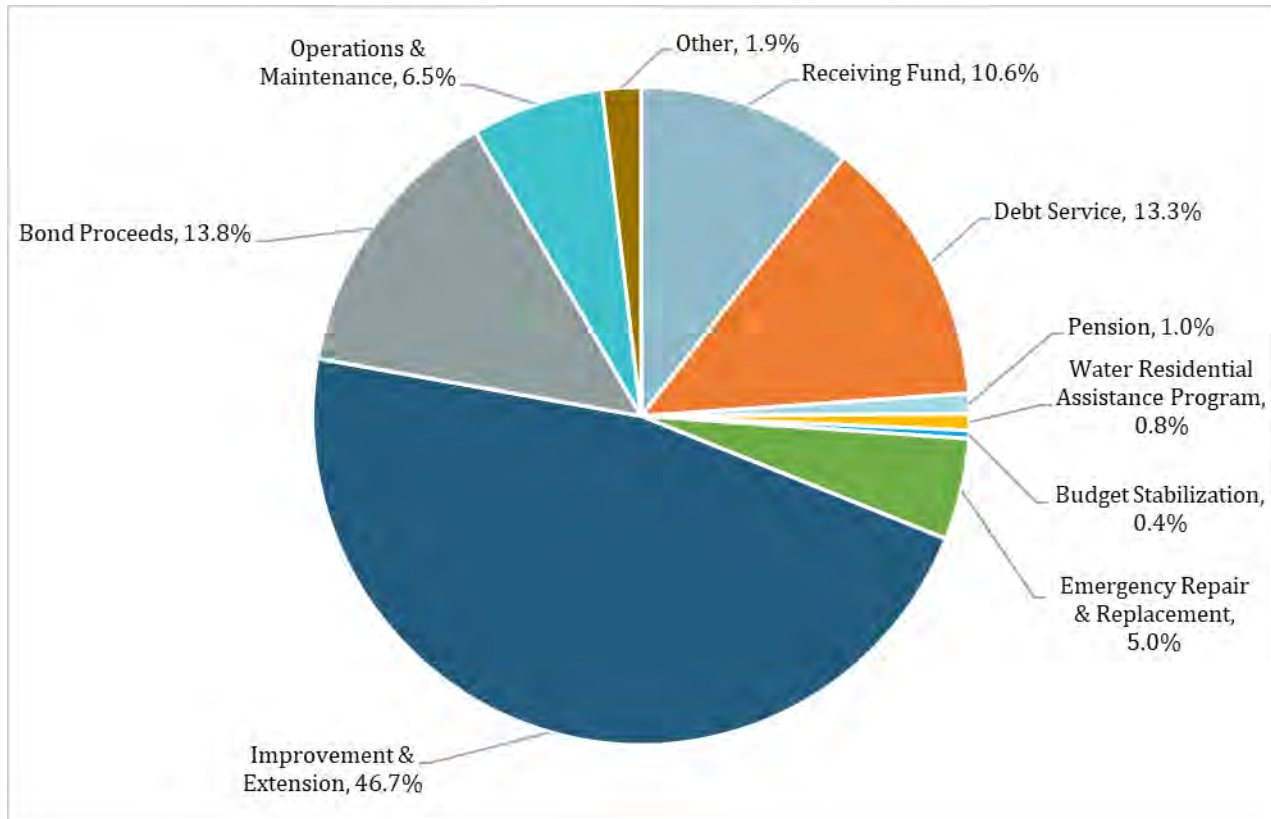
Funds Held Outside Trust:

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

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

Chart 2 – Cash Balances - Water Funds as of October 31, 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 October 31, 2019 is \$555 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 October 31, 2019

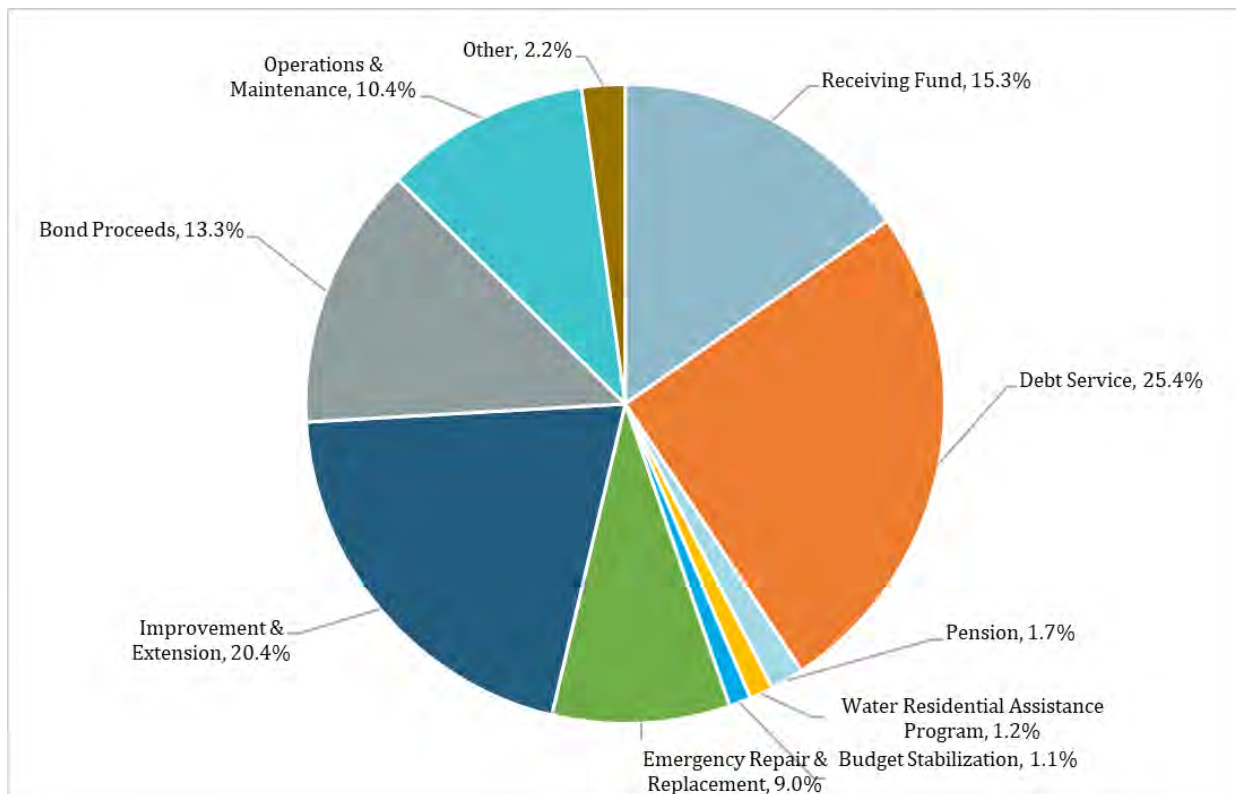


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of October 31, 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 October 31, 2019 is \$489 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 October 31, 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 October 31, 2019, the DWSD usage was at 92.50% of the budget and billed revenue was at 98.44% 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	Volume	Revenue (2)	Unit	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	286,871	9,909,302	34.54	267,054	9,670,167	36.21	(19,817)	(239,135)
August	288,810	9,698,584	33.58	259,489	9,504,240	36.63	(29,321)	(194,344)
September	246,846	9,159,992	37.11	228,961	8,767,202	38.29	(17,885)	(392,790)
October	228,814	8,288,490	36.22	217,031	8,535,614	39.33	(11,783)	247,124
November	218,154	8,078,402	37.03					
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	972,535	36,477,223	37.51	(78,806)	(579,145)
Subtotals ytd	1,051,341	37,056,368	35.25	972,535	36,477,223	37.51	(78,806)	(579,145)
Achievement of Budget				92.50%	98.44%			

(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
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%
October	9,619,977	9,015,400	604,577	6.71%
Rolling, 12-Month Total	99,471,810	100,563,830		
Rolling, 12-Month Average	8,289,318	8,380,319		

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 October 31, 2019, the DWSD usage was at 95.14% of the budget and billed revenue was at 97.74% 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
	Mcf	\$	Mcf	\$	Mcf	\$
July	251,738	28,535,420	244,810	27,985,611	(6,928)	(549,809)
August	258,984	28,327,270	246,989	27,871,381	(11,995)	(455,889)
September	255,527	26,788,442	215,119	26,334,145	(40,408)	(454,297)
October	227,141	26,444,548	238,202	25,414,427	11,061	(1,030,121)
November	211,617	25,759,684				
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	945,120	107,605,564	(48,270)	(2,490,116)
<i>Subtotals ytd</i>	993,390	110,095,680	945,120	107,605,564	(48,270)	(2,490,116)
<i>Achievement of Budget/Goal</i>			95.14%	97.74%		

(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
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%
October	26,321,010	23,938,933	2,382,077	9.95%
Rolling 12-Month Total	260,821,080	250,536,593		
Rolling, 12-Month Average	21,735,090	20,878,049		

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 October 31, 2019 with comparative totals from October 31, 2018.

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

Sales Class	# of Accounts	Avg. Balance	Current	> 30 Days	> 60 Days	> 180 Days	Accounts Receivable Balance
Residential	286,824	\$ 322.84	\$ 13,129,691	\$ 7,413,286	\$ 17,475,577	\$ 54,579,445	\$ 92,597,999
			14.2%	8.0%	18.9%	58.9%	100.0%
Commercial	28,331	1,398.73	8,739,068	3,254,824	7,253,899	20,379,558	39,627,348
			22.1%	8.2%	18.3%	51.4%	100.0%
Industrial	4,801	3,611.96	4,074,076	1,396,202	2,322,825	9,547,939	17,341,042
			23.5%	8.1%	13.4%	55.1%	100.0%
Tax Exempt Entities	8,121	1,791.39	2,046,250	1,229,208	2,097,495	9,174,946	14,547,899
			14.1%	8.4%	14.4%	63.1%	100.0%
Government Entities	3,025	2,032.35	1,183,797	302,572	1,152,780	3,508,709	6,147,859
			19.3%	4.9%	18.8%	57.1%	100.0%
Subtotal - Active Accounts	331,102	\$ 514.23	\$ 29,172,882	\$ 13,596,092	\$ 30,302,577	\$ 97,190,596	\$ 170,262,147
			17.1%	8.0%	17.8%	57.1%	100.0%
Inactive Accounts	270,770	84.12	234,695	(1,241,588)	1,318,715	22,464,719	22,776,541
			1.0%	(5.5%)	5.8%	98.6%	100.0%
Total	601,872	\$ 320.73	\$ 29,407,578	\$ 12,354,504	\$ 31,621,292	\$ 119,655,315	\$ 193,038,688
% of Total A/R			15.2%	6.4%	16.4%	62.0%	100.0%
Water Fund	217,466	176.16	\$ 7,036,000	\$ 1,368,000	\$ 5,711,000	\$ 24,195,000	\$ 38,309,000
Sewer Fund	270,047	572.97	\$ 22,372,000	\$ 10,987,000	\$ 25,910,000	\$ 95,461,000	\$ 154,729,000
Total October 31, 2019	601,872	320.73	\$ 29,408,000	\$ 12,355,000	\$ 31,621,000	\$ 119,655,000	\$ 193,039,000
Water Fund- Allowance							\$ (26,993,000)
Sewer Fund- Allowance							\$ (93,482,000)
Total October 31, 2019 Bad Debt Allowance							\$ (120,475,000)
Comparative Totals from October 31, 2018	583,418	302.33	\$ 29,197,000	\$ 15,122,000	\$ 29,389,000	\$ 102,679,000	\$ 176,387,000

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	4
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 October 31, 2019, the billed usage was at 93.43% of budget and billed revenue at 97.08% 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	Volume	Revenue	Unit	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	1,777,138	32,544,400	18.31	1,545,631	30,356,570	19.64	(231,507)	(2,187,830)
August	1,549,587	30,383,100	19.61	1,554,426	30,501,606	19.62	4,839	118,506
September	1,368,496	28,270,400	20.66	1,257,111	27,278,750	21.70	(111,385)	(991,650)
October	1,066,653	25,351,200	23.77	1,026,086	25,007,145	24.37	(40,567)	(344,055)
November	917,034	24,049,100	26.22					
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	5,383,254	113,144,071	21.02	(378,620)	(3,405,029)
Subtotals ytd	5,761,874	116,549,100	20.23	5,383,254	113,144,071	21.02	(378,620)	(3,405,029)
Achievement of Budget				93.43%	97.08%			

(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
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%
October	25,786,774	27,827,722	(2,040,948)	-7.33%
Rolling 12-Month Total	307,125,671	308,919,855		
Rolling, 12-Month Average	25,593,806	25,743,321		

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	7
Total	<u>18</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 October 31, 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		N/A	
December	N/A	22,882,500	N/A		N/A	
January	N/A	22,882,500	N/A		N/A	
February	N/A	22,882,500	N/A		N/A	
March	N/A	22,882,500	N/A		N/A	
April	N/A	22,882,500	N/A		N/A	
May	N/A	22,882,500	N/A		N/A	
June	N/A	22,882,500	N/A		N/A	
Total		274,590,000		91,530,000		-
<i>Subtotals ytd</i>		91,530,000		91,530,000		-
<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
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%
October	29,833,760	16,105,200	13,728,560	85.24%
Rolling 12-Month Total	292,401,983	269,503,806		
Rolling, 12-Month Average	24,366,832	22,458,651		

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 October 31, 2019, Highland Park had a delinquent balance of \$42.2 million, including \$32.7 million for wastewater treatment services, \$1.7 million for industrial waste control services, and \$7.8 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 October 31, 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
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
October 2019 Billing	107,422	472,500	3,933	583,855
October 2019 Payments	-	-	-	-
October 31, 2019 Balance	7,777,814	32,701,587	1,691,336	42,170,737

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 October 31, 2019.

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park is the same summary *without* the past due balances for the City of Highland Park.

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA is a summary *without* the past due balances for the City of Highland Park and net of pending credits for certain Western Township Utilities Authority (WTUA). Credits for billed services are pending receipt of a final agreement from Wayne County to effectuate a transfer retroactive to July 1, 2018.

Table 6 - Wholesale Accounts Receivable Aging Report Summary

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 44,264,635.41	\$ 36,702,251.06	\$ 106,637.76	\$ 104,701.53	\$ 7,351,045.06
Sewer	\$ 36,610,726.23	\$ 4,381,399.50	\$ 472,740.00	\$ 472,500.00	\$ 31,284,086.73
IWC	\$ 3,377,344.36	\$ 525,901.76	\$ 38,854.79	\$ -	\$ 2,812,587.81
Pollutant Surcharge	\$ 977,016.91	\$ 912,744.38	\$ 13,531.87	\$ 2,932.26	\$ 47,808.40
Total	\$ 85,229,722.91	\$ 42,522,296.70	\$ 631,764.42	\$ 580,133.79	\$ 41,495,528.00
	100.00%	49.89%	0.74%	0.68%	48.69%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 36,486,821.58	\$ 36,486,821.58	\$ -	\$ -	\$ -
Sewer	\$ 3,909,139.50	\$ 3,908,899.50	\$ 240.00	\$ -	\$ -
IWC	\$ 1,686,008.70	\$ 517,955.38	\$ 34,829.21	\$ -	\$ 1,133,224.11
Pollutant Surcharge	\$ 977,016.91	\$ 912,744.38	\$ 13,531.87	\$ 2,932.26	\$ 47,808.40
Total	\$ 43,058,986.69	\$ 41,826,420.84	\$ 48,601.08	\$ 2,932.26	\$ 1,181,032.51
	100.00%	97.14%	0.11%	0.01%	2.74%

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA
Note: percentages vary from 100% due to rounding.

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 36,486,821.58	\$ 36,486,821.58	\$ -	\$ -	\$ -
Sewer	\$ 3,909,139.50	\$ 3,908,899.50	\$ 240.00	\$ -	\$ -
IWC	\$ 448,635.75	\$ 448,797.20	\$ 250.12	\$ -	\$ (411.57)
Pollutant Surcharge	\$ 977,016.91	\$ 912,744.38	\$ 13,531.87	\$ 2,932.26	\$ 47,808.40
Total	\$ 41,821,613.74	\$ 41,757,262.66	\$ 14,021.99	\$ 2,932.26	\$ 47,396.83
	100.00%	99.85%	0.03%	0.01%	0.11%

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 four months of activity to date.

Water fund activity exceeded required MBO disbursements by 18% through October 31, 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 October 31, 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.

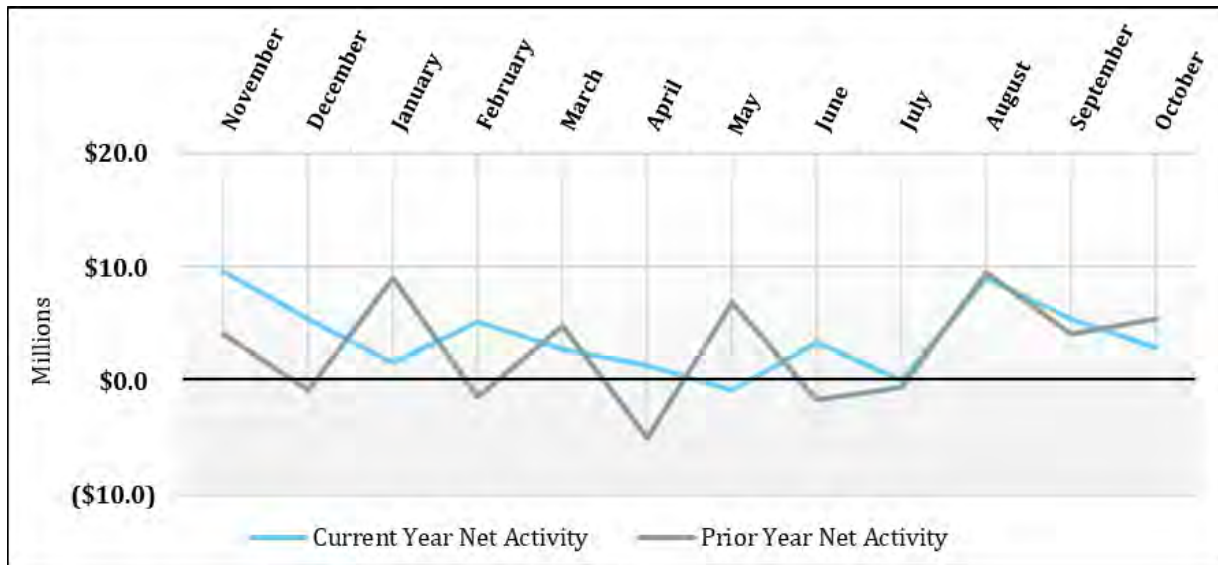
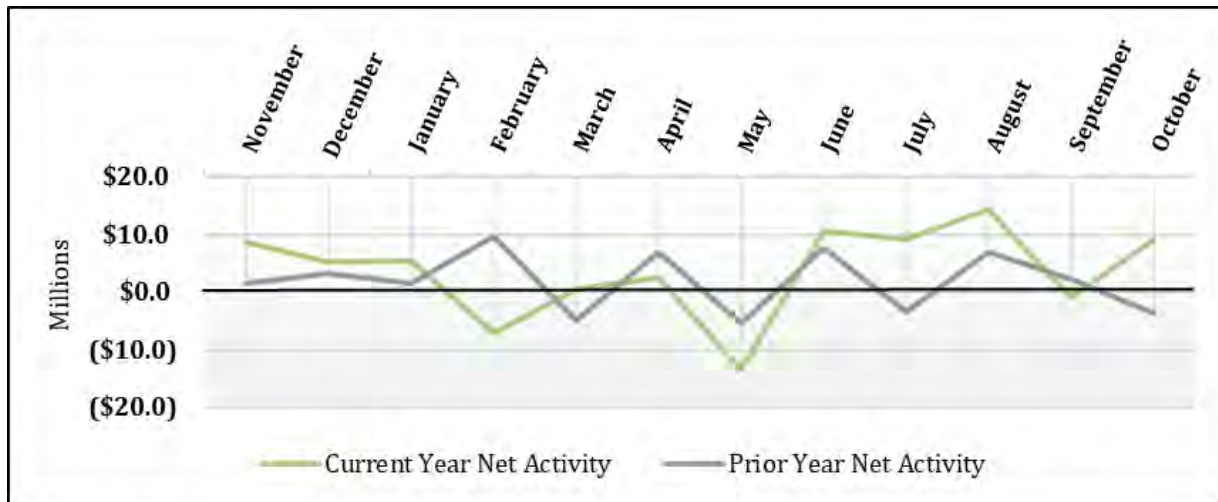
Chart 1 – GLWA 12-Month Net Receipts – Water outlines monthly cash receipt trends across two points of reference for the regional water system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

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	\$ 115,735,746	\$1,293,412,601
2 MOU Adjustments	-	-	-	-	-	-
3 Adjusted Receipts	149,688,711	352,941,909	338,452,001	336,594,234	115,735,746	1,293,412,601
4 Disbursements	(146,256,185)	(288,777,985)	(297,064,810)	(289,230,481)	(98,260,878)	(1,119,590,339)
5 Receipts Net of Required Transfers	3,432,526	64,163,924	41,387,191	47,363,753	17,474,868	173,822,262
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)	\$ 17,474,868	\$ 100,387,562
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	102%	122%	114%	116%	118%	116%
Sewer						
9 Receipts	\$ 232,377,715	\$ 469,788,882	\$ 476,269,761	\$ 467,743,744	\$ 180,233,697	\$1,826,413,799
10 MOU Adjustments	-	-	-	-	-	-
11 Adjusted Receipts	232,377,715	469,788,882	476,269,761	467,743,744	180,233,697	1,826,413,799
12 Disbursements	(219,538,325)	(441,443,340)	(458,903,335)	(453,406,636)	(148,470,689)	(1,721,762,325)
13 Receipts Net of Required Transfers	12,839,390	28,345,542	17,366,426	14,337,108	31,763,008	104,651,474
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	5,775,339	15,142,694
17 Net Receipts	\$ 11,553,924	\$ 331,008	\$ (29,444,708)	\$ 1,156,763	\$ 37,538,347	\$ 21,135,334
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	\$ 295,969,443	\$3,119,826,400
20 MOU Adjustments	-	-	-	-	-	-
21 Adjusted Receipts	382,066,426	822,730,791	814,721,762	804,337,978	295,969,443	3,119,826,400
22 Disbursements	(365,794,510)	(730,221,325)	(755,968,145)	(742,637,117)	(246,731,567)	(2,841,352,664)
23 Receipts Net of Required Transfers	16,271,916	92,509,466	58,753,617	61,700,861	49,237,876	278,473,736
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	5,775,339	15,142,694
27 Net Receipts	\$ 14,986,450	\$ 64,494,932	\$ (13,797,217)	\$ 825,516	\$ 55,013,215	\$ 121,522,896
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 four months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 7% through October 31, 2019 with a historical ratio of 3% since January 1, 2016.

Sewer fund cash receipts fell short of required MBO disbursements by 4% through October 31, 2019 with a historic shortfall of 6% since January 1, 2016. DWSD has recognized this issue and proactively implemented plans in December 2019 to resolve the current shortfall. On December 3, DWSD transferred \$2.6 million from Sewer Operations & Maintenance back to the Sewer Receiving Fund. In addition, beginning December 1, DWSD has formally requested to reduce budgeted, monthly Sewer Operations & Maintenance transfers by \$1 million. These two changes should resolve the current Sewer shortfall to close FY 2020 with positive net receipts.

Table 3 – FY 2017 DWSD Loan Receivable - Sewer provides an activity summary of loan receivable established under the terms of the April 2018 MOU addressing the cash shortfall from FY 2016 and FY 2017.

Table 4 – FY 2017 DWSD Loan Receivable Payments - Sewer provides an activity summary of loan receivable payments to date on the FY 2017 Sewer Loan Receivable including the interest on the loan. This payment is transferred directly to GLWA Sewer Improvement & Extension fund monthly.

The Reconciliation Committee monitors this balance and repayment progress as part of its quarterly meetings.

Table 5 – FY 2018 DWSD Loan Receivable - Sewer provides an activity summary of loan receivable established under the terms of the April 2018 MOU addressing the cash shortfall from FY 2018.

Table 6 – FY 2018 DWSD Loan Receivable Payments - Sewer provides an activity summary of loan receivable payments to date on the FY 2018 Sewer Loan Receivable including the interest on the loan. This payment is transferred directly to GLWA Sewer Improvement & Extension fund monthly.

The Reconciliation Committee monitors this balance and repayment progress as part of its quarterly meetings.

Chart 3 – DWSD 12-Month Net Receipts – Water outlines monthly activity trends across two points of reference for the local water system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Chart 4 – DWSD 12-Month Net Receipts – Sewer outlines monthly activity trends across two points of reference for the local sewer system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Table 2 – DWSD Net Cash Flows from Trust Receipts & Disbursements

	FY 2016	FY 2017	FY 2018	FY 2019 (Prelim)	FY 2020	Life-to-Date Total
Water						
1 Receipts	\$ 26,201,881	\$ 96,451,105	\$ 101,233,147	\$ 99,868,219	\$ 35,007,103	\$ 358,761,455
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	44,647,981	96,451,105	101,233,147	99,868,219	35,007,103	377,207,555
4 Disbursements	(47,809,552)	(93,066,144)	(93,049,457)	(97,694,600)	(32,834,164)	(364,453,917)
5 Receipts Net of Required Transfers	(3,161,571)	3,384,961	8,183,690	2,173,619	2,172,939	12,753,638
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)	\$ 2,172,939	\$ 4,346,558
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	93%	104%	109%	102%	107%	103%
Sewer						
9 Receipts	\$ 65,256,734	\$ 233,723,367	\$ 242,104,791	\$ 265,339,797	\$ 92,425,435	\$ 898,850,124
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	92,425,435	961,132,424
12 Disbursements	(122,297,300)	(261,963,973)	(266,217,825)	(271,018,306)	(96,530,566)	(1,018,027,970)
13 Receipts Net of Required Transfers	(1,285,466)	(28,240,606)	(24,113,034)	848,691	(4,105,131)	(56,895,546)
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	\$ (4,105,131)	\$ (3,482,512)
17 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	99%	89%	91%	100%	96%	94%
Combined						
18 Receipts	\$ 91,458,615	\$ 330,174,472	\$ 343,337,938	\$ 365,208,016	\$ 127,432,538	\$1,257,611,579
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	127,432,538	1,338,339,979
21 Disbursements	(170,106,852)	(355,030,117)	(359,267,282)	(368,712,906)	(129,364,730)	(1,382,481,887)
22 Receipts Net of Required Transfers	(4,447,037)	(24,855,645)	(15,929,344)	3,022,310	(1,932,192)	(44,141,908)
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)	\$ (1,932,192)	\$ 864,046
26 <i>Ratio of Receipts to Required Disbursements (Line 20/Line 21)</i>	97%	93%	96%	101%	99%	97%

(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
(28,240,606)	FY 2017 Shortfall
(29,526,072)	Subtotal
238,264	June IWC not due until July
(29,287,808)	FY 2017 Shortfall-to-Date
29,300,000	FY 2017 Shortfall-to-Date, Rounded

Table 3 – FY 2017 DWSD Loan Receivable - Sewer

Date	Transaction	Amount	Balance
6/30/2019	Record FY 16 and FY 17 Loan Receivable		29,300,000
2/8/2019	Loan Receivable Payment (for the months of Jul - Dec)	4,635,462	24,664,538
2/22/2019	Loan Receivable Payment (for the months of Jan - Mar)	2,353,768	22,310,770
4/15/2019	Loan Receivable Payment (for the month of Apr)	789,990	21,520,780
5/8/2019	Loan Receivable Payment (for the month of May)	792,705	20,728,075
6/7/2019	Loan Receivable Payment (for the month of June)	795,430	19,932,645
7/5/2019	Loan Receivable Payment (for the month of July)	798,164	19,134,480
8/8/2019	Loan Receivable Payment (for the month of August)	800,908	18,333,572
9/6/2019	Loan Receivable Payment (for the month of September)	803,661	17,529,911
10/2/2019	Loan Receivable Payment (for the month of October)	806,424	16,723,487
		12,576,513	16,723,487

Table 4 – FY 2017 DWSD Loan Receivable Payments - Sewer

Date	Transaction	Principal	Interest	Total Paid
2/8/2019	Loan Receivable Payment (for the months of Jul - Dec)	4,635,462	564,636	5,200,098
2/22/2019	Loan Receivable Payment (for the months of Jan - Mar)	2,353,768	246,280	2,600,049
4/15/2019	Loan Receivable Payment (for the month of Apr)	789,990	76,693	866,683
5/8/2019	Loan Receivable Payment (for the month of May)	792,705	73,978	866,683
6/7/2019	Loan Receivable Payment (for the month of June)	795,430	71,253	866,683
7/5/2019	Loan Receivable Payment (for the month of July)	798,164	68,518	866,683
8/8/2019	Loan Receivable Payment (for the month of August)	800,908	65,775	866,683
9/6/2019	Loan Receivable Payment (for the month of September)	803,661	63,022	866,683
10/2/2019	Loan Receivable Payment (for the month of October)	806,424	60,259	866,683
		12,576,513	1,290,414	13,866,927

Table 5 – FY 2018 DWSD Loan Receivable - Sewer

Date	Transaction	Amount	Balance
6/30/2019	Record FY 18 Loan Receivable		24,113,034
7/15/2019	Loan Receivable Payment (for the month of July)	638,978	23,474,056
8/8/2019	Loan Receivable Payment (for the month of August)	640,686	22,833,370
9/6/2019	Loan Receivable Payment (for the month of September)	642,400	22,190,970
10/2/2019	Loan Receivable Payment (for the month of October)	644,118	21,546,852
		2,566,182	21,546,852

Table 6 – FY 2018 DWSD Loan Receivable Payments - Sewer

Date	Transaction	Principal	Interest	Total Paid
7/15/2019	Loan Receivable Payment (for the month of July)	638,978	64,482	703,460
8/8/2019	Loan Receivable Payment (for the month of August)	640,686	62,774	703,460
9/6/2019	Loan Receivable Payment (for the month of September)	642,400	61,060	703,460
10/2/2019	Loan Receivable Payment (for the month of October)	644,118	59,342	703,460
		2,566,182	247,658	2,813,840

Chart 3 – DWSD 12-Month Net Receipts - Water

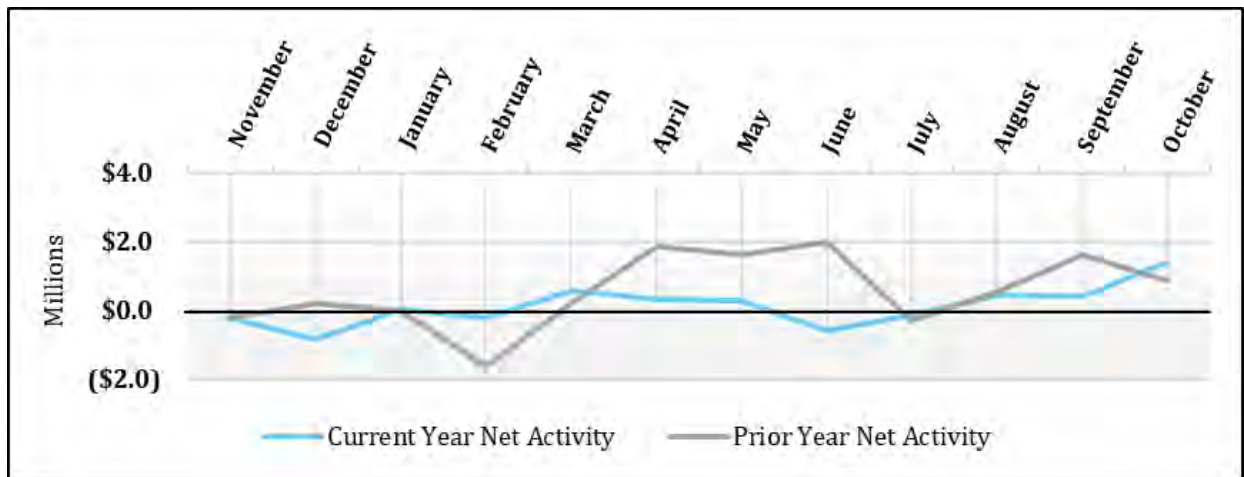
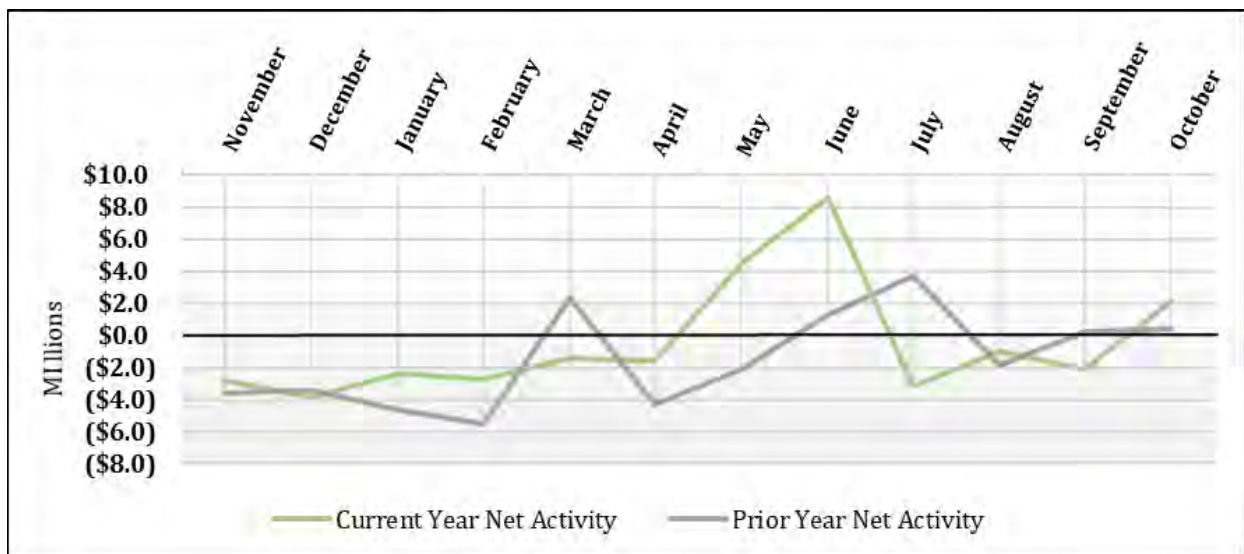


Chart 4 – DWSD 12-Month Net Receipts – Sewer



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 four months of activity to date.

Water fund cash receipts exceeded required MBO disbursements by 15% through October 31, 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 11% through October 31, 2019 and with a historical ratio of cash receipts exceeding MBO disbursements by 2% 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	\$ 150,742,849	\$1,652,174,056
2 MOU Adjustments	18,446,100	-	-	-	-	18,446,100
3 Adjusted Receipts	194,336,692	449,393,014	439,685,148	436,462,453	150,742,849	1,670,620,156
4 Disbursements	(194,065,737)	(381,844,129)	(390,114,267)	(386,925,081)	(131,095,042)	(1,484,044,256)
5 Receipts Net of Required Transfers	270,955	67,548,885	49,570,881	49,537,372	19,647,807	186,575,900
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)	\$ 19,647,807	\$ 104,734,120
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	100%	118%	113%	113%	115%	113%
Sewer						
9 Receipts	\$ 297,634,449	\$ 703,512,249	\$ 718,374,552	\$ 733,083,541	\$ 272,659,132	\$2,725,263,923
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	272,659,132	2,787,546,223
12 Disbursements	(341,835,625)	(703,407,313)	(725,121,160)	(724,424,942)	(245,001,255)	(2,739,790,295)
13 Receipts Net of Required Transfers	11,553,924	104,936	(6,746,608)	15,185,799	27,657,877	47,755,928
14 I&E Transfer	-	-	(22,698,100)	(22,547,700)	-	(45,245,800)
15 Shortfall Advance	-	-	-	-	-	-
16 Shortfall Repayment (principal)	-	-	-	9,367,355	5,775,339	15,142,694
17 Net Receipts	\$ 11,553,924	\$ 104,936	\$ (29,444,708)	\$ (7,361,901)	\$ 33,433,216	\$ 17,652,823
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	103%	100%	99%	102%	111%	102%
Combined						
19 Receipts	\$ 473,525,041	\$1,152,905,263	\$1,158,059,700	\$1,169,545,994	\$ 423,401,981	\$4,377,437,979
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	423,401,981	4,458,166,379
22 Disbursements	(535,901,362)	(1,085,251,442)	(1,115,235,427)	(1,111,350,023)	(376,096,297)	(4,223,834,551)
23 Receipts Net of Required Transfers	11,824,879	67,653,821	42,824,273	64,723,171	47,305,684	234,331,828
24 I&E Transfer	-	-	(48,437,800)	(78,649,780)	-	(127,087,580)
25 Shortfall Advance	-	-	-	-	-	-
26 Shortfall Repayment	-	-	-	9,367,355	5,775,339	15,142,694
27 Net Receipts	\$ 11,824,879	\$ 67,653,821	\$ (5,613,527)	\$ (4,559,254)	\$ 53,081,023	\$ 122,386,943
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	102%	106%	104%	106%	113%	106%

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$209,553.79	\$209,553.79	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$68,768.60	\$68,768.60	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$28,658.98	\$28,658.98	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$60,531.02	\$60,531.02	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$304,660.59	\$304,660.59	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$29,294.23	\$29,294.23	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$28,064.78	\$28,064.78	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$1,970,630.84	\$1,970,630.84	\$0.00	\$0.00	\$0.00
CENTER LINE	\$39,811.26	\$39,811.26	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$368,473.82	\$368,473.82	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$653,459.31	\$653,459.31	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$307,729.54	\$307,729.54	\$0.00	\$0.00	\$0.00
DEARBORN	\$1,152,983.45	\$1,152,983.45	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$307,245.12	\$307,245.12	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$261,658.90	\$261,658.90	\$0.00	\$0.00	\$0.00
ECORSE	\$119,812.39	\$119,812.39	\$0.00	\$0.00	\$0.00
FARMINGTON	\$86,669.61	\$86,669.61	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$803,943.06	\$803,943.06	\$0.00	\$0.00	\$0.00
FERNDAL	\$173,402.93	\$173,402.93	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$109,806.74	\$109,806.74	\$0.00	\$0.00	\$0.00
FLINT	\$282,109.14	\$282,109.14	\$0.00	\$0.00	\$0.00
FRASER	\$101,218.64	\$101,218.64	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$125,599.57	\$125,599.57	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GIBRALTAR	\$27,940.85	\$27,940.85	\$0.00	\$0.00	\$0.00
GREENWOOD TOWNSHIP	\$98,585.10	\$98,585.10	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$90,878.93	\$90,878.93	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$140,280.20	\$140,280.20	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$65,300.24	\$65,300.24	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$130,657.97	\$130,657.97	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$67,608.58	\$67,608.58	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$63,318.99	\$63,318.99	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$ (18,896.50)	\$ (18,896.50)	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$61,811.89	\$61,811.89	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$7,777,813.83	\$215,429.48	\$106,637.76	\$104,701.53	\$7,351,045.06
HURON TOWNSHIP	\$123,073.98	\$123,073.98	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$138,995.49	\$138,995.49	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP	\$1,190.25	\$1,190.25	\$0.00	\$0.00	\$0.00
INKSTER	\$100,993.09	\$100,993.09	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$25,633.00	\$25,633.00	\$0.00	\$0.00	\$0.00
LAPEER	\$130,332.22	\$130,332.22	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$46,767.19	\$46,767.19	\$0.00	\$0.00	\$0.00
LINCOLN PARK	\$187,770.26	\$187,770.26	\$0.00	\$0.00	\$0.00
LIVONIA	\$1,014,699.94	\$1,014,699.94	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$1,033,718.94	\$1,033,718.94	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$159,559.08	\$159,559.08	\$0.00	\$0.00	\$0.00

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MAYFIELD TOWNSHIP	\$3,634.37	\$3,634.37	\$0.00	\$0.00	\$0.00
MELVINDALE	\$109,180.71	\$109,180.71	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$30,816.44	\$30,816.44	\$0.00	\$0.00	\$0.00
NOCWA	\$4,189,743.03	\$4,189,743.03	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$81,143.24	\$81,143.24	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$503,348.73	\$503,348.73	\$0.00	\$0.00	\$0.00
NOVI	\$1,812,025.20	\$1,812,025.20	\$0.00	\$0.00	\$0.00
OAK PARK	\$117,580.87	\$117,580.87	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$7,861.26	\$7,861.26	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$95,074.34	\$95,074.34	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$397,610.09	\$397,610.09	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$264,235.70	\$264,235.70	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$61,337.74	\$61,337.74	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$75,514.90	\$75,514.90	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$23,542.71	\$23,542.71	\$0.00	\$0.00	\$0.00
ROMEO	\$49,243.21	\$49,243.21	\$0.00	\$0.00	\$0.00
ROMULUS	\$359,298.64	\$359,298.64	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$222,426.17	\$222,426.17	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$16,817.58	\$16,817.58	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$1,258,136.10	\$1,258,136.10	\$0.00	\$0.00	\$0.00
SOCWA	\$4,345,676.51	\$4,345,676.51	\$0.00	\$0.00	\$0.00
SOUTH ROCKWOOD	\$9,341.82	\$9,341.82	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$193,957.32	\$193,957.32	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ST. CLAIR SHORES	\$262,743.15	\$262,743.15	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$2,864,398.13	\$2,864,398.13	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$55,378.23	\$55,378.23	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$19,444.99	\$19,444.99	\$0.00	\$0.00	\$0.00
TAYLOR	\$823,072.71	\$823,072.71	\$0.00	\$0.00	\$0.00
TRENTON	\$140,118.13	\$140,118.13	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,192,867.15	\$1,192,867.15	\$0.00	\$0.00	\$0.00
UTICA	\$101,225.76	\$101,225.76	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$323,329.44	\$323,329.44	\$0.00	\$0.00	\$0.00
VILLAGE OF ALMONT	\$19,772.36	\$19,772.36	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$66,363.20	\$66,363.20	\$0.00	\$0.00	\$0.00
WARREN	\$880,542.01	\$880,542.01	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$211,813.51	\$211,813.51	\$0.00	\$0.00	\$0.00
WAYNE	\$333,687.11	\$333,687.11	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,915,474.84	\$1,915,474.84	\$0.00	\$0.00	\$0.00
WESTLAND	\$509,204.70	\$509,204.70	\$0.00	\$0.00	\$0.00
WIXOM	\$219,380.57	\$219,380.57	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$143,345.99	\$143,345.99	\$0.00	\$0.00	\$0.00
YCUA	\$892,806.92	\$892,806.92	\$0.00	\$0.00	\$0.00
TOTAL WATER ACCOUNTS	\$44,264,635.41	\$36,702,251.06	\$106,637.76	\$104,701.53	\$7,351,045.06

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 10/31/19

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	\$1,625,200.00	\$1,625,200.00	\$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	\$32,701,586.73	\$472,500.00	\$472,500.00	\$472,500.00	\$31,284,086.73
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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY N.E.	\$2,070,040.00	\$2,069,800.00	\$240.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$36,610,726.23	\$4,381,399.50	\$472,740.00	\$472,500.00	\$31,284,086.73

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 10/31/19

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)	\$18,552.82	\$18,552.82	\$0.00	\$0.00	\$0.00
AUBURN HILLS (E-F)	\$348.14	\$348.14	\$0.00	\$0.00	\$0.00
BERKLEY	\$3,004.82	\$3,004.82	\$0.00	\$0.00	\$0.00
BEVERLY HILLS	\$949.78	\$949.78	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$1,008.93	\$1,008.93	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$2,333.89	\$2,333.89	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$10,636.86	\$10,636.86	\$0.00	\$0.00	\$0.00
BLOOMFIELD HILLS	\$1,570.01	\$1,570.01	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$648,584.10	\$36,253.88	\$18,126.94	\$0.00	\$594,203.28
CENTER LINE	\$3,501.68	\$3,501.68	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$11,584.95	\$11,584.95	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$190.97	\$190.97	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$8,466.90	\$8,466.90	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON	\$263.64	\$263.64	\$0.00	\$0.00	\$0.00
CLAWSON	\$ (411.57)	\$0.00	\$0.00	\$0.00	\$ (411.57)
CLINTON TOWNSHIP	\$24,336.00	\$24,336.00	\$0.00	\$0.00	\$0.00
DEARBORN	\$35,146.93	\$35,146.93	\$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	\$6,151.60	\$6,151.60	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 10/31/19

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	\$23,703.94	\$23,496.07	\$207.87	\$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	\$1,985.75	\$1,985.75	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$302.51	\$302.51	\$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	\$1,884.35	\$1,884.35	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$3,009.89	\$3,009.89	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$20.14	\$20.14	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,691,335.66	\$7,946.38	\$4,025.58	\$0.00	\$1,679,363.70
HUNTINGTON WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDEPENDENCE	\$4,701.58	\$4,701.58	\$0.00	\$0.00	\$0.00
INKSTER	\$5,286.32	\$5,286.32	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$670.93	\$670.93	\$0.00	\$0.00	\$0.00
LAKE ORION	\$763.88	\$763.88	\$0.00	\$0.00	\$0.00
LATHRUP	\$1,336.79	\$1,336.79	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$309.27	\$309.27	\$0.00	\$0.00	\$0.00
LIVONIA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 10/31/19

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	\$17,677.40	\$17,677.40	\$0.00	\$0.00	\$0.00
MELVINDALE	\$3,450.98	\$3,450.98	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$2,087.15	\$2,063.49	\$23.66	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$155,621.31	\$8,696.74	\$4,348.37	\$0.00	\$142,576.20
NOVI	\$16,563.69	\$16,563.69	\$0.00	\$0.00	\$0.00
OAK PARK	\$6,477.77	\$6,477.77	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$447.85	\$429.26	\$18.59	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$381.94	\$381.94	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$5,247.45	\$5,247.45	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$1,019.07	\$1,019.07	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$1,196.52	\$1,196.52	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$433,167.54	\$24,207.56	\$12,103.78	\$0.00	\$396,856.20
REDFORD TOWNSHIP	\$10,284.59	\$10,284.59	\$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	\$14,076.01	\$14,076.01	\$0.00	\$0.00	\$0.00
ROYAL OAK	\$13,063.70	\$13,063.70	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$1,774.50	\$1,774.50	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$11,894.22	\$11,894.22	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SOUTHFIELD (E-F)	\$27,060.28	\$27,060.28	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$3,643.64	\$3,643.64	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$29,860.61	\$29,860.61	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$365.04	\$365.04	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$35,402.12	\$35,402.12	\$0.00	\$0.00	\$0.00
UTICA	\$2,862.86	\$2,862.86	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$1,593.67	\$1,593.67	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$62.53	\$62.53	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$1,331.72	\$1,331.72	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP	\$11,855.35	\$11,855.35	\$0.00	\$0.00	\$0.00
WAYNE	\$4,770.87	\$4,770.87	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$875.42	\$875.42	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$6,048.51	\$6,048.51	\$0.00	\$0.00	\$0.00
WESTLAND	\$21,711.43	\$21,711.43	\$0.00	\$0.00	\$0.00
TOTAL IWC ACCOUNTS	\$3,377,344.36	\$525,901.76	\$38,854.79	\$0.00	\$2,812,587.81

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
3M COMPANY	\$5,196.69	\$5,196.69	\$0.00	\$0.00	\$0.00
A & R PACKING CO., LLC	\$5,558.03	\$5,558.03	\$0.00	\$0.00	\$0.00
AACTRON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACADEMY PACKING CO.	\$307.24	\$307.24	\$0.00	\$0.00	\$0.00
ACME RUSTPROOF	\$ (4.13)	\$0.00	\$0.00	\$ (4.13)	\$0.00
AEVITAS SPECIALITY SERVICES	\$36,873.45	\$25,554.52	\$11,318.93	\$0.00	\$0.00
ALEXANDER & HORNUNG	\$6,536.21	\$6,536.21	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNUNG	\$21,777.78	\$21,777.78	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNUNG	\$1,024.16	\$1,024.16	\$0.00	\$0.00	\$0.00
ALGAL SCIENTIFIC CORPORATION	\$16,533.05	\$0.00	\$0.00	\$0.00	\$16,533.05
ALL CHEM CORP, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALPHA STAMPING COMPANY	\$484.43	\$484.43	\$0.00	\$0.00	\$0.00
AMERICAN WASTE TECH INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERITI MFG. CO.	\$13,382.94	\$13,382.94	\$0.00	\$0.00	\$0.00
ATWATER IN THE PARK	\$59.33	\$59.33	\$0.00	\$0.00	\$0.00
AUTOMOTIVE FINISH	\$7.36	\$7.36	\$0.00	\$0.00	\$0.00
AXLE BREWING COMPANY, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
B. NEKTAR MEADERY	\$0.66	\$0.66	\$0.00	\$0.00	\$0.00
BAFFIN BREWING COMPANY	\$470.45	\$121.80	\$10.90	\$108.95	\$228.80
BARON INDUSTRIES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BARTZ BAKERY	\$85.25	\$85.25	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$37.51	\$37.51	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$211.18	\$211.18	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BAYS MICHIGAN CORPORATION	\$3.22	\$3.22	\$0.00	\$0.00	\$0.00
BEIRUT BAKERY, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BETTER MADE SNACK FOOD	\$16,402.99	\$16,402.99	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$61.25	\$61.25	\$0.00	\$0.00	\$0.00
BOZEK'S MARKET	\$79.68	\$79.68	\$0.00	\$0.00	\$0.00
BREW DETROIT	\$8,264.60	\$8,264.60	\$0.00	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$ (20.62)	\$0.00	\$0.00	\$0.00	\$ (20.62)
BROOKS BREWING, LLC.	\$108.06	\$108.06	\$0.00	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$59.87	\$59.87	\$0.00	\$0.00	\$0.00
CADILLAC STRAITS BREWING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CANTON BREW WORKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAPITAL REPRODUCTIONS	\$3.00	\$0.00	\$1.38	\$0.00	\$1.62
CF BURGER CREAMERY	\$21,642.55	\$21,642.55	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$2,475.76	\$74.00	\$24.13	\$22.15	\$2,355.48
CINTAS CORP. - MACOMB TWP.	\$44,045.56	\$44,045.56	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CITY LAUNDRY, INC.	\$5.88	\$5.88	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$11.42	\$11.42	\$0.00	\$0.00	\$0.00
COCA-COLA REFRESHMENTS USA,	\$877.05	\$877.05	\$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 10/31/19

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.	\$3,962.40	\$3,962.40	\$0.00	\$0.00	\$0.00
CROSS CHEMICAL COMPANY, INC.	\$ (754.50)	\$0.00	\$0.00	\$0.00	\$ (754.50)
DARLING INGREDIENTS, INC.	\$12,195.50	\$12,195.50	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$379.93	\$379.93	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$40.81	\$40.81	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE	\$7,757.25	\$7,757.25	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$9,399.78	\$9,399.78	\$0.00	\$0.00	\$0.00
DETROIT BEER	\$128.40	\$128.40	\$0.00	\$0.00	\$0.00
DETROIT LINEN SERVICE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT RIVERTOWN BREWERY CC	\$2,766.89	\$2,766.89	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$14.23	\$14.23	\$0.00	\$0.00	\$0.00
DETRONIC INDUSTRIES, INC.	\$165.61	\$165.61	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$25,931.96	\$25,931.96	\$0.00	\$0.00	\$0.00
DIVERSIFIED CHEM TECH. INC.	\$148.73	\$148.73	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$1,696.39	\$1,696.39	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$709.62	\$709.62	\$0.00	\$0.00	\$0.00
DOWNEY BREWING COMPANY	\$34.13	\$34.13	\$0.00	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$4,285.94	\$4,285.94	\$0.00	\$0.00	\$0.00
EASTERN MARKET BREWING COMP	\$180.65	\$180.65	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$27,444.06	\$27,444.06	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
EQ DETROIT, INC.	\$2,218.71	\$2,218.71	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$9,483.81	\$9,483.81	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ETON ST BREWERY- GRIFFIN CLF	\$3,626.28	\$3,626.28	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$63.16	\$63.16	\$0.00	\$0.00	\$0.00
EXTRUDEHODE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON BREWING COMPANY	\$20.25	\$20.25	\$0.00	\$0.00	\$0.00
FAYGO BEVERAGES, INC.	\$10,343.08	\$10,343.08	\$0.00	\$0.00	\$0.00
FORD NEW MODEL PROGRAM	\$700.27	\$700.27	\$0.00	\$0.00	\$0.00
FOUNDERS BREWING COMPANY	\$61.11	\$61.11	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$244.14	\$244.14	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
G2O ENERGY, LLC	\$2,704.73	\$2,704.73	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$13,819.27	\$13,819.27	\$0.00	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$100.13	\$100.13	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$53.43	\$53.43	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$185.02	\$90.90	\$0.00	\$94.12	\$0.00
GREAT BARABOO BREWING CO.	\$110.25	\$110.25	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$3,608.96	\$1,372.59	\$706.15	\$708.35	\$821.87
HENKEL CORPORATION	\$603.45	\$0.00	\$364.60	\$0.00	\$238.85

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
HOME STYLE FOOD INC.	\$5,791.83	\$5,791.83	\$0.00	\$0.00	\$0.00
HOMEGROWN BREWING COMPANY	\$69.13	\$69.13	\$0.00	\$0.00	\$0.00
HOODS CLEANERS	\$211.33	\$0.00	\$0.00	\$0.00	\$211.33
HOUGHTON INTERNATIONAL INC.	\$157.92	\$157.92	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$141.30	\$141.30	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$2,003.07	\$2,003.07	\$0.00	\$0.00	\$0.00
HUNTINGTON CLEANERS	\$551.33	\$551.33	\$0.00	\$0.00	\$0.00
IDP, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDUSTRIAL METAL COATING	\$506.88	\$506.88	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$834.67	\$834.67	\$0.00	\$0.00	\$0.00
ITALIAN BUTTER BREAD STICKS	\$8.17	\$8.17	\$0.00	\$0.00	\$0.00
J & G FOOD PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
JAMEX BREWING CO.	\$42.35	\$42.35	\$0.00	\$0.00	\$0.00
KAR NUT PRODUCTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$1,447.66	\$1,447.66	\$0.00	\$0.00	\$0.00
KUHNHENN BREWING	\$14.62	\$14.62	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$956.72	\$956.72	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$ (26.44)	\$0.00	\$0.00	\$0.00	\$ (26.44)
LEAR CORPORATION DBA EAGLE C	\$0.00	\$0.00	\$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	\$48.13	\$48.13	\$0.00	\$0.00	\$0.00
MACDERMID, INC.	\$2,040.28	\$2,040.28	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$14,509.02	\$14,509.02	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MCNICHOLS POLISHING & ANODIZ	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELLO MEATS INC, - KUBISCH S	\$170.75	\$170.75	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$688.44	\$688.44	\$0.00	\$0.00	\$0.00
MIBA HYDRAMECHANICA CORP.	\$108.68	\$108.68	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$109,064.90	\$109,064.90	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$4,048.79	\$4,048.79	\$0.00	\$0.00	\$0.00
MICHIGAN SOY PRODUCTS CO.	\$635.72	\$635.72	\$0.00	\$0.00	\$0.00
MIDWEST WIRE PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MILANO BAKERY	\$1,374.37	\$1,374.37	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$3,297.29	\$3,297.29	\$0.00	\$0.00	\$0.00
MISTER UNIFORM & MAT RENTALS	\$136.43	\$4.53	\$3.13	\$3.08	\$125.69
MOTOR CITY BREWING WORKS	\$1,135.06	\$178.07	\$175.22	\$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	\$31.66	\$31.66	\$0.00	\$0.00	\$0.00
OAKWOOD BAKERY	\$149.68	\$149.68	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$95.29	\$95.29	\$0.00	\$0.00	\$0.00
PELLERITO FOODS INC.	\$2,685.65	\$2,685.65	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$85,252.88	\$85,252.88	\$0.00	\$0.00	\$0.00
PERSONAL UNIFORM SERVICE, IN	\$50.25	\$50.25	\$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 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
PINE TREE ACRES, INC.	\$19,015.42	\$19,015.42	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$270.35	\$270.35	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$1,134.75	\$1,134.75	\$0.00	\$0.00	\$0.00
RAY'S ICE CREAM CO.	\$85.31	\$85.31	\$0.00	\$0.00	\$0.00
RED SPOT PAINT #409139	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RIVER ROUGE BREWING COMPANY	\$781.67	\$781.67	\$0.00	\$0.00	\$0.00
ROAK BREWING CO. LLC	\$757.25	\$757.25	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS BEER COMPANY	\$301.65	\$301.65	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS PROD BREWERY	\$2,674.65	\$1,543.04	\$0.00	\$1,131.61	\$0.00
RTT	\$27,772.36	\$0.00	\$756.08	\$768.90	\$26,247.38
SEAFARE FOODS, INC.	\$59.56	\$59.56	\$0.00	\$0.00	\$0.00
SHERWOOD BREWING COMPANY	\$934.47	\$100.35	\$98.74	\$0.00	\$735.38
SMITH-WATKINS, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$11.74	\$11.74	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$1,711.38	\$164.11	\$72.61	\$78.57	\$1,396.09
THE CROWN GROUP-LIVONIA PLAN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE ROYAL OAK BREWERY	\$ (1,031.09)	\$0.00	\$0.00	\$0.00	\$ (1,031.09)
TOM LAUNDRY CLEANERS	\$8.86	\$8.86	\$0.00	\$0.00	\$0.00
TRAFFIC JAM & SNUG	\$41.66	\$21.00	\$0.00	\$20.66	\$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 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TURRI'S ITALIAN FOODS	\$231,110.97	\$231,110.97	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$1,547.98	\$1,547.98	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$62,516.04	\$62,516.04	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$2,227.40	\$2,227.40	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$15.05	\$15.05	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$297.56	\$297.56	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
URBANREST BREWING COMPANY	\$76.20	\$76.20	\$0.00	\$0.00	\$0.00
US ECOLOGY MICHIGAN	\$380.91	\$380.91	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$4,407.44	\$4,407.44	\$0.00	\$0.00	\$0.00
USHER OIL SERVICES	\$4,694.34	\$4,694.34	\$0.00	\$0.00	\$0.00
VALICOR ENVIROMENTAL SERVICE	\$999.85	\$999.85	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$11,866.73	\$11,866.73	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$4,347.92	\$4,347.92	\$0.00	\$0.00	\$0.00
VERNOR FOOD PRODUCTS	\$ (36.26)	\$0.00	\$0.00	\$0.00	\$ (36.26)
WIGLEY'S MEAT PROCESS	\$683.02	\$683.02	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$905.00	\$905.00	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$176.45	\$176.45	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$7,691.38	\$7,691.38	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$3,264.26	\$3,264.26	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$85.18	\$85.18	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 10/31/19

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$977,016.91	\$912,744.38	\$13,531.87	\$2,932.26	\$47,808.40

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 (4 Months)	426,769	1,885,400	16,093	2,328,262
FY 2020 Payments (4 Months)	<u>-</u>	<u>(656,657)</u>	<u>-</u>	<u>(656,657)</u>
				-
Balance as of October 31, 2019	<u>\$ 7,777,814</u>	<u>\$ 32,701,587</u>	<u>\$ 1,691,336</u>	<u>\$ 42,170,737</u>

Debt Summary
for the Quarter Ended September 30, 2019

The Quarterly Debt Summary Report includes the following:

1. Key Takeaways
2. Look Ahead – Five Year Capital Financing Plan
3. Existing Debt
4. Debt Service Coverage
5. Potential Refinancing Opportunities

Pursuant to leases that became effective on January 1, 2016, the Great Lakes Water Authority (GLWA) assumed possession and control of the regional assets of both the water supply and sewage disposal systems owned by the City of Detroit (City), which were previously operated by the Detroit Water and Sewerage Department (DWSD). GLWA assumed certain liabilities including State Revolving Fund loans and 100% of the revenue bond debt issued by DWSD prior to January 1, 2016.

The bonds are repaid by the revenues of the water and sewage systems including the DWSD retail system (local system) revenues which are the exclusive property of GLWA in accordance with Section 5.7 of each lease agreement. The DWSD is GLWA's agent for purposes of billing and collection of the retail system revenues for both the water and sewer system, as set forth in a water and sewer services agreement between the City and GLWA. All revenue receipts are deposited into a trust and administered in compliance with the Master Bond Ordinance, applicable to each system (referred to herein collectively as the "MBO").

The leases also provide that GLWA will finance local system improvements of DWSD. GLWA is the obligor of 100% of the debt payable which is recorded in GLWA's books. An "obligation receivable" is recorded by GLWA which represents the amount related to the DWSD retail system improvements. Accordingly, DWSD records an "obligation payable" for a like amount.

GLWA maintains detailed records of all debt issuances and how that debt is allocated between the regional system and local system, as well as between the water and sewer systems. GLWA and DWSD regularly reconcile interrelated accounts between the entities.

The lease agreements, water and sewer services agreement, and MBO noted above are available on GLWA's website at www.glwater.org. The above explanation is a synopsis of key points and is not intended to fully represent the agreements or any sub-sections thereof.

Key Takeaways

- ✓ The purpose of this report is to provide a resource for stakeholders and to support management decisions as capital financing needs evolve.
- ✓ GLWA continues to enhance transparency by including the Debt Summary Report in the Audit Committee Binder quarterly.
- ✓ Currently, GLWA has eight open State Revolving Fund (SRF) loans, four for water and four for sewer.
- ✓ Specific key items of interest include the following along with the balance as of September 30, 2019.

As of September 30, 2019 (\$ Millions)		
	Water	Sewer
FY 2020 Approved SRF Projects - Table 5	\$32.6	\$13.0
DWSD Obligation Receivable - Table 6	\$473.6	\$414.2
GLWA Outstanding Debt - Table 7	\$2,239.3	\$3,031.1

Look Ahead - Five Year Capital Financing Plan

The following tables summarize the projected Capital Improvement Program (CIP) funding to be provided by proceeds received from the issuance of new revenue bonds and draws on committed SRF loans. *The financing plan is dynamic and changes with the pace of capital spending and alignment with refunding opportunities.* These schedules are based upon the recently approved FY 2020 to FY 2024 Capital Improvement Plan (CIP) for the regional system by the GLWA Board of Directors and for the local system by the DWSD's Board of Water Commissioners. It is important to note the amounts represented in Revenue Bonds reflect the anticipated par amount of the bonds to be issued and not the net proceeds needed to support the capital plan.

Table 1 - GLWA Projected Financing Needs FY 2020 – FY 2024

Projected Funding Needs for Regional System					
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water					
Revenue Bonds	\$ -	\$ -	\$ 62,000,000	\$ 56,000,000	\$ 56,000,000
SRF loan draws	5,531,000	18,367,000	24,115,000	29,615,000	29,994,000
Total projected funding Water	\$ 5,531,000	\$ 18,367,000	\$ 86,115,000	\$ 85,615,000	\$ 85,994,000
Sewer					
Revenue Bonds	\$ 84,000,000	\$ 87,000,000	\$ 91,000,000	\$ 69,000,000	\$ 13,000,000
SRF loan draws	29,342,000	8,280,000	1,343,000	-	-
Total projected funding Sewer	\$ 113,342,000	\$ 95,280,000	\$ 92,343,000	\$ 69,000,000	\$ 13,000,000

Table 2 - DWSD Projected Bond Financing Needs FY 2020 – FY 2024

Projected Funding Needs for Local System					
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water					
Revenue Bonds	\$ 100,000,000		\$ 50,000,000	\$ -	\$ 50,000,000
SRF loan draws	\$ 4,020,000	\$ 12,040,000	\$ -	\$ -	\$ -
Total projected funding Water	\$ 104,020,000	\$ 12,040,000	\$ 50,000,000	\$ -	\$ 50,000,000
Sewer					
Revenue Bonds	\$ -	\$ -	\$ 50,000,000	\$ -	\$ -
SRF loans draws	\$ -	\$ -	\$ -	\$ -	\$ -
Total projected funding Sewer	\$ -	\$ -	\$ 50,000,000	\$ -	\$ -

Note: Information presented is as of September 30, 2019. Financing plans continue to evolve based on the needs of the system.

Existing Debt

Current Debt Ratings: Bond ratings are a key measure of an organization's financial strength. Ratings are established by independent agencies that conduct detailed reviews of an organization's operational and financial performance to assist those seeking to invest in an organization through the purchase of bonds. GLWA actively monitors its debt ratings and continually seeks to make operational and financial improvements to improve its bond ratings. Achieving higher ratings will allow GLWA to finance its capital needs at lower interest rates.

Table 3 – Debt Ratings by System provides a summary of the debt ratings assigned in September 2018, in advance of the most recent bond issuances in October 2018, as well as the ratings assigned to the Junior Lien debt in November 2018.

Current Debt Ratings			
	S&P Global Ratings	Moody's Investors Service	Fitch Ratings
Water Supply System Revenue Bonds			
Senior lien	AA-	A2	A
Second lien	A+	A3	A-
Junior lien	A+	N/A	N/A
Outlook	Stable	Stable	Positive
Sewage Disposal System Revenue Bonds			
Senior lien	A+	A2	A
Second lien	A	A3	A-
Junior lien	A	N/A	N/A
Outlook	Positive	Stable	Positive

Debt Allocation: GLWA has nearly \$2.3 billion in water system debt and \$3.1 billion in sewer system debt for a combined total of over \$5.3 billion. Debt within each system is prioritized according to its security interest, or lien category, with senior lien debt having the highest security interest, followed by second lien and finally junior lien.

Chart 1 - Debt Type by Lien – Water provides a breakdown of the total water system debt for both the regional and local systems by lien type.

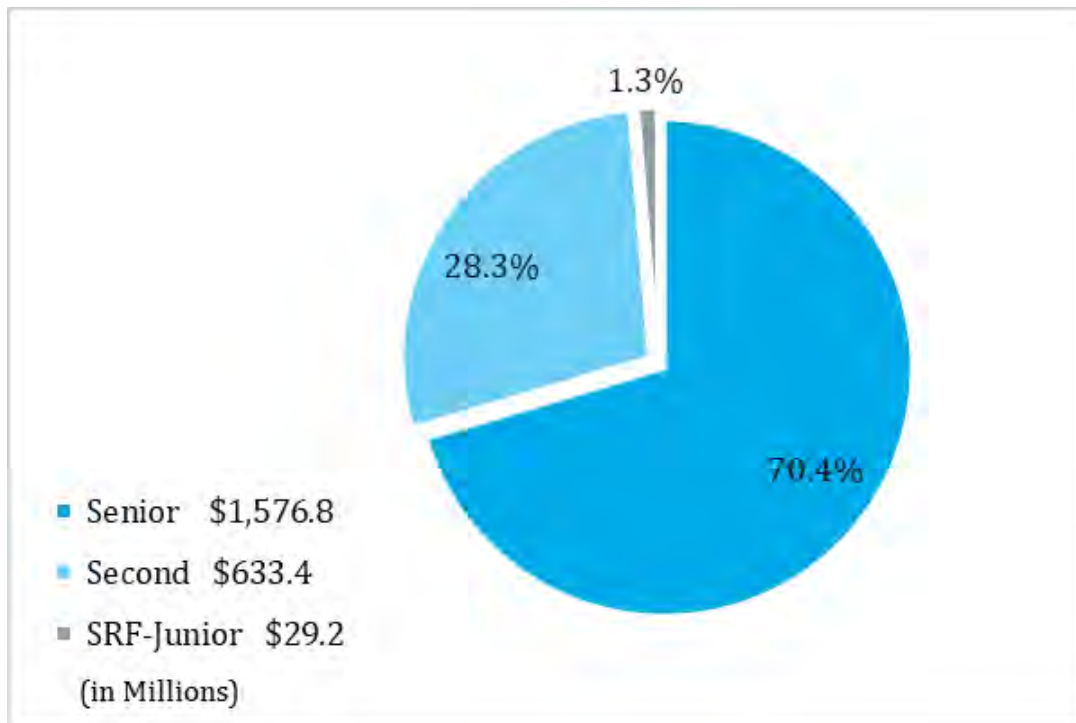


Chart 2 - Debt Type by Lien – Sewer provides a breakdown of the total sewer system debt for both the regional and local systems by lien type.

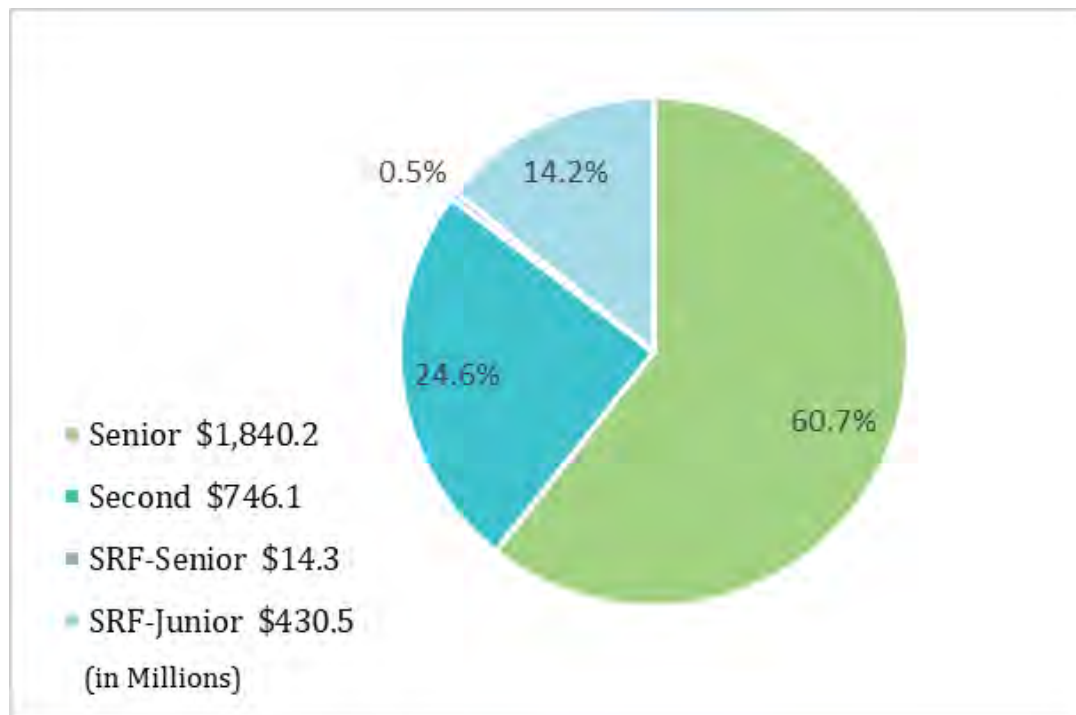


Chart 3 – Annual Debt Service Payments by Lien – Water provides the amortization schedule of combined annual debt service requirements by due dates within the fiscal year based on debt owed as of June 30, 2019.

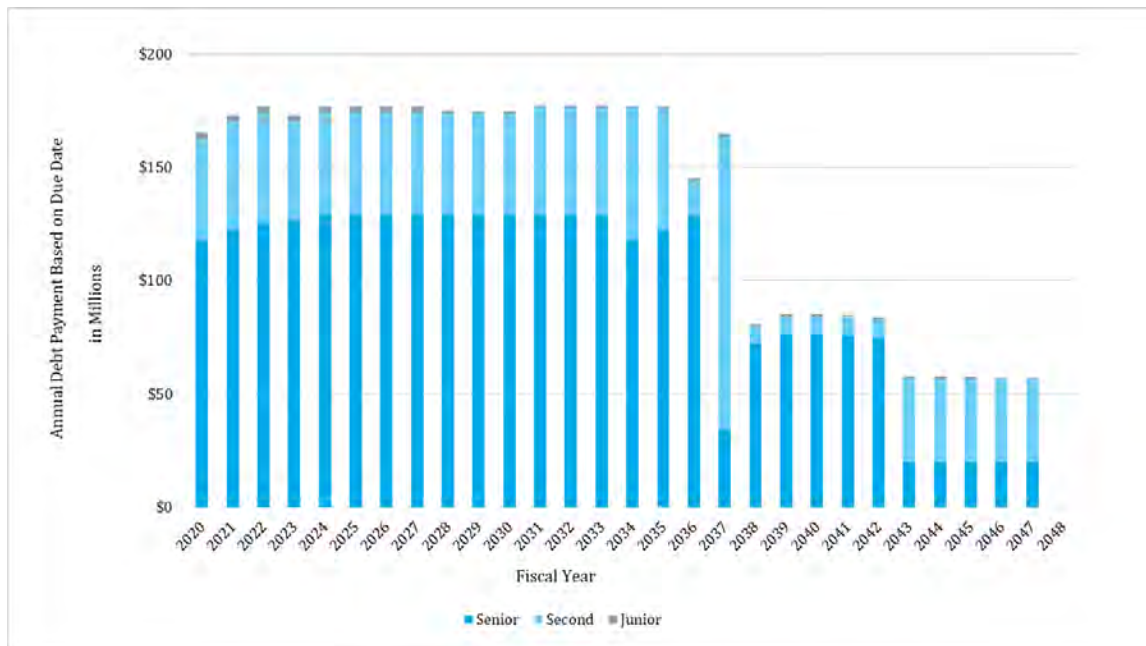
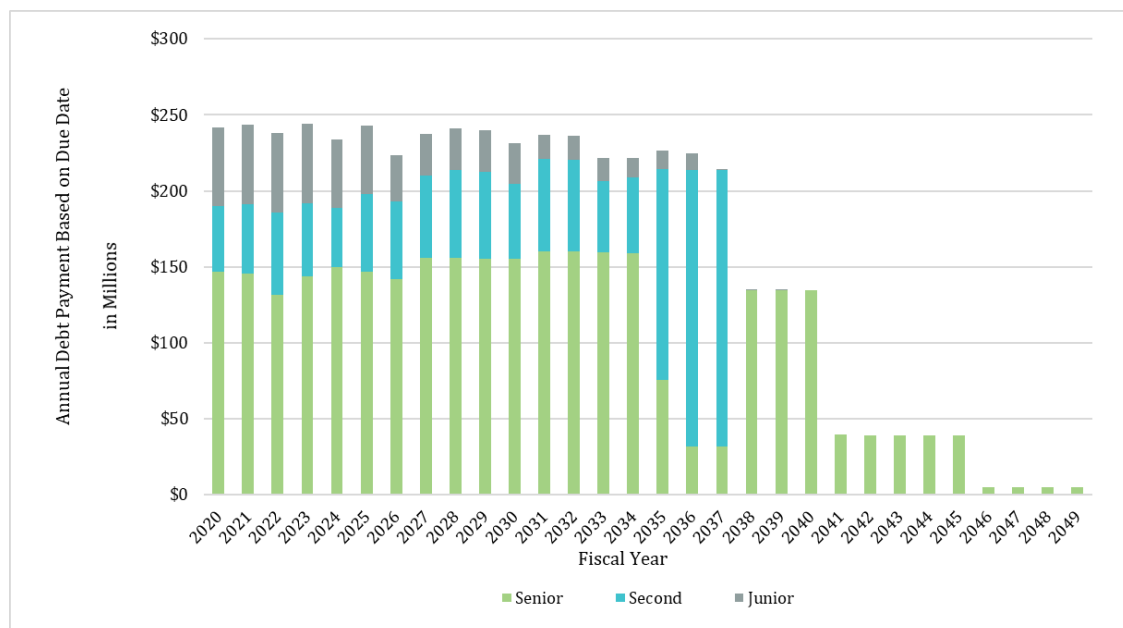


Chart 4 – Annual Debt Service Payments by Lien – Sewer provides the amortization schedule of combined annual debt service requirements by due dates within the fiscal year based on debt owed as of June 30, 2019.



Note: Approximately one-half of the Senior and Second lien bonds are due the first day of the fiscal year and is actually paid by June 30 annually. Charts 3 & 4 accurately reflect the amounts due annually, but this information will differ from the yearend Comprehensive Annual Financial Report which requires a different manner of reporting.

State of Michigan's State Revolving Fund (SRF) Programs: GLWA participates in the State's Clean Water Revolving Fund (CWRF) to finance qualified sewage disposal system projects and the State's Drinking Water Revolving Fund (DWRF) to finance qualified water supply system projects. For the purposes of this report, both water and sewer projects financed through these programs will be referred to as either water or sewer SRF loans.

These loan programs have interest rates that are well below open market interest rates (usually between 2.0% and 2.5%) and are repaid over 20-30 years. Funds are disbursed as construction payments are made. Interest on each loan is based on the amount of funds drawn and not the full loan amount. GLWA must submit project plans to Michigan Department of Environment, Great Lakes, and Energy ("EGLE", and formerly known as the Michigan Department of Environmental Quality or MDEQ) for each project by the annual submission date (May 1 for DWRF and July 1 for CWRF) in order to be considered for the State's funding pool for the following fiscal year.

State Revolving Fund Loans: GLWA's strategy is to maximize its use of SRF loans to finance qualified capital projects. GLWA currently has approximately \$29.2 million in outstanding water SRF loans and \$444.8 million in outstanding sewer SRF loans.

Table 4 - Active SRF Project Summary provides information regarding each loan including the loan award date which is also referred to as the Order of Approval date by the State of Michigan.

State Loan #	Description	Order of Approval	Project Total (\$ Millions)
SRF Water - DWSD Projects			
7414-01	Water Main Replacement (WS-698)	6/1/2017	\$8.7
7447-01	Water Main Replacement (WS-707)	8/9/2019	\$16.5
SRF Water - GLWA Projects			
7445-01	Northeast Transmission Phase 1	8/9/2019	\$30.0
7446-01	Lake Huron Sludge System-Raw Sludge Clarifiers	5/17/2019	\$8.3
Total Water			\$63.5
SRF Sewer - GLWA Projects			
5635-01	Aeration System Improvements	8/24/2016	\$19.3
5636-01	Rehab Rectangular Primary Clarifiers, Electrical/Mechanical Buildings and Pipe Gallery	8/24/2016	\$51.3
5651-01	RRO Disinfection (Phase II)	3/13/2015	\$38.5
5655-01	Detroit River Interceptor	8/23/2018	\$17.5
Total Sewer			\$126.6

Chart 5 - Open State Revolving Fund Loans summarizes all current SRF loans held by GLWA (including financings on behalf of DWSD) that are active (reference Table 4 above for project descriptions). It summarizes the original award amount remaining and the amount drawn down as of September 30, 2019 for each loan. At September 30, 2019 the amount of SRF loans authorized and unissued are \$55.4 million for the Water Fund and \$35.2 million for the Sewer Fund.

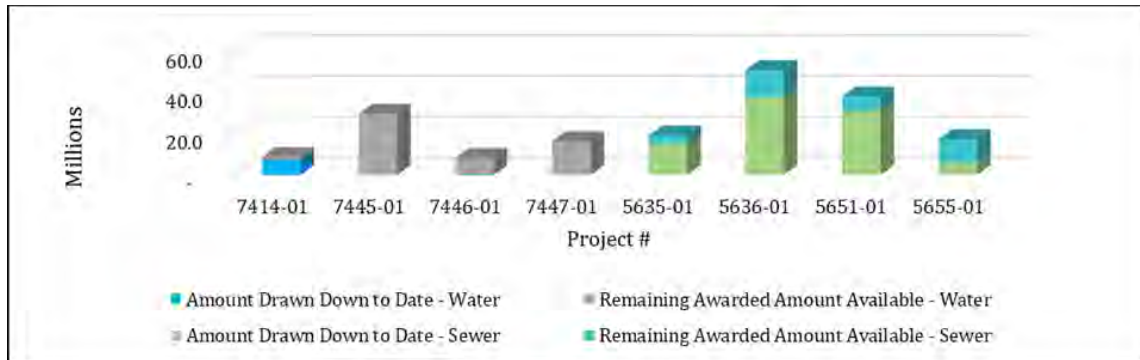


Table 5 - Project Plan Approved by EGLE identifies projects approved by the EGLE but for which applications have not yet been submitted for funding.

Project Owner	Description	Project Total	Anticipated Funding Date
Water SRF			
DWSD	Local System Water Main Replacement- WS-710 and WS-711	32,635,000	3/27/2020
Total Water SRF		\$ 32,635,000	
Sewer SRF			
GLWA	Ferric Chloride System Rehabilitation (PS-2)	\$ 13,000,000	8/28/2020
Total Sewer SRF		\$ 13,000,000	

DWSD Obligation Receivable: GLWA holds an obligation receivable from DWSD as an asset to account for the amount due for financing local system capital projects. DWSD carries a like amount of this as an obligation payable on its statement of net assets.

There are three components to the calculation of the DWSD obligation receivable. These are:

- an agreed upon amount for pre-January 1, 2016 (i.e. “pre-bifurcation”) debt as documented in a 2018 Memorandum of Understanding (\$455 million for water system and \$370 million for sewer per agreed-upon amortization schedules),
- new revenue bonds issued after January 1, 2016 to specifically fund the DWSD local system capital improvement projects which are payable based on the allocable share of the actual bonds debt service schedule, and
- SRF loans issued after January 1, 2016 for specific DWSD capital projects which are payable based on the allocable share of the actual loan payment schedule.

All retail customer revenues are deposited into a trust to fund these financial obligations in accordance with the MBO flow of funds.

Chart 6 - DWSD Obligation Receivable by Type summarizes the total DWSD obligation receivable balance for both Water and Sewer as of September 30, 2019 by pre-bifurcation, revenue bond and SRF component.

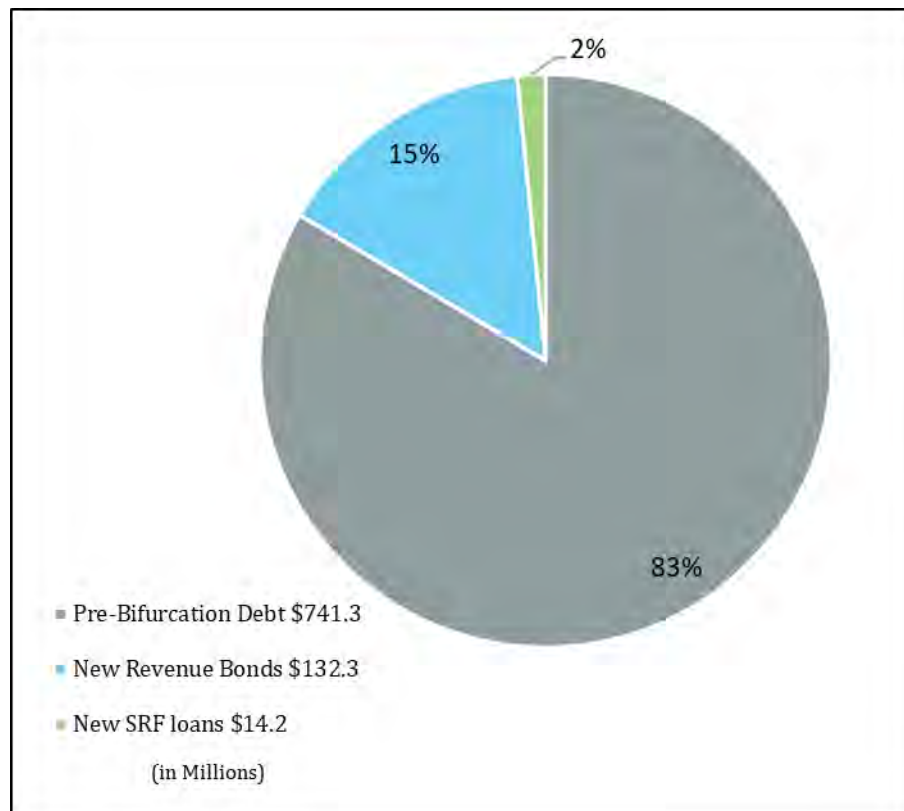


Chart 7 – Obligation Receivable Compared to Total Debt - Water provides context by comparing the Water System Obligation Receivable to the Total Water Debt (excludes unamortized premiums).

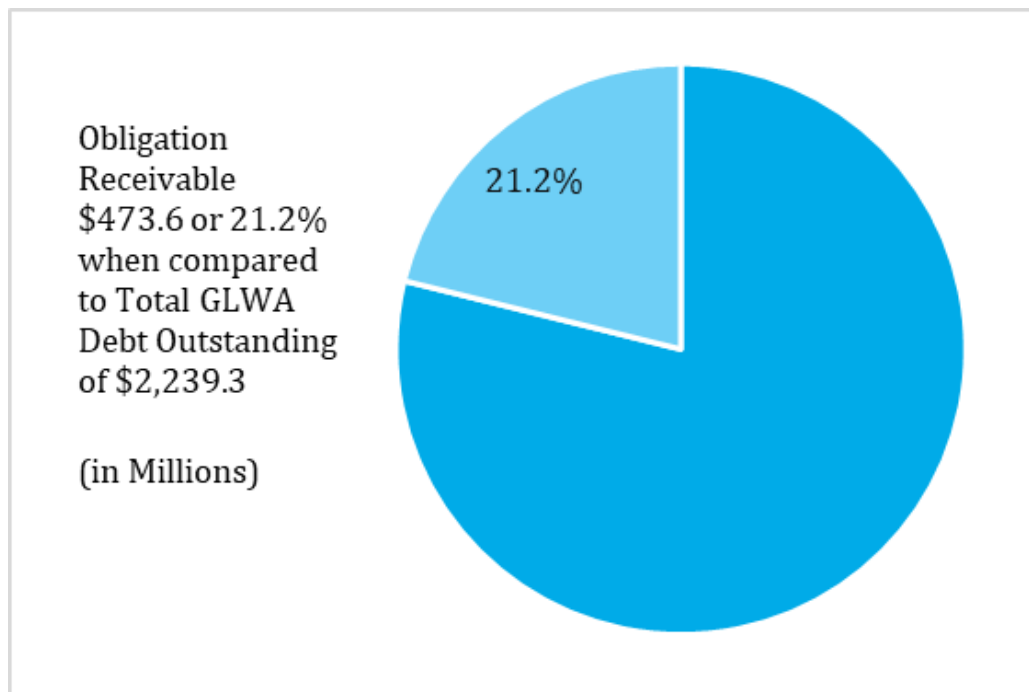


Chart 8 – Obligation Receivable Compared to Total Debt - Sewer provides context by comparing the Sewer System Obligation Receivable to the Total Sewer Debt (excludes unamortized premiums).

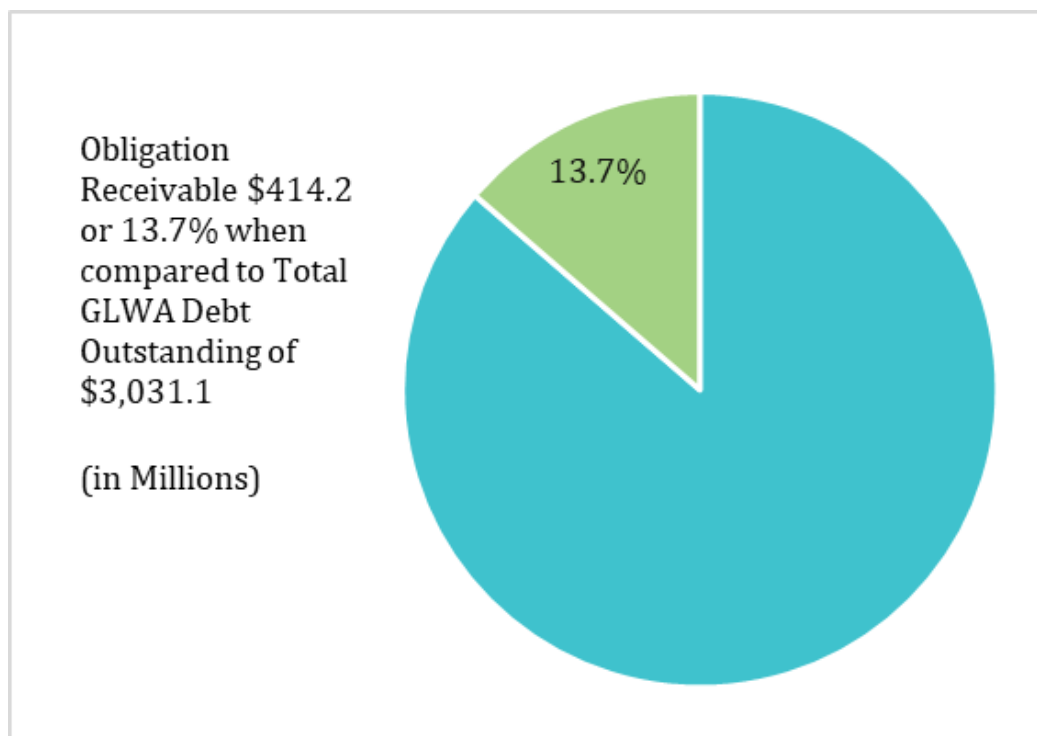


Table 6 - DWSD Obligation Receivable provides obligation receivable detail including fiscal year 2020 beginning balances by debt type and loan issue (for revenue bonds and SRF loans), year-to-date activity and ending balances as of September 30, 2019. Total DWSD debt totals \$903.5 million. This differs slightly from the total in Chart 8 due to the inclusion of unamortized premiums.

(In Thousands)				
Debt Type	July 1, 2019 Beg Balance	Increase	Decrease	September 30, 2019 End Balance
DWSD Water				
Pre-Bifurcation Debt	\$ 412,141	\$ -	\$ (3,455)	\$ 408,685
Revenue Bond - 2016A	17,725	-	-	17,725
Revenue Bond - 2016B	33,015	-	-	33,015
SRF 7412-01	5,084	-	-	5,084
SRF 7413-01	3,299	-	-	3,299
SRF 7414-01	5,420	388	-	5,808
Total DWSD Obligation	476,683	388	(3,455)	473,616
Unamortized Premiums	6,127		(35)	6,092
Subtotal: Water	482,810	388	(3,490)	479,707
DWSD Sewer				
Pre-Bifurcation Debt	335,575	-	(2,935)	332,639
Revenue Bond - 2018A	81,595	-		81,595
Total DWSD Obligation	417,170	-	(2,935)	414,234
Unamortized Premiums	9,687	-	(86)	9,601
Subtotal: Sewer	426,857	-	(3,022)	423,835
Total DWSD Debt	\$ 909,667	\$ 388	\$ (6,512)	\$ 903,543

Annual Change in Outstanding Debt: It is the goal of GLWA to ensure the long-term sustainability of the water and sewer systems. One of the best ways to accomplish this is by reducing the debt service payments on existing bonds as well as reducing the amounts of future bond issues by using revenue financed capital.

Table 7 - Long-Term Debt Summary provides a detail of GLWA's fiscal year 2020 beginning balances by debt type and loan issues, year-to-date activity, and ending balances as of September 30, 2019. GLWA debt includes financing for both the regional and local share.

Debt Type	(In Thousands)			
	July 1, 2019 Beg Balance	Increase	Decrease	September 30, 2019 End Balance
Water Fund				
Revenue Bonds	\$ 2,220,320	\$ -	\$ (10,205)	\$ 2,210,115
State Revolving Loans	29,861	974	(1,640)	29,194
Total Installment Debt	2,250,181	974	(11,845)	2,239,309
Unamortized Premiums / Discounts	246,241	-	(4,277)	241,964
Subtotal: Water	2,496,422	974	(16,122)	2,481,273
Sewer Fund				
Revenue Bonds	2,604,390	-	(29,415)	2,574,975
Capital Appreciation bonds	14,780	-	(3,445)	11,335
State Revolving Loans	474,177	7,647	(37,070)	444,754
Total Installment Debt	3,093,347	7,647	(69,930)	3,031,064
Capital Appreciation Bond Discount	(1,402)	-	414	(988)
Unamortized Premiums / Discounts	159,807	-	(1,401)	158,406
Subtotal: Sewer	3,251,752	7,647	(70,917)	3,188,481
Total Combined, Long Term Debt	\$ 5,748,174	\$ 8,620	\$ (87,040)	\$ 5,669,754

Debt Service Coverage

GLWA is committed to ensuring the long-term sustainability of the water and sewer systems and has pledged specific revenue streams to secure the repayment of the revenue bonds and SRF loans associated with them. The MBO establishes minimum debt coverage levels at 1.20 for senior lien bonds, 1.10 for second lien bonds and 1.00 for any junior lien bonds, other than second lien bonds. Debt service coverage ratios are inclusive of all debt held on behalf of both GLWA and DWSD.

Table 8: Debt Service Coverage Ratios provides a summary of the debt service coverage ratios for the water and sewer systems as reported in the Comprehensive Annual Financial Report (CAFR) for 2016, 2017, 2018 and 2019 as well as ratios based on the adopted FY 2020 Budget. Debt service coverage is calculated by dividing the Net Revenues for the fiscal year of calculation by the debt service installment requirements on bonds for such fiscal year all for such priority of lien and any higher priority of lien.

Water Fund	MBO Required Minimum	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020
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Senior Lien Bonds	1.20	2.11	2.03	2.03	2.04	1.94
Senior and second lien bonds	1.10	1.59	1.57	1.52	1.47	1.40
All bonds, including SRF junior lien	1.00	1.58	1.56	1.51	1.45	1.38

Sewer Fund	MBO Required Minimum	Actual 2016	Actual 2017	Actual 2018	Adopted Budget 2019	Adopted Budget 2020
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Senior Lien Bonds	1.20	2.33	2.32	2.11	2.10	2.11
Senior and second lien bonds	1.10	1.72	1.73	1.61	1.61	1.61
All bonds, including SRF junior lien	1.00	1.43	1.39	1.29	1.28	1.26

Potential Refunding Opportunities

In an effort to reduce the annual water and sewer debt service payments, GLWA monitors its outstanding water and sewer debt portfolios to determine if it has the ability to refund existing bond issues with new, lower interest rate bonds. At least once per year, GLWA's registered municipal advisor, PFM Financial Advisors, LLC (PFM) prepares an analysis of GLWA's bond refunding opportunities based on the current municipal interest rate environment and the existing debt service on GLWA's callable bonds. The latest PFM analysis was presented at the October 18, 2019 Audit Committee meeting. If municipal interest rates continue to be favorable, GLWA intends to issue refunding bonds in FY 2020.