



Audit Committee Meeting
Friday, March 25, 2022 at 8:00 a.m.
www.glwater.org

[Join Zoom Meeting](#)

Meeting ID: **882 7795 7299** Passcode: **399074**
US Toll-free: **888 788 0099** or **877 853 5247**

AGENDA

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

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
 - A. February 25, 2022 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. Water Residential Assistance Program Updates (Page 6)
7. NEW BUSINESS
 - A. *Action Item:* Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 (Ordinance 2022-02) (Page 14)
 - B. *Action Item:* Authorizing Publication of Notice of Intent to Issue Water Supply and Sewage Disposal System Revenue Bonds (Page 40)
 - C. *Action Item:* FY 2022 Second Quarter Budget Amendments (Page 50)
 - D. Calendar Year 2022 Financing Team Selection (Page 89)
8. REPORTS
 - A. CFO Report (Page 92)
 - B. Monthly Financial Report for December 2021 (Page 97)
 - C. Business Inclusion and Diversity Program Update (Page 98)
 - D. Quarterly Gifts, Grants & Other Resources Report (Page 101)
 - E. Quarterly Debt Report (Page 111)
 - F. Annual Procurement Report (Page 126)
9. COMMUNICATIONS
 - A. *The Procurement Pipeline* for March 2022 (Page 171)
 - B. Correction of FY 2023 Approved Pollutant Surcharge Charge Support (Page 173)
 - C. Moody's Credit Opinion Re Great Lakes Water Authority, March 23, 2022 (Page 175)
10. LOOK AHEAD
 - A. Next Audit Committee Meeting: April 22, 2022 at 8:00 a.m.
11. OTHER MATTERS
12. ADJOURNMENT



Great Lakes Water Authority

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

Meeting Minutes - Draft

Audit Committee

Friday, February 25, 2022

8:00 AM

Zoom Telephonic Meeting

Zoom Telephonic Meeting

Join Zoom Meeting Here:

<https://glwater.zoom.us/j/86061585624?pwd=OS9XS2pYbzdoWjVwcmdra2ZFVml1Zz09>

Join By Telephone:

877 853 5247 US Toll-free

888 788 0099 US Toll-free

Meeting ID: 860 6158 5624

Passcode: 077431

1. Call To Order

Chairperson Baker called the meeting to order at 8:01 am

2. Quorum Call

Present: 3 - Chairperson Brian Baker, Director Gary Brown, and Director Jaye Quadrozzi

3. Approval of Agenda

Nicolette Bateson, Chief Financial Officer/Treasurer, requested to move item 8.E. Quarterly Investment Report after item 7.A., and item 8.F. Quarterly WRAP Report after item 7.C.

Chairperson Baker requested a Motion to Approve the Agenda as Amended

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Approved as Amended

The motion carried by a unanimous vote.

4. Approval of Minutes

A. [2022-078](#) Minutes of January 21, 2022

Indexes: Finance

Attachments: [4A January 21, 2022 Audit Committee Meeting Minutes](#)

Chairperson Baker requested a Motion to Approve the January 21, 2022 Audit Committee Meeting Minutes.

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Approved

The motion carried by a unanimous vote.

B. [2022-079](#) Minutes of February 11, 2022

Indexes: Finance

Attachments: [4B February 11, 2022 Special Audit Committee Meeting Minutes](#)

Chairperson Baker requested a Motion to Approve the February 11, 2022 Special Audit Committee Meeting Minutes.

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Approved

The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

6. Old Business

None

7. New Business**A.** [2022-080](#) Presentation: Municipal Advisor Market Update

Indexes: Finance

Attachments: [7A1- Municipal Advisor Update Memo](#)

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Received and Filed

The motion carried by a unanimous vote.

8. E. [2022-089](#) Quarterly Investment Report
- Indexes:** Finance
- Attachments:** [8E1 Quarterly Investment Report Cover Memo December 2021](#)
[8E2 GLWA Quarterly Report December 2021 FINAL](#)
- Motion By: Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- B. [2022-081](#) Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Bonds in an Amount Not to Exceed \$13,000,000 (Ordinance 2022-01)
- Indexes:** Finance
- Attachments:** [7B2 Resolution Approving 2022 SRF-1 Ordinance \(DWRF\)](#)
[7B3 Series Ordinance \(2022 SRF-1 2.5 Quarter DWRF\)](#)
- Motion By: Gary Brown
Support By: Jaye Quadrozzi
Action: Recommended for Approval to the Board of Directors
Agenda of March 23, 2022
The motion carried by a unanimous vote.
- C. [2022-082](#) Scheduling of Public Hearings for the FY 2023 Clean Water State Revolving Fund (CWSRF)
- Indexes:** Finance
- Attachments:** [7C3 CWSRF Public Hearing Notice](#)
- Motion By: Jaye Quadrozzi
Support By: Gary Brown
Action: Recommended for Approval to the Board of Directors
Agenda of March 23, 2022
The motion carried by a unanimous vote.
- 8.F. [2022-090](#) Quarterly WRAP Report
- Indexes:** Finance
- Attachments:** [8F1 Quarterly WRAP Report thru 12.31.2021](#)
[8F2 Appendix A - Quarterly WRAP Performance Metrics Report](#)
- Motion By: Gary Brown
Support By: Jaye Quadrozzi
Action: Received and Filed
The motion carried by a unanimous vote.

D. [2022-083](#) WRAP Funding Reallocation

Indexes: Finance

Attachments: [7D1 WRAP Funding Reallocation](#)

[7D2 WRAP Funding Reallocation](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

Note: A Special Audit Committee Meeting has been scheduled for Friday, March 18, 2022, at 8:00 a.m. for further discussion of WRAP Funding Reallocation.

E. [2022-084](#) WRAP Administrator Contracts

Indexes: Finance

Attachments: [7E1 WRAP Administrator Contracts](#)

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Received and Filed

The motion carried by a unanimous vote.

8. Reports**A.** [2022-085](#) CFO Report (verbal)

Indexes: Finance

Nicolette Bateson, Chief Financial Officer/Treasurer, stated that the audit services request for proposal has been issued this week and is now available in Bonfire. Timing for Audit Committee review of those proposals is contingent upon the number of proposals received.

B. [2022-086](#) Monthly Financial Report for October 2021

Indexes: Finance

Attachments: [8B October 2021 Financial Report_Tagetik](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

C. [2022-087](#) Monthly Financial Report for November 2021

Indexes: Finance

Attachments: [8C November 2021 Financial Report_Tagetik](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

D. [2022-088](#) Business Inclusion and Diversity Program Update

Indexes: Finance

Attachments: [8D Business Inclusion and Diversity Program Update](#)

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Received and Filed

The motion carried by a unanimous vote.

9. Communications

A. [2022-091](#) The Procurement Pipeline for February 2022

Indexes: Finance

Attachments: [9A The Procurement Pipeline for February 2022](#)

No Action Taken

10. Look Ahead

A Special Audit Committee Meeting has been scheduled for Friday, March 18, 2022 at 8:00 a.m.

The next regular Audit Committee Meeting is scheduled for Friday, March 25, 2022 at 8:00 a.m.

11. Other Matters

There were no other matters.

12. Adjournment

Chairperson Baker requested a Motion to Adjourn.

Motion By: Gary Brown

Support By: Jaye Quadrozzi

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 9:53 a.m.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

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

Re: Water Residential Assistance Program Update

Background: In June 2020, the Great Lakes Water Authority contracted with Public Sector Consultants (PSC) to engage stakeholders and perform an evaluation of WRAP program effectiveness and opportunities for improvement. In November 2020, PSC presented the Board of Directors with a list of recommendations which have largely been put into place. The effectiveness of these changes, along with the performance of service delivery partners was difficult to evaluate as the COVID-19 pandemic restrained WRAP client service opportunities. The evaluation of these changes was also occurring at a time when an unprecedented level of one-time water assistance funding was distributed to the action agencies by the state of Michigan. Best use of public resources was to apply the state and federally supported funding first and WRAP second. The pandemic further limited in-home services to protect the residents and workers in alignment with public health requirements and guidelines.

Analysis: Beginning July 1, 2021, the service partner delivery model moved from a decentralization from Wayne Metro as the lead for the entire service area to Oakland Livingston Human Service Agency (OLHSA) and Macomb Community Action Agency (MCAA) being the lead agency for their respective county. With nearly nine months experience with the new WRAP delivery model, there has been improvement in Oakland and Macomb utilization, but the pace and trajectory are still below meeting the needs that we know exist. Additionally, as we now emerge from the pandemic era with one-time funding for arrearages and assistance and a return to in-person interactions, *the timing and implementation for broader amendments to the WRAP program design and delivery model is warranted.*

It is important to note that we are very appreciative and have the highest level of respect for each of our service delivery partners, Wayne Metro, OLHSA, and MCAA. They have risen to an immense challenge over the past two years. Each agency, and each county, is unique. I want to underscore this point, because the barriers to success may sound critical of the individual agencies. That is not the case. What we have discovered, is that 1) there are a number of competing priority programs to manage in the human services area, 2) fundamental changes that need to be made to the WRAP design and delivery methods for

greater success, and 3) a “one source” action agency, particularly for Oakland and Macomb, is leaving out a number of viable pipelines to reach out to constituents in need. It is important that the program moving forward retains what is working well and focus on the barriers to success. One of the areas working well is the relationship with the City of Detroit Water & Sewerage Department (DWSD) and Wayne Metro – particularly as it relates to program administration. The size of the city’s customer base makes it unique compared to the other member partner communities. For those reasons, proposals to amend some administrative processes may not be applicable to DWSD.

The table below is an executive summary of the barriers and **strategies** that we would like to begin to rollout with a target date of full implementation by July 1, 2022. There are many details to work through internally and with external stakeholders as well as the Board of Directors via the leadership of GLWA’s Affordability & Assistance Manager, Madison Merzlyakov. There is an attached memo from her related to details and next steps. The table below is presented to frame the discussion with the Audit Committee before we launch into an aggressive timeline to effectuate program changes.

Barriers to Success	Strategy
Program Benefits	
A payment amount of \$25/month is meaningful in some communities but not others	Utilize EPA’s model for determining water affordability where annual cost of water service is compared to household income and other relevant factors
Given the monthly bill compared to the \$25 payment, clients decline participation because they know they will not be successful based on their payment amount based on the relative size of their water bill	Scalability of payment, client education related to budget payments, reward participation of <i>some</i> payment to stay in program
Misnomer that someone needs to “have documented income” to receive benefits	Caseworker training that “proof of income” is helpful in determining eligibility but recognize that a person is in need because they have no income - allow for instances where there is temporarily no income and/or acknowledge that household support may come from other sources.
Lack of contractor resources and/or in-house action agency expertise to manage the water use efficiency audits and/or repairs	Expand client service delivery partners who have the staff resources and compatible programs to reach out and service more constituents; evaluate GLWA procuring master agreements for agencies to access for contractors

Barriers to Success	Strategy
Unique to the City of Flint – stop and start of WRAP based on funding available	Smoothing of existing resource commitments and perhaps more often reviews of overall program utilization/reallocation
Program Administration	
Three levels at which each community opts-in level 1, opt-in level 2, or complete opt-out; this is very confusing and burdensome for case workers. As a result, case workers do not promote WRAP at point of intake and/or the program becomes siloed from other agency offerings.	Eliminate the opt-in/opt out model and move to direct client service that eliminates workload on Member Partner communities. Train case workers with a simple list of eligible communities.
Tracking success of the monthly, bi-monthly, or quarterly payment is based on an unreasonably burdensome Excel file exchanged between Member Community and Action Agency.	Eliminate the burden on the Member Partner community. Empower caseworker to work with client to review the client's progress in making payments as a pathway to long-term success rather than compliance validation by the Member Partner community.
Placing burden on a handful of action agencies are the best approach to reach constituents in need <i>throughout</i> the GLWA service area.	Expand “client service delivery partners” who have the staff resources and compatible programs to reach out to more people as well as provide services.
Action agency staffing is limited, program is burdensome, and other programs are higher priorities.	Expand client service delivery partners who have the staff resources and compatible programs to expand access to the program.
Data tracking monthly is not timely or effective for decision making and monitoring program effectiveness.	Client data sheet submitted to GLWA in some electronic method that provides statistical data (e.g., excludes client's personal information).
Outreach	
Ensure the level of outreach matches the resources available for delivery on services promoted. If outreach increases client awareness, but there are not sufficient caseworkers, the program will falter.	Expand client service delivery partners who have the staff resources and compatible programs to reach out to more people and serve as secondary source to manage client needs.

Barriers to Success	Strategy
Expand grass roots partner engagement of WRAP to evaluate outreach effectiveness and networking.	Advisory panel including service delivery partners and others to support program success.

The next steps include the following.

1. Receive Audit Committee feedback
2. GLWA to build out the details of the WRAP strategy moving forward
3. Strengthen program delivery where it is most successful (Wayne Metro and DWSD)
4. Continue discussions with, and recruitment of additional service delivery partners with an emphasis on the GLWA service area outside of Wayne County

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Madison Merzlyakov, Affordability & Assistance Manager

Re: Water Residential Assistance Program – Next Steps in Program Improvements

The Great Lakes Water Authority (GLWA) is continuously evaluating ways to improve the Water Residential Assistance Program (WRAP) to best utilize the funding available. The following program design changes are recommended to remove unnecessary barriers to households enrolling in the program, as well as providing the right level assistance to adequately meet a household's need.

1. Evaluate Water Affordability

A household enrolled in WRAP is currently eligible for \$25 per month in direct bill assistance. This amount is meaningful in some communities but not in others. Household income, size and the amount of the water bill is not considered. In some cases, households decline participation because they know they will not be successful based on their payment amount given the relative size of their water bill.

When evaluating water affordability at a community level the EPA has determined combined sewer and water bills over 4.5% of the median household income for the community to be unaffordable. GLWA is proposing to utilize this approach and create a sliding scale for direct bill payment assistance that is based upon their average bill amount and household income.

As discussed above, upon intake a household would need to provide data on a year's worth of water consumption and costs to calculate the average bill amount. It would then be determined how much of their household income is being spent on their bill. Once this percentage is obtained, the caseworker could determine the level of assistance based on a scale. Below is an example of what this scale might look like.

Water Bill as a Percentage of Household Income	Under 4%	4.5%	5%	5.5%	6%	6.5% and above
Monthly Support	\$25	\$30	\$35	\$40	\$45	\$50

Using this sliding scale of assistance, GLWA has run the following scenarios to demonstrate how the program would work for different households.

Scenario 1: Household of one at 135% of the federal poverty level (FPL)

Household Income: \$20,000 or \$1,666 a month

- Average water bill: \$95/month or 5.7% of their household income (\$95 is the average bill in City of Detroit)
- Monthly direct assistance: \$40
- New average water bill: \$55/month or 3.3% of their monthly household income

Scenario 2: Household of four at 200% of FPL

Household income \$55,500 or \$4,583 a month

- Average water bill: \$140/month or 3% median household income
- Monthly direct assistance: \$25
- New water bill \$115 or 2.5% of their monthly household income

Scenario 3: Median household income in Detroit and average monthly water bills

Household income: \$32,498 or \$2,708 a month

- Average water bill: \$95 or 3.5% of household income
- Monthly direct assistance: \$25
- New water bill \$70 or 2.6% of household income

2. Move toward direct client assistance

Reducing the workload burden required of our Member Communities. This will be accomplished by removing the requirement of communities to verify on time payments for the household. This will also empower the Community Action Agencies (CAAs) to work with the client to review their progress in making payments as a pathway to long-term personal financial sustainability.

Direct Client Assistance Process:

- 1) Household provides documented income (if available)/ability to pay and data on water consumption and cost for the past year (i.e. past water bill information)
- 2) CAA verifies eligibility and calculates monthly support based on annual water bill amount and household income
- 3) CAA alerts Member Community that the household is enrolled in WRAP

- 4) Member Community flag accounts that are enrolled in WRAP to avoid water shutoff or penalty fees (*note: this part of the proposal may not be universally accepted by Member Communities and will require further dialog*)
- 5) CAA makes payments directly to the Member Community on behalf of the household
- 6) Member Community receive and apply payments from the CAA to the corresponding household in same manner as any other account payment
- 7) Household makes payments on the remainder of their bill to the Member Community
- 8) CAA works directly with household to review progress in making payments as a pathway to long-term success

It is important to note that the current relationship between Wayne Metro and the Detroit Water & Sewerage Department (DWSD) is working well and the current established process is successful. What works well for a large community like Detroit, will not always work well for smaller communities. GLWA is not recommending changes to that specific relationship.

3. Provide WRAP as core service for eligible Member Communities (thereby eliminating opt-in/out and service levels)

Due to Member Community resources being required to administer the program, communities must choose to opt into WRAP. When opting in, a community then has multiple options to choose from. The opt in requirement and options have caused confusion for residents and is a burden on the CAAs. It also means that while all Member Communities are paying into the program, not all residents are able to take advantage of the program.

By removing the workload burden Member Communities experienced with their involvement in the monthly/quarterly bill review as mentioned in item 2 above, we believe there is no reason to continue with the opt in model and different program options. This would mean that if a low-income household in an eligible GLWA Member Community meets the other requirements of WRAP, they will be eligible for all elements of the program. This will allow the program to be more accessible, removes the burden at the Member Community level and allows for more simple, direct assistance to the household.

4. Allow for instances where there is no income

There is the impression that a household must have income to be eligible for WRAP. While CAAs have been flexible in what they accept as formal income, this has been a barrier to categorial eligibility and engaging the wraparound services that CAAs can provide.

GLWA is proposing that upon intake if a household indicates they do not have documented income, they are still able to enroll in the program and a plan to maintain payments is

documented. An example of this could be where a family member provides financial support to the household.

5. Form a Member Community WRAP Advisory Panel

GLWA recognizes that engagement at the member community level is still important to the success of WRAP. A Member Community WRAP Advisory Panel will be formed that has representatives from various Member Communities to help establish what that relationship might look like and to help continuously evaluate the program and its success.

6. Expand Partnerships

The CAAs have been key partners in administering WRAP, however they are often faced with resource constraints, as they are responsible for administering many other programs. There are other resources in the region that may be able to support different elements of the WRAP program.

GLWA proposes to begin engaging other potential service delivery partners in addition to our CAAs to help with program aspects like outreach and conservation elements (minor plumbing repairs, home water audit, contractor resources).

7. Track progress

Currently, the CAAs own the data and report out to GLWA in various formats. Data tracking on a monthly basis is not timely or effective for decision making and monitoring program effectiveness. GLWA proposes that data is more closely tracked and provided directly to GLWA via a client data sheet submitted upon intake that provides statistical data (but not personal information).

8. Provide more frequent reviews of overall program utilization

The City of Flint is in a unique position that often results in the stopping and starting of the program based on current funding available. GLWA is proposing that by reviewing the program utilization more frequently and considering reallocation on a more regular basis, the program will be able to run smoother for Flint residents.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Kim Garland, CPA, Financial Services Area Chief of Staff

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 (Ordinance 2022-02)

Background & Analysis: See attached draft Great Lakes Water Authority (“GLWA”) Board letter.

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the resolution Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 for 5655-03 Financial Segment 2 for the Detroit River Interceptor.

..Title

Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 (Ordinance 2022-02)

..Body

Agenda of: April 27, 2022
Item No.: **2022-119**
Amount: Not to Exceed \$42,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Suzanne R. Coffey, P.E.
Interim Chief Executive Officer
Great Lakes Water Authority

DATE: April 27, 2022

RE: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 (Ordinance 2022-02)

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer//Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approve the resolution Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 as presented**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

On February 26, 2020, the Great Lakes Water Authority (“GLWA”) Board of Directors approved Resolution 2020-068, “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 \$200,000,000” (the “Notice of Intent”). This is the fifth series of water bonds from that Notice of Intent in the amount not to exceed \$42,000,000.

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 Clean Water State Revolving Fund (CWSRF) Bonds, designates the Bonds as 2022 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.

JUSTIFICATION

This series of bonds authorized by this ordinance will be sold through the state of Michigan’s CWSRF program (Project #5655-03) is a Regional Sewer System project involving the evaluation and rehabilitation of the Detroit River Interceptor (DRI) which conveys approximately 30% of GLWA wastewater flows to the Water Resource Recovery Facility (WRRF). The DRI was constructed in 1927 and has seen limited maintenance and rehabilitation since that time and is currently in poor condition. The DRI is an extremely important interceptor in the collection system and the consequences of failure are high. Therefore, this project is necessary to ensure that GLWA can rely on this critical component of the system to convey maximum wastewater flows to the WRRF, while mitigating historical problems with combine sewer overflows (CSOs), interceptor collapses, sink holes and residential basement flooding. The project will significantly provide upgrades and improve the reliability of the DRI conveyance system.

This loan will support Reach 3 work. It is expected to be the final phase of work with overall estimated project completion date of May 2026 and an estimated total project cost of nearly \$90 million. The State considers 5655-03 to be a financial segment, which is a continuation of a previously approved project typically associated with larger or longer-term projects that extend beyond current State SRF funding amounts and construction milestone requirements. It follows two, prior, CWSRF loans approved for this project totaling approximately \$46 million.

Loan #	Date Approved	Amount
5655-01	August 2018	\$17,510,000
5655-02 Financial Segment 1	February 2020	\$28,350,000
	Total	\$45,860,000

The 2022 SRF-1 Junior Lien Bonds will be sold to the Michigan Finance Authority. The current program interest rate for the CWSRF is 1.875% with a 20-year term. The not to exceed amount for this series of \$42 million.

BUDGET IMPACT

The debt service payments on the GLWA Regional project are anticipated to start on October 1, 2023 with minimal amounts of interest due, because of the projected draw down schedules. Interest expense on the loan will be included in the FY 2024 Water Budget.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 25, 2022. The Audit Committee *[insert action]* of the resolution for the Approval of Series Ordinance Authorizing Issuance and Sale of Sewer Disposal System Revenue Bonds in an Amount Not to Exceed \$42,000,000 as presented.

Great Lakes Water Authority

Resolution 2022-119

RE: Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Bonds in an Amount not to Exceed \$42,000,000

Ordinance 2022-02

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 Sewage Disposal System Revenue Bonds in an Amount not to Exceed \$42,000,000” (the “2022 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, August 10, 2016 and February 12, 2020.

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 2022 SRF-1 Series Ordinance.

Now, Therefore Be It:

Resolved That the 2022 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 2022 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: _____, 2022

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2022-02

**SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF
SEWAGE DISPOSAL SYSTEM REVENUE BONDS IN
AN AGGREGATE AMOUNT NOT TO EXCEED \$42,000,000**

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 “2022 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 “2022 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 “2022 SRF-1 Series Ordinance”) is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2022 SRF-1 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings, respectively, in this 2022 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) “2022 SRF-1 Junior Lien Bonds” means the Bonds authorized by Section 5 of this 2022 SRF-1 Series Ordinance for the purpose of paying and/or reimbursing costs of the 2022 SRF-1 Project.

(b) “2022 SRF-1 Project” means improvements to the Regional Sewer System, including but not limited to improvements to the Detroit River Interceptor (DRI) component of the Authority’s Conveyance System that directs flow for treatment at the Water Resource Recovery Facility (WRRF).

(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. In accordance with Resolution 2021-330 adopted by the Authority Board on August 11, 2021, references herein to Chief Executive Officer shall be deemed to include any duly appointed Interim Chief Executive Officer.

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

(f) “Maturity Date” means such dates of maturity of the 2022 SRF-1 Junior Lien Bonds as determined in the Sale Order.

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

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

(i) “Project Costs” means the costs of acquiring, constructing, equipping, installing and financing the 2022 SRF-1 Project, including Issuance Costs relating to the 2022 SRF-1 Junior Lien Bonds.

(j) “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 2022 SRF-1 Junior Lien Bonds.

(k) “Regional Construction Fund, Series 2022 SRF-1” means a subaccount of the Construction Fund established in accordance with Section 11 of this 2022 SRF-1 Series Ordinance relating to the construction of the 2022 SRF-1 Project to be paid with the proceeds of the 2022 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 2022 SRF-1 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2022 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 the 2022 SRF-1 Junior Lien Bonds.

(o) “Taxable 2022 SRF-1 Junior Lien Bonds” means any 2022 SRF-1 Junior Lien Bonds other than Tax-Exempt 2022 SRF-1 Junior Lien Bonds.

(p) “Tax-Exempt 2022 SRF-1 Junior Lien Bonds” means any 2022 SRF-1 Junior Lien Bonds that are Tax-Exempt Bonds.

(q) “Trustee” means U.S. Bank Trust Company, National Association, as successor to U.S. Bank, National Association, as appointed and ratified herein.

Section 3. Approval of 2022 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 2022 SRF-1 Project, and the 2022 SRF-1 Project is hereby approved and accepted.

Section 4. Estimated Cost and Period of Usefulness of 2022 SRF-1 Project. The Project Costs are estimated by the Authority Board to not exceed \$42,000,000 and the Project Costs are hereby approved and confirmed. The period of usefulness of the 2022 SRF-1 Project is estimated to be not less than 40 years.

Section 5. Authorization of 2022 SRF-1 Junior Lien Bonds.

(a) Authorization of Borrowing. The Authority may borrow an amount not in excess of \$42,000,000, as is finally determined in the Sale Order, and issue the 2022 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 2022 SRF-1 Junior Lien Bonds, all as finally determined in the Sale Order. The amount of the 2022 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 2022 SRF-1 Junior Lien Bonds. The 2022 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 2022 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 Sewer System on hand and legally available therefor, as determined by the Authority Board.

(e) Taxable and Tax-Exempt 2022 SRF-1 Junior Lien Bonds. The 2022 SRF-1 Junior Lien Bonds may be issued as Taxable 2022 SRF-1 Junior Lien Bonds or Tax-Exempt 2022 SRF-1 Junior Lien Bonds, or as separate subseries of both, as set forth in the Sale Order.

(f) Source of Payment and Security. The 2022 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 2022 SRF-1 Series Ordinance or in the Sale Order, all of the provisions of the Ordinance shall apply to the 2022 SRF-1 Junior Lien Bonds as if set forth in full in this 2022 SRF-1 Series Ordinance, the purpose of this 2022 SRF-1 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2022 SRF-1 Junior Lien Bonds for the purposes set forth herein.

Section 6. 2022 SRF-1 Junior Lien Bond Details.

(a) Designation.

- (1) The 2022 SRF-1 Junior Lien Bonds shall bear the designations Sewage Disposal System Revenue Bonds, Series 2022-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 2022 SRF-1 Series Ordinance.
- (2) If the 2022 SRF-1 Junior Lien Bonds are not issued in 2022, an Authorized Officer is authorized in her discretion to re-designate the year and Series designation of such Series of 2022 SRF-1 Junior Lien Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of such Series of 2022 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 2022 SRF-1 Junior Lien Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. The 2022 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 2022 SRF-1 Junior Lien Bonds shall mature later than 40 years after the date of issuance thereof.
- (2) The 2022 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. 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds are owned by the MFA, the 2022 SRF-1 Junior Lien Bonds are payable as to principal, redemption premium, if any, and interest at U.S. Bank Trust Company, National Association, 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 2022 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 2022 SRF-1 Junior Lien Bonds are not registered in the name of the MFA, the principal of and premium, if any, on the 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds.

(h) Exchange. The registered owner of any 2022 SRF-1 Junior Lien Bond may exchange such 2022 SRF-1 Junior Lien Bond for a new 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds.

(i) Execution and Delivery of 2022 SRF-1 Junior Lien Bonds. The 2022 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 2022 SRF-1 Junior Lien Bonds to the MFA upon receiving the purchase price therefor in lawful money of the United States.

(j) Form of 2022 SRF-1 Junior Lien Bonds. The 2022 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 2022 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 2022-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 Issuer, 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 Trust Company, 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 U.S. Bank Trust Company, National Association, 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 2022-SRF-1" 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 \$ _____, adopted by the Board on _____, 2022 (the “Series Ordinance”), and (iv) a Sale Order of the Chief Executive Officer of the Issuer dated _____, 2022 (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 2022-SRF-1”.

U.S. Bank Trust Company, National Association,
Trustee

By: _____

Date of Authentication: _____, 2022

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 2022 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 2022 SRF-1 Junior Lien Bonds is shown on books of the Securities Depository.

(b) The 2022 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 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2022 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 2022 SRF-1 Junior Lien Bonds to the extent of the sum or sums so paid.

(d) If 2022 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 2022 SRF-1 Junior Lien Bonds that they be able to obtain 2022 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 2022 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 2022 SRF-1 Series Ordinance to the contrary, so long as any 2022 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 2022 SRF-1 Junior Lien Bond and all notices of redemption, tender and otherwise with respect to such 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds of the same type of any maturity are to be redeemed, then the particular 2022 SRF-1 Junior Lien Bonds or portions of 2022 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 2022 SRF-1 Junior Lien Bonds and premium, if any and interest on the 2022 SRF-1 Junior Lien Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and
- (4) if a 2022 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 2022 SRF-1 Junior Lien Bond pursuant to the procedures of the Securities Depository.

Section 8. Payment of 2022 SRF-1 Junior Lien Bonds; Confirmation of Statutory Lien.

(a) The 2022 SRF-1 Junior Lien Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2022 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 2022 SRF-1 Junior Lien Bonds as follows: Such lien in favor of the 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds and any capitalized interest on the 2022 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 2022 SRF-1 Junior Lien Bonds.

(b) Construction Fund. The balance of the proceeds of the 2022 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 2022 SRF-1 Junior Lien Bonds and designated the "Construction Fund, Series 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds, that so long as any of the Tax-Exempt 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds and moneys deemed to be proceeds of Tax-Exempt 2022 SRF-1 Junior Lien Bonds, and to prevent Tax-Exempt 2022 SRF-1 Junior Lien Bonds from being or becoming “private activity bonds” as that term is used in the Code.

Section 13. Sale of 2022 SRF-1 Junior Lien Bonds; Purchase Contract; Expiration of Referendum Period.

(a) The 2022 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 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds subject to the following limitations:

- (1) The interest rate with respect to any Series of the 2022 SRF-1 Junior Lien Bonds shall not exceed 2.50%.
- (2) The aggregate purchaser’s discount at which any Series of the 2022 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 2022 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 2022 SRF-1 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2022 SRF-1 Series Ordinance, an Authorized Officer shall determine the aggregate principal amount of 2022 SRF-1 Junior Lien Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2022 SRF-1 Series Ordinance, on the basis of her evaluation of the maximum amount of 2022 SRF-1 Junior Lien Bonds which can be sold, given anticipated interest rates and the revenue coverage requirements with respect to the 2022 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 2022 SRF-1 Junior Lien Bonds.
- (2) An Authorized Officer shall also determine and establish, in accordance with this 2022 SRF-1 Series Ordinance, the maturities of each Series of the 2022 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 2022 SRF-1 Junior Lien Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2022 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 2022 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 2022 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 2022 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 2022 SRF-1 Junior Lien Bonds and otherwise give effect to the transactions contemplated by this 2022 SRF-1 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 18. 2022 SRF-1 Series Ordinance a Contract. The provisions of this 2022 SRF-1 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2022 SRF-1 Junior Lien Bond.

Section 19. Appointment and Ratification of Successor Trustee; Professional Services.

(a) U.S. Bank Trust Company, National Association is hereby appointed and ratified as successor Trustee to U.S. Bank, National Association, in accordance with Section 907 of the Ordinance.

(b) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2022 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 2022 SRF-1 Junior Lien Bonds.

(c) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2022 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 2022 SRF-1 Junior Lien Bonds.

(d) 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 2022 SRF-1 Junior Lien Bonds or other available funds.

(e) 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 2022 SRF-1 Junior Lien Bonds and to pay the fees and expenses thereof from the proceeds of the 2022 SRF-1 Junior Lien Bonds or other available funds.

Section 20. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2022 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 2022 SRF-1 Series Ordinance. The section and paragraph headings in this 2022 SRF-1 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2022 SRF-1 Series Ordinance.

Section 21. Publication and Recordation. This 2022 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 2022 SRF-1 Series Ordinance are, to the extent of such conflict, repealed.

Section 23. Effective Date. This 2022 SRF-1 Series Ordinance shall be effective upon adoption.

Adopted and signed on the ____ day of _____, 2022.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

4879-5082-2419 v1 [63818-40]



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Kim Garland, CPA, Financial Services Area Chief of Staff

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

Background & Analysis See attached draft Great Lakes Water Authority (“GLWA”) Board letter.

Proposed Action: The GLWA Audit Committee recommends approval of the Resolutions Authorizing Publication of Notice of Intent to Issue Water Supply and Sewage Disposal System Revenue Bonds to the GLWA Board of Directors at its meeting on April 27, 2022.

..Title

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

..Body

Agenda of: April 27, 2022
Item No.: **2022-120**
Amount: Not to Exceed \$600,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Suzanne R. Coffey, P.E.
Interim Chief Executive Officer
Great Lakes Water Authority

DATE: April 27, 2022

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

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer//Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approve the Resolutions Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds of \$400,000,000 and Sewer Disposal System Revenue Bonds of \$200,000,000 in an Amount Not to Exceed \$600,000,000 as presented**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The publication of the Notice of Intent to Issue Water Supply System Revenue Bonds is required pursuant to Section 33 of Public Act 94 of 1933 to begin the 45-day referendum period. "If within 45 days after the publication of the notice a petition, signed by not less

than 10% or 15,000 of the registered electors, whichever is less, residing within the limits of the borrower, is filed with the clerk, or other recording officer, of the borrower, requesting a referendum upon the question of the issuance of the bonds, then the bonds shall not be issued until approved by the vote of a majority of the electors of the borrower qualified to vote and voting on the bonds at a general or special election.” If the 45-day referendum period expires without a petition requesting a referendum, then the Authority may authorize and issue such bonds.

JUSTIFICATION

Included with this memo are proposed resolutions authorizing the publication of Notice of Intent to issue regional water supply and regional sewer disposal system revenue bonds in the amounts of \$400 million and \$200 million respectively. This authorization would provide for continued funding for improvements to the system in three ways.

1. The approved, State Revolving Fund (SRF) loan #7532-02 for \$111 million related to CIP #122004 – GLWA 96-inch Water Main Relocation – Phase 2 which will be closing in calendar year 2022;
2. Additional SRF loan applications that align with the capital improvement program; and;
3. A market-based revenue bond transaction consistent with the ten-year financial plan presented to the Audit Committee and Board of Directors in conjunction with the FY 2023 & FY2024 Biennial Budget and FY 2023 Charges. That ten-year plan contemplated a transaction in calendar year 2022 with *net* bond proceeds of \$176 million for the water system and \$138 million for the sewer system in addition to the state revolving fund.

It should be noted that the management for the local water supply and local sewer disposal systems (Detroit Water & Sewerage Department, DWSD) has indicated that there is currently have sufficient funds available to meet capital project requirements. No additional bond proceeds beyond state revolving fund loans are requested by DWSD at this time for at least the next two years.

BUDGET IMPACT

The debt service payments on the regional SRF project are anticipated to start in FY 2023 with minimal amounts of interest due, because of the projected draw down schedules. This minimal interest expense on the loan is included in the FY 2023 water budget.

Anticipated debt service associated with a potential FY 2023 bond transaction has been included in the approved FY 2023 & FY 2024 Biennial budget as applicable.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 25, 2022. The Audit Committee *[pending action]* that the GLWA Board of Directors *[pending action]* the Resolutions Authorizing Publication of Notice of Intent to Issue Water Supply System Revenue Bonds of \$400,000,000 and Sewer Disposal System Revenue Bonds of \$200,000,000 in an Amount Not to Exceed \$600,000,000 as presented.

Great Lakes Water Authority
Resolution 2022-120
RE: Authorizing Publication of Notice of Intent
to Issue Sewage Disposal System Revenue Bonds

By Board Member: _____

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

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

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

Now, Therefore Be It:

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

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

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

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

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

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

SOURCE OF PAYMENT OF REVENUE BONDS

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

RIGHT TO PETITION FOR REFERENDUM

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

FURTHER INFORMATION

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

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

Nicolette N. Bateson
Chief Financial Officer & Treasurer
Great Lakes Water Authority

And Be it Further

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

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

Adopted by the Great Lakes Water Authority Board on: {Month, Day, Year}

Great Lakes Water Authority
Resolution 2022-120
RE: Authorizing Publication of Notice of Intent
to Issue Water Supply System Revenue Bonds

By Board Member: _____

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

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

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

Now, Therefore Be It:

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

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

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

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

NOTICE IS HEREBY GIVEN, that the Great Lakes Water Authority (the "Authority"), a municipal authority organized and existing under the provisions of Act No. 233, Public Acts of Michigan, 1955, as amended, intends to issue its water supply system revenue bonds in one or more series in the aggregate principal amount of not to exceed \$400,000,000 for the purpose of paying all or part of the cost of acquiring and constructing facilities, replacements, extensions, improvements and repairs to the City of Detroit's water supply system (the "Water System"), which Water System is described and defined in the Regional Water Supply System Lease dated June 12, 2015, between the City of Detroit (the "City") and the Authority (the "Lease"). As set forth in the Lease, the Water System consists of (i) the Regional Water System, which is that portion of the Water System that provides water service to wholesale customers thereof and to individual customers within and outside the City ("Retail Water Customers") that receive water service directly from the hereinafter described Local Water System up to the point of connection to the Local Water System and (ii) the Local Water System, which is that portion of the Water System that provides service directly to Retail Water Customers. Pursuant to the Lease, the City has leased the Regional Water System to the Authority for a period of forty (40) years and the Authority is authorized to issue revenue bonds under Act No. 94, Public Acts of Michigan, 1933, as amended ("Act 94") for the foregoing purposes.

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

SOURCE OF PAYMENT OF REVENUE BONDS

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

RIGHT TO PETITION FOR REFERENDUM

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

FURTHER INFORMATION

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

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

Nicolette N. Bateson
Chief Financial Officer & Treasurer
Great Lakes Water Authority

And Be it Further

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

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

Adopted by the Great Lakes Water Authority Board on: {Month, Day, Year}



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Lisa L. Mancini, Financial Planning & Analysis Manager

Re: FY 2022 Second Quarter Budget Amendments through December 31, 2021, and Proposed Budget Amendment Resolution

Background: In accordance with the budget amendment policy, articles, and by-laws for the Great Lakes Water Authority, a quarterly budget amendment report is presented for review by the Audit Committee. When budget amendments are required at the appropriation level as defined by the corresponding fiscal year budget adoption resolution, the Audit Committee will review the proposed budget amendments and forward to the Board of Directors with a recommendation.

Analysis: Highlights of the second quarter budget amendments include the following.

- A. There is a net increase to the Water System revenues of \$0.5 million. This is due to increases in the following.
 - \$0.4 million – Investment earnings adjustment based on revised interest rates and cashflow forecast.
 - \$0.1 million – Other revenues adjustment for energy rebates and lease revenues.

- B. There is a net decrease to the Sewer System revenues of \$2.7 million due to the following.
 - \$2.4 million decrease – Highland Park bad debt adjustment (combined with the first quarter adjustment of \$3.0 million to bring the total FY 2022 adjustment to \$5.4 million).
 - \$0.7 million decrease – Industrial Waste Control Charges adjustment based on revised FY 2022 forecast.
 - \$0.4 million increase – Investment earnings adjustment based on revised interest rates and cashflow forecast.
 - \$90.0 thousand increase – Other revenues adjustment for energy rebates.

- C. The Capital Spending Ratio for the sewer capital improvement plan has increased from 77.0% to 78.0% which equates to \$1.1 million. The Capital Spending Ratio remains at 80.4% for the water capital improvement plan as amended in the first quarter.

The attached budget amendment report is organized in the following manner.

1. Appropriation Level - Revenue Requirement - Water and Sewer Systems

- A. *Water System General Operating Fund*
- B. *Sewer System General Operating Fund*
- C. *Total Operating Fund Level – Water System and Sewer System (Supplemental Information)*
- D. *Enterprise-wide Core Groups (Supplemental Information)*
- E. *Enterprise-wide Operations & Maintenance Account Type (Supplemental Information)*
- F. *Unallocated Reserve by Core Group (Supplemental Information)*

2. Appropriation Level – Debt Service – Water and Sewer Systems

- A. *Water System Debt Service Coverage Calculation*
- B. *Sewer System Debt Service Coverage Calculation*

3. Appropriation Level – Improvement & Extension Fund – Water and Sewer Systems

- A. *Water System Improvement & Extension Fund*
- B. *Sewer System Improvement & Extension Fund*

4. Appropriation Level – Construction Fund – Water and Sewer Systems

- A. *Water System Construction Fund*
- B. *Sewer System Construction Fund*

A budget amendment resolution reflecting the budget amendments is also attached.

Proposed Action: The Audit Committee recommends that the Board of Directors for the Great Lakes Water Authority adopt the proposed budget resolution for the second quarter FY 2022 budget amendments.



Quarterly Budget Amendment Report
FY 2022 Ending December 31, 2021

Table 1A - Appropriation Level - Revenue Requirement – Water System General Operating

Water System	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Suburban Wholesale Customer Charges	\$ 321,110,900	\$ (2,400,000)	\$ -	\$ 318,710,900	\$ 162,992,800
Retail Service Charges	21,697,300	-	-	21,697,300	10,848,600
Investment Earnings	1,047,300	500,000	376,500	1,923,800	1,057,000
Other Revenues	175,000	-	116,000	291,000	247,000
Total Revenues	\$ 344,030,500	\$ (1,900,000)	\$ 492,500	\$ 342,623,000	\$ 175,145,400
Revenue Requirements					
Operations & Maintenance Expense	\$ 143,933,800	\$ -	\$ -	\$ 143,933,800	\$ 67,115,300
General Retirement System Legacy Pension	6,048,000	-	-	6,048,000	3,024,000
Debt Service	135,481,000	(360,000)	-	135,121,000	67,853,500
General Retirement System Accelerated Pension	6,268,300	-	-	6,268,300	3,134,300
Extraordinary Repair & Replacement Deposit	-	-	-	-	-
Water Residential Assistance Program Contribution	1,705,500	-	-	1,705,500	852,800
Regional System Lease	22,500,000	-	-	22,500,000	11,250,000
DWSD Budget Shortfall Pending Improvement & Extension Fund Transfer Pending	-	-	-	-	-
	28,093,900	(1,540,000)	492,500	27,046,400	13,698,600
Total Revenue Requirements	\$ 344,030,500	\$ (1,900,000)	\$ 492,500	\$ 342,623,000	\$ 166,928,500
Net Actual to Date	\$ -	\$ -	\$ -	\$ -	\$ 8,216,900



Quarterly Budget Amendment Report
FY 2022 Ending December 31, 2021

Appropriation Level – Revenue Requirement – Water System General Operating Budget Amendment Explanation	
Revenues	
Suburban Wholesale Customer Charges	<i>No budget amendment is required.</i>
Retail Services Charges	<i>No budget amendment is required.</i>
Investment Earnings	<i>The increase is based on the revised interest rates and cashflow forecast.</i>
Other Revenues	<i>The budget amendment proposed is based on activity to date for energy rebates and lease payments received (radio towers and easements). This source of revenue fluctuates from year to year.</i>
Revenue Requirements (Expenditures)	
Operations & Maintenance Expense	<i>No budget amendment is required.</i>
General Retirement System Legacy Pension	<i>No budget amendment is required. Budget and funding are on a fixed schedule.</i>
Debt Service	<i>No budget amendment is required.</i>
General Retirement System Legacy Pension – Accelerated Payment	<i>No budget amendment is required. Budget and funding are on a fixed schedule.</i>
Extraordinary Repair & Replacement Deposit	<i>No budget amendment is required. This is a formulaic requirement in the Master Bond Ordinance. Based on adopted and amended budget, no adjustment is required.</i>
Water Residential Assistance Program Contribution	<i>No budget amendment is required. Budget is fixed at time of budget adoption.</i>
Regional System Lease	<i>No budget amendment is required. Lease payment is established in accordance with terms of the lease.</i>
DWSD Budget Shortfall Pending	<i>No budget amendment is proposed at this time.</i>



Appropriation Level – Revenue Requirement – Water System General Operating Budget Amendment Explanation	
Improvement & Extension Fund Transfer Pending	<i>Represents annual funding for pay-as-you-go capital improvement program. Budget amendments to revenues, investment earnings, debt service, and DWSD budget shortfall affect this line item.</i>



Quarterly Budget Amendment Report
FY 2022 Ending December 31, 2021

Table 1B - Appropriation Level - Revenue Requirement – Sewer System General Operating

Sewer System	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Suburban Wholesale Customer Charges	\$ 272,130,000	\$ (3,000,000)	\$ (2,400,000)	\$ 266,730,000	\$ 136,134,800
Retail Service Charges	188,662,200	-	-	188,662,200	94,331,100
Industrial Waste Control Charges	9,024,800	-	(700,000)	8,324,800	4,159,100
Pollutant Surcharges	4,188,900	-	-	4,188,900	2,627,100
Investment Earnings	1,023,300	500,000	352,900	1,876,200	836,400
Other Revenues	400,000	-	90,000	490,000	287,600
Total Revenues	\$ 475,429,200	\$ (2,500,000)	\$ (2,657,100)	\$ 470,272,100	\$ 238,376,100
Revenue Requirements					
Operations & Maintenance Expense	\$ 181,299,800	\$ -	\$ -	\$ 181,299,800	\$ 89,629,100
General Retirement System Legacy Pension	10,824,000	-	-	10,824,000	5,412,000
Debt Service	207,209,500	(2,225,000)	-	204,984,500	103,656,200
General Retirement System Accelerated Pension	11,620,700	-	-	11,620,700	5,810,400
Extraordinary Repair & Replacement Deposit	-	-	-	-	-
Water Residential Assistance Program Contribution	2,358,300	-	-	2,358,300	1,179,200
Regional System Lease	27,500,000	-	-	27,500,000	13,750,000
DWSD Budget Shortfall Pending	-	-	-	-	1,358,400
Improvement & Extension Fund Transfer Pending	34,616,900	(275,000)	(2,657,100)	31,684,800	16,749,300
Total Revenue Requirements	\$ 475,429,200	\$ (2,500,000)	\$ (2,657,100)	\$ 470,272,100	\$ 237,544,600
Net Actual to Date	\$ -	\$ -	\$ -	\$ -	\$ 831,500



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Appropriation Level – Revenue Requirement – Sewer System General Operating Budget Amendment Explanation	
Revenues	
Suburban Wholesale Customer Charges	<i>The reduction to this category is the result of an adjustment to the allowance for bad debt expense for Highland Park.</i>
Retail Services Charges	<i>No budget amendment is required.</i>
Industrial Waste Control Charges	<i>The budget amendment proposed is based on a review of billings to date and a revised FY 2022 forecast.</i>
Pollutant Surcharges	<i>No budget amendment is required.</i>
Investment Earnings	<i>The increase is based on the revised interest rates and cashflow forecast.</i>
Other Revenues	<i>The budget amendment proposed is based on activity to date for energy rebates. This source of revenue fluctuates from year to year.</i>
Revenue Requirements (Expenditures)	
Operations & Maintenance Expense	<i>No budget amendment is required.</i>
General Retirement System Legacy Pension	<i>No budget amendment is required. Budget and funding are on a fixed schedule.</i>
Debt Service	<i>No budget amendment is required.</i>
General Retirement System Legacy Pension – Accelerated Payment	<i>No budget amendment is required. Budget and funding are on a fixed schedule.</i>
Extraordinary Repair & Replacement Deposit	<i>No budget amendment is required. This is a formulaic requirement in the Master Bond Ordinance. Based on adopted and amended budget, no adjustment is required.</i>
Water Residential Assistance Program Contribution	<i>No budget amendment is required. Budget is fixed at time of budget adoption.</i>
Regional System Lease	<i>No budget amendment is required. Lease payment is established in accordance with terms of the lease.</i>



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Appropriation Level – Revenue Requirement – Sewer System General Operating Budget Amendment Explanation	
DWSD Budget Shortfall Pending	<i>No budget amendment is proposed at this time. The 2018 Memorandum of Understanding provides guidance related to repayment to the extent that the shortfall is not cured by other means before June 30th of the subsequent year. Communication with DWSD Management indicates that plans are cautiously optimistic that the shortfall will be cured by year-end.</i>
Improvement & Extension Fund Transfer Pending	<i>Represents annual funding for pay-as-you-go capital improvement program. Budget amendments to revenues, investment earnings, debt service, and DWSD budget shortfall affect this line item.</i>



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Table 1C - Supplemental Information - Operating Fund Level - Water System and Sewer System

System	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Water System Operations	\$ 143,933,800	\$ -	\$ -	\$ 143,933,800	\$ 67,115,300
Wastewater System Operations	181,299,800	-	-	181,299,800	89,629,100
Total	\$ 325,233,600	\$ -	\$ -	\$ 325,233,600	\$ 156,744,400

Totals may be off due to rounding.

As shown in the table above, there are no budget amendments for transfers of resources between the water and sewer funds. It is unforeseen that such an amendment would occur as each system is accounted for as a stand-alone entity. The purpose of this table is to transparently report that funds from one system do not provide budget support to the other system.



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Table 1D - Supplemental Information - Enterprise-wide Core Groups

O&M Major Budget Categories (Core Groups)	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
A Water System Operations	\$ 74,813,000	\$ -	\$ -	\$ 74,813,000	\$ 38,647,400
B Wastewater System Operations	111,971,400	-	-	111,971,400	56,534,500
C Centralized Services	103,845,900	-	-	103,845,900	45,844,700
D Administrative & Other Services	34,603,300	-	-	34,603,300	15,717,800
Total	\$ 325,233,600	\$ -	\$ -	\$ 325,233,600	\$ 156,744,400

Totals may be off due to rounding.

A subset of the operating funds are core groups that account for A) direct cost of water operations, B) direct cost of sewer operations, C) centralized services (E.g., field services, security, information technology, facilities, and fleet), D) administrative services (E.g., finance, public affairs, general counsel, and organizational development). The costs of the latter two categories are allocated to the water and sewer systems based upon an internal cost allocation plan that is performed on an annual basis.

Through the second quarter FY 2022, there are no amendments that cross the core groups. For more activity within these groups, see *Supplemental Information - Enterprise-wide Operations & Maintenance Department and Account Level Amendments (Addendum 1)*.



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Table 1E - Supplemental Information - Enterprise-wide Operations & Maintenance Account Type

O&M Expense Categories (Account Type)	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Personnel Costs	\$ 115,437,400	\$ (1,436,600)	\$ (92,700)	\$ 113,908,100	\$ 54,679,800
Utilities	50,398,000	-	42,900	50,440,900	27,899,600
Chemicals	16,044,300	-	1,470,400	17,514,700	9,384,100
Supplies & Other	38,559,700	1,057,200	(2,534,200)	37,082,700	13,911,000
Contractual Services	103,375,700	1,459,000	1,958,600	106,793,300	53,627,400
Capital Program Allocation	(3,471,000)	-	-	(3,471,000)	(1,388,700)
Shared Services	(1,892,500)	(883,200)	(153,300)	(2,929,000)	(1,368,800)
Unallocated Reserve	6,782,000	(196,400)	(691,700)	5,893,900	-
Total	\$ 325,233,600	\$ -	\$ -	\$ 325,233,600	\$ 156,744,400

Totals may be off due to rounding.

The table above presents the Operations & Maintenance budget by the major expense categories (account type).

For additional detail and the explanation of the key changes to the FY 2022 budget within these categories, see *Supplemental Information - Enterprise-wide Operations & Maintenance Department and Account Level Amendments (Addendum 1)*.

For an additional view of the Operations & Maintenance budget by expense category (account type) and by departmental level, see *Supplemental Information - Enterprise-wide Operations & Maintenance Account Type and Departmental Level Amendments (Addendum 2)*.



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Table 1F - Supplemental Information - Unallocated Reserve by Core Group

O&M Unallocated Reserves	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget
Water System Operations	\$ 1,798,800	\$ -	\$ -	\$ 1,798,800
Wastewater System Operations	2,250,900	(1,061,100)	153,300	1,343,100
Centralized Services	2,187,600	(227,100)	(61,700)	1,898,800
Administrative & Other Services	544,700	1,091,900	(783,300)	853,300
Total	\$ 6,782,000	\$ (196,300)	\$ (691,700)	\$ 5,894,000

Totals may be off due to rounding.

An Unallocated Reserve account is established for each of the four core groups. Budget is assigned to these accounts to cover expenditures not known at the time the budget is developed (merit increases, fluctuations within maintenance contracts and usage of utilities and chemicals, projects and initiatives not planned at the time the initial budget was developed, etc.). It is GLWA's internal budget directive for each area, group, and team to manage their needs to an amount within the initial budget. If required, an amendment is made from the unallocated reserve. If an area does not require as much funding as was established in the original budget, that department's budgeted expenses are reduced, and the unallocated reserve is increased.

For additional information on the FY 2022 changes to the unallocated reserve, see *Supplemental Information - Enterprise-wide Operations & Maintenance Department and Account Level Amendments (Addendum 1)*.



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Table 2A - Appropriation Level – Debt Service Coverage Calculation – Water System

	FY 2022 Board Adopted Budget	1st Quarter FY 2022 Amendments Regional System	1st Quarter FY 2022 Amendments Local System	FY 2022 Amended Budget	2nd Quarter FY 2022 Amendments Regional System	2nd Quarter FY 2022 Amendments Local System	FY 2022 Amended Budget
Water System - Debt Service Coverage Calculation							
Revenues							
1 Regional System Wholesale Revenues	\$ 342,808,200	\$ (2,400,000)	\$ -	\$ 340,408,200	\$ -	\$ -	\$ 340,408,200
2 Local System Revenues	73,264,300	-	(3,626,300)	69,638,000	-	-	69,638,000
3 Miscellaneous Revenue (Local System)	6,428,400	-	(2,614,900)	3,813,500	-	-	3,813,500
4 Non-Operating Revenue (Regional System)	1,222,300	500,000	-	1,722,300	492,500	-	2,214,800
5 Total Revenues	\$ 423,723,200	\$ (1,900,000)	\$ (6,241,200)	\$ 415,582,000	\$ 492,500	\$ -	\$ 416,074,500
Revenue Requirements							
Operations & Maintenance Expense							
6 Regional System Wholesale Expenses	\$ 143,933,800	\$ -	\$ -	\$ 143,933,800	\$ -	\$ -	\$ 143,933,800
7 Local System Expenses	34,648,600	-	(4,659,600)	29,989,000	-	-	29,989,000
8 GRS Pension allocable to Regional System	6,048,000	-	-	6,048,000	-	-	6,048,000
9 GRS Pension allocable to Local System	4,272,000	-	-	4,272,000	-	-	4,272,000
10 Total Operations & Maintenance Expense	188,902,400	-	(4,659,600)	184,242,800	-	-	184,242,800
11 Net Revenues after Operations & Maintenance Expense	\$ 234,820,800	\$ (1,900,000)	\$ (1,581,600)	\$ 231,339,200	\$ 492,500	\$ -	\$ 231,831,700
Debt Service by Lien							
12 Senior Lien Bonds	\$ 124,309,700	\$ -	\$ -	\$ 124,309,700	\$ -	\$ -	\$ 124,309,700
13 Second Lien Bonds	46,840,400	-	-	46,840,400	-	-	46,840,400
14 SRF Junior Lien Bonds	6,695,100	(360,000)	-	6,335,100	-	-	6,335,100
15 Total Debt Service	\$ 177,845,200	\$ (360,000)	\$ -	\$ 177,485,200	\$ -	\$ -	\$ 177,485,200
Debt Service Coverage							
16 Senior Lien Bonds (11)/(12)	1.89	(0.02)	(0.01)	1.86	0.00	0.00	1.86
17 Second Lien Bonds (11)/[(12)+(13)]	1.37	(0.01)	(0.01)	1.35	0.00	0.00	1.35
18 SRF Junior Lien Bonds (11)/(15)	1.32	(0.01)	(0.01)	1.30	0.00	0.00	1.31

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget.

** Total Debt Service, highlighted in dark grey (Row 15) in the above table, is adopted by the GLWA Board.



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Appropriation Level - Debt Service - Water System Debt Service Coverage Calculation Budget Amendment Explanation	
Total Debt Service	<i>For purposes of Debt Service coverage, we look at the combined Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense to determine net revenues to calculate the Debt Service Coverage. The Board adopts the Debt Service amount shown on line 15 of the Water System Debt Service Coverage Calculation table on the previous page. This is the amount necessary to pay the principal of and interest on all Regional Water System bonds and to restore any reserves therefore established in the Master Bond Ordinance.</i>



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Table 2B - Appropriation Level – Debt Service Coverage Calculation – Sewer System

	FY 2022 Board Adopted Budget	1st Quarter FY 2022 Amendments Regional System	1st Quarter FY 2022 Amendments Local System	FY 2022 Amended Budget	2nd Quarter FY 2022 Amendments Regional System	2nd Quarter FY 2022 Amendments Local System	FY 2022 Amended Budget
Sewer System - Debt Service Coverage Calculation							
Revenues							
1 Regional System Wholesale Revenues	\$ 474,005,900	\$ (3,000,000)	\$ -	\$ 471,005,900	\$ (3,100,000)	\$ -	\$ 467,905,900
2 Local System Revenues	104,684,700	-	(6,803,300)	97,881,400	-	-	97,881,400
3 Miscellaneous Revenue (Local System)	6,810,800	-	364,200	7,175,000	-	-	7,175,000
4 Non-Operating Revenue (Regional System)	1,423,300	500,000	-	1,923,300	442,900	-	2,366,200
5 Total Revenues	\$ 586,924,700	\$ (2,500,000)	\$ (6,439,100)	\$ 577,985,600	\$ (2,657,100)	\$ -	\$ 575,328,500
Revenue Requirements							
Operations & Maintenance Expense							
6 Regional System Wholesale Expenses	\$ 181,299,800	\$ -	\$ -	\$ 181,299,800	\$ -	\$ -	\$ 181,299,800
7 Local System Expenses	69,233,000	-	(7,932,000)	61,301,000	-	-	61,301,000
8 GRS Pension allocable to Regional System	10,824,000	-	-	10,824,000	-	-	10,824,000
9 GRS Pension allocable to Local System	2,856,000	-	-	2,856,000	-	-	2,856,000
10 Total Operations & Maintenance Expense	264,212,800	-	(7,932,000)	256,280,800	-	-	256,280,800
11 Net Revenues after Operations & Maintenance Expense	\$ 322,711,900	\$ (2,500,000)	\$ 1,492,900	\$ 321,704,800	\$ (2,657,100)	\$ -	\$ 319,047,700
Debt Service by Lien							
12 Senior Lien Bonds	\$ 133,195,700	\$ (2,375,000)	\$ -	\$ 130,820,700	\$ -	\$ -	\$ 130,820,700
13 Second Lien Bonds	51,893,000	-	-	51,893,000	-	-	51,893,000
14 SRF Junior Lien Bonds	53,921,600	150,000	-	54,071,600	-	-	54,071,600
15 Total Debt Service	\$ 239,010,300	\$ (2,225,000)	\$ -	\$ 236,785,300	\$ -	\$ -	\$ 236,785,300
Debt Service Coverage							
16 Senior Lien Bonds (11)/(12)	2.42	(0.02)	0.01	2.46	(0.02)	0.00	2.44
17 Second Lien Bonds (11)/[(12)+(13)]	1.74	(0.01)	0.01	1.76	(0.01)	0.00	1.75
18 SRF Junior Lien Bonds (11)/(15)	1.35	(0.01)	0.01	1.36	(0.01)	0.00	1.35

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget.

** Total Debt Service, highlighted in dark grey (Row 15) in the above table, is adopted by the GLWA Board.



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Appropriation Level - Debt Service - Sewer System Debt Service Coverage Calculation Budget Amendment Explanation	
Total Debt Service	<i>For purposes of Debt Service coverage, we look at the combined Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense to determine net revenues to calculate the Debt Service Coverage. The Board adopts the Debt Service amount shown on line 15 of the Sewer System Debt Service Coverage Calculation table on the previous page. This is the amount necessary to pay the principal of and interest on all Regional Sewer System bonds and to restore any reserves therefore established in the Master Bond Ordinance.</i>



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Table 3A - Appropriation Level - Improvement & Extension Fund - Water System

Water Improvement & Extension Fund	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Water System Transfers In from General Operating	\$ 28,093,900	\$ (1,540,000)	\$ 492,500	\$ 27,046,400	\$ 13,698,600
Earnings on Investments (b)	-	715,000	614,000	1,329,000	906,600
Net Use of Reserves (a)	97,220,700	68,800	(3,523,300)	93,766,200	-
Total Revenues	\$ 125,314,600	\$ (756,200)	\$ (2,416,800)	\$ 122,141,600	\$ 14,605,200
Expenditures					
Water System Revenue Transfers Out (b)	\$ -	\$ 715,000	\$ 614,000	\$ 1,329,000	\$ 915,900
Capital Spending - Other	-	567,400	-	567,400	1,117,700
Capital Outlay	17,006,600	-	(3,030,800)	13,975,800	2,515,700
Revenue Financed Capital - Operating Transfer to Construction Fund	108,308,000	(2,038,600)	-	106,269,400	56,654,100
Total Expenditures	\$ 125,314,600	\$ (756,200)	\$ (2,416,800)	\$ 122,141,600	\$ 61,203,400
<i>(a) Beginning Net Position</i>				\$ 207,475,000	
<i>Net Use of Reserves</i>				\$ (93,766,200)	
<i>Projected Ending Net Position</i>				\$ 113,708,800	

(b) Note: As outlined in the Master Bond Ordinance, the investment earnings in the I&E Fund are transferred to the Receiving Fund. The impact is to reduce revenue required from charges when calculating the annual Revenue Requirement budget.



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Appropriation Level – Improvement & Extension Fund – Water System Budget Amendment Explanation	
Revenues	
Transfers In from General Operating	<i>The proposed budget amendment is to match the amount available for transfer from the FY 2022 revenue requirement based upon general operating fund performance. (see I&E Fund Transfer Pending line on the Appropriation Level-Revenue Requirement-Water System General Operating table).</i>
Earnings on Investments	<i>Had not been originally budgeted as there is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. The net effect on the I&E Fund is zero as the earnings are budgeted and accounted for in the operating fund to lower revenue requirement for charges. The first quarter amendment was for an estimated amount. The increase proposed for the second quarter amendment is based on the revised interest rates and cashflow forecast.</i>
Net Use (Source) of Reserves	<i>This amount represents the net amount of revenues less expenses. A negative amount represents an increase in reserves from current year activity rather than a use of reserves.</i>
Expenditures	
Water System Revenue Transfers Out (Earnings on Investments)	<i>Had not been originally budgeted as there is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance (so the net effect on the I&E Fund is zero). Amendment is for revised estimated amount. This line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. Any variance between the two lines represents a timing difference.</i>
Capital Spending - Other	<i>No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing.</i>



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Appropriation Level – Improvement & Extension Fund – Water System Budget Amendment Explanation	
Capital Outlay	<i>The proposed budget amendment reflects the decrease in spending which is partially driven by the change in project start dates and project scope as well as a correction in the funding source (from water to sewer) for the Rialto warehouse upgrades.</i>
Revenue Financed Capital – Transfer to Construction Fund	<i>No budget amendment is required.</i>



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Table 3B - Appropriation Level - Improvement & Extension Fund – Sewer System

Sewer Improvement & Extension Fund	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Sewer System Transfers In from General Operating	\$ 34,616,900	\$ (275,000)	\$ (2,657,100)	\$ 31,684,800	\$ 16,749,300
Receipt of DWSD Shortfall Loan Interest	406,400	-	(261,500)	144,900	105,700
Earnings on Investments (b)	-	500,000	504,900	1,004,900	500,500
Net Use of Reserves (a)	28,487,800	18,182,800	4,299,400	50,970,000	-
Total Revenues	\$ 63,511,100	\$ 18,407,800	\$ 1,885,700	\$ 83,804,600	\$ 17,355,500
Expenditures					
Sewer System Revenue Transfers Out (b)	\$ -	\$ 500,000	\$ 504,900	\$ 1,004,900	\$ 455,700
Capital Spending - Other	-	722,200	-	722,200	2,806,800
Capital Outlay	15,965,100	-	1,380,800	17,345,900	2,350,300
Revenue Financed Capital - Operating Transfer to Construction Fund	47,546,000	17,185,600	-	64,731,600	26,950,000
Total Expenditures	\$ 63,511,100	\$ 18,407,800	\$ 1,885,700	\$ 83,804,600	\$ 32,562,800
<i>(a) Beginning Net Position</i>				\$ 122,385,000	
<i>Net Use of Reserves</i>				(50,970,000)	
<i>Projected Ending Net Position</i>				\$ 71,415,000	

(b) Note: As outlined in the Master Bond Ordinance, the investment earnings in the I&E Fund are transferred to the Receiving Fund. The impact is to reduce revenue required from charges when calculating the annual Revenue Requirement budget.



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Appropriation Level – Improvement & Extension Fund – Sewer System Budget Amendment Explanations	
Revenues	
Transfers In from General Operating	<i>The proposed budget amendment is to match the amount available for transfer from FY 2022 revenue requirement based upon general operating fund performance. (see I&E Fund Transfer Pending line on the Appropriation Level-Revenue Requirement-Sewer System General Operating table).</i>
Receipt of DWSD Shortfall Loan Interest	<i>The proposed budget amendment adjusts the interest earnings on the Note Receivable for the FY 2018 DWSD Sewer System Shortfall to the payment schedule. This note is scheduled to be paid off by June 30, 2022.</i>
Earnings on Investments	<i>Had not been originally budgeted as there is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. The net effect on the I&E Fund is zero as the earnings are budgeted and accounted for in the operating fund to lower revenue requirement for charges. The first quarter amendment was for an estimated amount. The increase proposed for the second quarter amendment is based on the revised interest rates and cashflow forecast.</i>
Net Use (Source) of Reserves	<i>This amount represents the net amount of revenues less expenditures. A negative amount represents an increase in reserves from current year activity rather than a use of reserves.</i>
Expenditures	
Sewer System Revenue Transfers Out (Earnings on Investments)	<i>Had not been originally budgeted as there is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance (so the net effect on the I&E Fund is zero). Amendment is for revised estimated amount. This line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. Any variance between the two lines represents a timing difference.</i>



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Appropriation Level – Improvement & Extension Fund – Sewer System Budget Amendment Explanations	
Capital Spending – Other	<i>No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing.</i>
Capital Outlay	<i>The proposed budget amendment reflects the correction in the funding source (from water to sewer) for the Rialto warehouse upgrades.</i>
Revenue Financed Capital – Transfer to Construction Fund	<i>No budget amendment is required.</i>



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Table 4A - Appropriation Level – Construction Fund – Water System

Water Construction Fund	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Transfer from Improvement & Extension Fund	\$ 108,308,000	\$ (2,038,600)	\$ -	\$ 106,269,400	\$ 56,654,100
Bond Proceeds	-	-	-	-	-
Bond Fund Earnings on Investments	-	-	-	-	-
Grant Revenues (SRF Loans)	26,100,000	10,427,000	-	36,527,000	15,861,600
Net Use of Reserves (a)	-	772,700	-	772,700	-
Total Revenues	\$ 134,408,000	\$ 9,161,100	\$ -	\$ 143,569,100	\$ 72,515,700
Expenditures					
Capital Improvement Plan (b)	\$ 179,210,000	\$ (567,400)	\$ -	\$ 178,642,600	\$ 83,084,300
Capital Spend Rate Adjustment	(44,802,000)	9,728,500	-	(35,073,500)	-
Total Expenditures (b)	\$ 134,408,000	\$ 9,161,100	\$ -	\$ 143,569,100	\$ 83,084,300
<i>(a) Beginning Net Position</i>				\$ 12,438,000	
<i>Net Use of Reserves</i>				(772,700)	
<i>Projected Ending Net Position</i>				<u>\$ 11,665,300</u>	
<i>(b) Plus Direct I&E Projects</i>	-			567,400	
<i>Total CIP Expenditures</i>	134,408,000			144,136,500	
<i>Total Published Capital Improvement Plan</i>	179,210,000			179,210,000	
<i>Capital Spending Ratio</i>	75.0%			80.4%	



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Appropriation Level – Construction Fund – Water System Budget Amendment Explanations	
Revenues	
Transfers from Improvement & Extension Fund	<i>No budget amendment is required.</i>
Bond Proceeds	<i>No budget amendment is required.</i>
Earnings on Investments	<i>No budget amendment is required.</i>
Grant Revenues (State Revolving Fund Loans)	<i>No budget amendment is required. State revolving fund loan disbursements are on a reimbursement basis. The amount and timing of funds fluctuates with project expenditures incurred. Details related to the SRF projects are presented in the quarterly debt report. The most recent quarterly debt report is presented in the March 2022 Audit Committee binder which provides details related to the SRF funding and associated projects.</i>
Net Use (Source) of Reserves	<i>No budget amendment is required. This amount represents the net amount of revenues less expenditures. A “use of reserves” indicates a spend down of prior year reserves.</i>
Expenditures	
Capital Improvement Plan	<i>No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing. This amount is reflected on the ‘Capital Spending – Other’ line on the Water Improvement & Extension Fund table.</i>



Appropriation Level – Construction Fund – Water System Budget Amendment Explanations

Capital Spend Rate
 Assumption Adjustment

No budget amendment is required. The Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established. Amendments to the spend rate assumption are made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The Capital spend rate for the Water CIP was amended for the first quarter from 75.0% (projection at time of the FY 2022 budget adoption) to 80.4%. No further amendment is being propose for the second quarter. The most recent quarterly construction work-in-progress report is presented in the [October 2021 Audit Committee binder](#).



Quarterly Budget Amendment Report
FY 2022 Ending December 31, 2021

Table 4B - Appropriation Level – Construction Fund – Sewer System

Sewer Construction Fund	FY 2022 Board Adopted Budget	Total 1st Quarter FY 2022 Amendments	Total 2nd Quarter FY 2022 Amendments	FY 2022 Amended Budget	FY 2022 Activity Thru 12/31/2021
Revenues					
Transfer from Improvement & Extension Fund	\$ 47,546,000	\$ 17,185,600	\$ -	\$ 64,731,600	\$ 26,950,000
Bond Proceeds	-	-	-	-	-
Bond Fund Earnings on Investments	-	-	-	-	-
Grant Revenues (SRF Loans)	31,992,000	(17,843,000)	-	14,149,000	5,043,300
Net Use of Reserves (a)	-	2,008,200	1,100,000	3,108,200	-
Total Revenues	\$ 79,538,000	\$ 1,350,800	\$ 1,100,000	\$ 81,988,800	\$ 31,993,300
Expenditures					
Capital Improvement Plan (b)	\$ 106,050,000	\$ (722,200)	\$ -	\$ 105,327,800	\$ 29,250,700
Capital Spend Rate Adjustment	(26,512,000)	2,073,000	1,100,000	(23,339,000)	-
Total Expenditures (b)	\$ 79,538,000	\$ 1,350,800	\$ 1,100,000	\$ 81,988,800	\$ 29,250,700
<i>(a) Beginning Net Position</i>				\$ 11,473,000	
<i>Net Use of Reserves</i>				(3,108,200)	
<i>Projected Ending Net Position</i>				<u>\$ 8,364,800</u>	
<i>(b) Plus Direct I&E Projects</i>	-			722,200	
<i>Total CIP Expenditures</i>	79,538,000			82,711,000	
<i>Total Published Capital Improvement Plan</i>	106,050,000			106,050,000	
<i>Capital Spending Ratio</i>	75.0%			78.0%	



Quarterly Budget Amendment Report
FY 2022 Ending December 31, 2021

Appropriation Level – Construction Fund – Sewer System Budget Amendment Explanations	
Revenues	
Transfers from Improvement & Extension Fund	<i>No budget amendment is required.</i>
Bond Proceeds	<i>No budget amendment is required.</i>
Earnings on Investments	<i>No budget amendment is required.</i>
Grant Revenues (State Revolving Fund Loans)	<i>No budget amendment is required. State revolving fund loan disbursements are on a reimbursement basis. The amount and timing of funds fluctuates with project expenditures incurred. Details related to the SRF projects are presented in the quarterly debt report. The most recent quarterly debt report is presented in the March 2022 Audit Committee binder which provides details related to the SRF funding and associated projects.</i>
Net Use (Source) of Reserves	<i>This amount represents the net amount of revenues less expenditures. A “use of reserves” indicates a spend down of prior year reserves. The amount has been amended to reflect the anticipated increase in the Capital spend rate from 77.0% (first quarter budget amendment projection) to 78.0%.</i>
Expenditures	
Capital Improvement Plan	<i>No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing. This amount is reflected on the ‘Capital Spending – Other’ line on the Water Improvement & Extension Fund table.</i>



Appropriation Level – Construction Fund – Sewer System Budget Amendment Explanations

Capital Spend Rate Adjustment

The proposed budget amendment represents the increase in the projected Capital spend rate for the Water CIP from 77.0% (first quarter budget amendment projection) to 78.0%. The Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established. Amendments to the spend rate assumption are made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The most recent quarterly construction work-in-progress report is presented in the [October 2021 Audit Committee binder](#).



ADDENDUM 1

Supplemental Information –

Enterprise-wide Operations & Maintenance Department and Account Level Amendments

The summary of budget amendments for operations & maintenance (department and account level amendments) are organized by the four core groups. The FY 2022 second quarter budget amendments result in a net zero change to all categories: A - Water System Operations, B - Sewer System Operations, C – Centralized Services, and D – Administrative & Other Services.

GLWA's internal budget directive is for each area, group, and team to manage their needs to an amount within the initial budget. To the extent that is not possible, an amendment is made from the unallocated reserve. If savings are incurred, or an area appears to not require as much funding as established in the original budget, that department's budgeted expenses are reduced, and the unallocated reserve is increased. In administering the budget, there are several refinements to departments and account categories. An explanation of key items is included in the table in Addendum 1.

Items greater than \$500,000 include the following (see Addendum 2 for a view of the operations & maintenance budget by expense category).

- Wastewater System Operations
 - Chemicals – Increase of \$1.5 million to adjust for increase in cost and estimated usage in FY 2022.
 - Contractual Services – Increase of \$0.9 million for usage demand of the facilities maintenance contract.
 - Supplies & Other – Suburban Only Green Infrastructure Allocation: Decrease of \$1.1 million per the review of GLWA's obligations under the current permit.
 - Supplies & Other – Decrease of \$0.7 million based on the usage of the HVAC contract (usage varies from year to year and additional work being performed by GLWA team members).
- Administrative & Other Services
 - Contractual Services – Board of Directors: Increase of \$0.8 million for the amendment to a contract for the independent investigation into the rain events.

ADDENDUM 1

Supplemental Information
Enterprise-wide Operations & Maintenance Department and Account Level Amendments

Departmental and Account Level Amendments	Total 2nd Quarter FY 2022 Amendments	Explanation of Key Items
B Wastewater System Operations	0	
Baby Creek Combined Sewer Overflow	(12,500)	
Chemicals	(12,500)	
Belle Isle Combined Sewer Overflow	(21,100)	
Chemicals	10,300	
Shared Services	(31,400)	
Belle Isle Pumping Station	8,800	
Shared Services	8,800	
Blue Hill Pumping Station	(99,200)	
Shared Services	(99,200)	
Conner Creek Combined Sewer Overflow	254,900	
Chemicals	254,900	
Fischer Pumping Station	(300)	
Shared Services	(300)	
Hubble Southfield CSO	17,000	
Chemicals	17,000	
Leib Combined Sewer Overflow	29,200	
Chemicals	29,200	
Oakwood Combined Sewer Overflow	23,900	
Chemicals	23,900	
Suburban Only Green Infrastructure Allocation	(1,110,000)	
Supplies & Other	(1,110,000)	Adjust budget due to review of obligations under the current permit
Wastewater Dewatering Process	118,600	
Chemicals	118,600	
Wastewater Director	700,000	
Contractual Services	890,000	Increased usage demand of the facilities maintenance contract
Supplies & Other	(190,000)	Deferral of facility renovations (determined not needed in FY 2022)
Wastewater Laboratories	53,500	
Chemicals	53,500	
Wastewater Operations	(700,000)	
Supplies & Other	(700,000)	Reduction in use of HVAC contract
Wastewater Primary Process	467,200	
Chemicals	467,200	
Wastewater Process Control	(360,400)	
Supplies & Other	(360,400)	Deferral due to SCADA system support contract renewal which is currently being negotiated
Wastewater Secondary Process	508,300	
Chemicals	508,300	
Wastewater System Operations Unallocated Reserves	153,300	
Unallocated Reserve	153,300	Offset to Wastewater Systems Operations budget adjustments
Woodmere Pumping Station	(31,200)	
Shared Services	(31,200)	
C Centralized Services	0	
Capital Improvement Planning	61,700	Transfer from Owners' Representative (Financial Services Area reorganization)
Personnel	61,700	
Info Tech Enterprise Asset Mgmt Systems	0	
Contractual Services	200,000	
Supplies & Other	(200,000)	
Info Technology Service Delivery	0	
Personnel	100	
Supplies & Other	(100)	
Office of Emergency Preparedness	170,600	Establish budget for new cost center (Offset Security and Integrity)
Contractual Services	37,500	
Personnel	130,600	
Supplies & Other	2,500	
Office of the CIO	0	
Contractual Services	(34,500)	
Supplies & Other	34,500	
Security and Integrity	(170,600)	Transfer budget to new cost center (Office of Emergency Preparedness)
Contractual Services	(76,300)	
Personnel	(94,300)	
Centralized Services Unallocated Reserves	(61,700)	
Unallocated Reserve	(61,700)	Offset to Centralized Services budget adjustments
D Administrative & Other Services	0	
Administrative Services Unallocated Reserves	(783,300)	Primarily used to offset the amendment to the AECOM contract (See Board of Directors below)
Unallocated Reserve	(783,300)	
Board of Directors	800,000	
Contractual Services	800,000	Estimated FY 2022 portion of amendment to AECOM contract for the independent investigation into the June and July 2021 rain events (Offset Unallocated Reserves)
Chief Administrative Officer	0	
Contractual Services	(3,700)	
Supplies & Other	3,700	
Financial Management & Planning	54,000	
Contractual Services	58,000	
Supplies & Other	(4,000)	

ADDENDUM 1

Supplemental Information
Enterprise-wide Operations & Maintenance Department and Account Level Amendments

Departmental and Account Level Amendments	Total 2nd Quarter FY 2022 Amendments	Explanation of Key Items
Financial Reporting & Accounting	(130,700)	
Contractual Services	(100,000)	
Supplies & Other	(30,700)	
General Counsel	153,000	
Contractual Services	153,300	
Supplies & Other	(300)	
Logistics and Materials	266,100	Adjust budget for the operation of the new Rialto warehouse
Contractual Services	118,000	
Personnel	6,000	
Supplies & Other	99,200	
Utilities	42,900	
OD Talent Management	0	
Contractual Services	(108,700)	
Personnel	70,700	
Supplies & Other	38,000	
Owners' Representative	(437,400)	Reorganization of the Owners' Representative cost center throughout various Financial Services groups (Offset Unallocated Reserves, Procurement Director, and Capital Improvement Planning)
Capital Program Allocation	14,400	
Contractual Services	(25,000)	
Personnel	(402,700)	
Supplies & Other	(24,100)	
Procurement Director	78,300	Transfer from Owners' Representative (Financial Services Area reorganization)
Capital Program Allocation	(14,400)	
Contractual Services	50,000	
Personnel	90,200	
Supplies & Other	(47,500)	
Public Affairs	0	
Personnel	45,000	
Supplies & Other	(45,000)	
Grand Total	0	

Totals may be off due to rounding



ADDENDUM 2

Supplemental Information –

Enterprise-wide Operations & Maintenance Account Type and Department Level Amendments

The table in Addendum 2 summarizes the FY 2022 second quarter budget amendments for operations & maintenance by the major expense categories (account type). An explanation of key items is included in the table in Addendum 2.

ADDENDUM 2

Supplemental Information
Enterprise-wide Operations & Maintenance
Account Type and Department Level Amendments

Expense Categories and Departmental Level Amendments	Total 2nd Quarter FY 2022 Amendments	Explanation of Key Items
Capital Program Allocation	0.00	Reorganization of the Owners' Representative cost center
Owners' Representative	14,400.00	
Procurement Director	(14,400.00)	
Chemicals	1,470,400.00	Adjust for increase cost of chemicals and estimated usage in FY 2022
Baby Creek Combined Sewer Overflow	(12,500.00)	
Belle Isle Combined Sewer Overflow	10,300.00	
Conner Creek Combined Sewer Overflow	254,900.00	
Hubble Southfield CSO	17,000.00	
Leib Combined Sewer Overflow	29,200.00	
Oakwood Combined Sewer Overflow	23,900.00	
Wastewater Dewatering Process	118,600.00	
Wastewater Laboratories	53,500.00	
Wastewater Primary Process	467,200.00	
Wastewater Secondary Process	508,300.00	
Contractual Services	1,958,600.00	
Board of Directors	800,000.00	Estimated FY 2022 portion of amendment to AECOM contract for the independent investigation into the June and July 2021 rain events (Offset Unallocated Reserves)
Chief Administrative Officer	(3,700.00)	
Financial Management & Planning	58,000.00	
Financial Reporting & Accounting	(100,000.00)	
General Counsel	153,300.00	
Info Tech Enterprise Asset Mgmt Systems	200,000.00	
Logistics and Materials	118,000.00	
OD Talent Management	(108,700.00)	
Office of Emergency Preparedness	37,500.00	
Office of the CIO	(34,500.00)	
Owners' Representative	(25,000.00)	
Procurement Director	50,000.00	
Security and Integrity	(76,300.00)	
Wastewater Director	890,000.00	Increased usage demand of the facilities maintenance contract
Personnel	(92,700.00)	
Capital Improvement Planning	61,700.00	
Financial Management & Planning	0.00	
Info Technology Service Delivery	100.00	
Logistics and Materials	6,000.00	
OD Talent Management	70,700.00	
Office of Emergency Preparedness	130,600.00	Establish budget for new cost center (Offset Security and Integrity)
Owners' Representative	(402,700.00)	Reorganization of the Owners' Representative cost center to Capital Improvement Planning and Procurement
Procurement Director	90,200.00	
Public Affairs	45,000.00	
Security and Integrity	(94,300.00)	
Shared Services	(153,300.00)	To adjust OPS-008 (Systems Control Center, Detroit Only Pump Stations/CSO) for maintenance needs; Shared Services is a "contra" account which offsets items in the O&M budget that can be billed via a shared services agreement.
Belle Isle Combined Sewer Overflow	(31,400.00)	
Belle Isle Pumping Station	8,800.00	
Blue Hill Pumping Station	(99,200.00)	
Fischer Pumping Station	(300.00)	
Woodmere Pumping Station	(31,200.00)	
Supplies & Other	(2,534,200.00)	
Chief Administrative Officer	3,700.00	
Chief Executive Officer	0.00	
Financial Management & Planning	(4,000.00)	
Financial Reporting & Accounting	(30,700.00)	
General Counsel	(300.00)	
HazMat	0.00	
Info Tech Business Productivity Systems	0.00	
Info Tech Enterprise Asset Mgmt Systems	(200,000.00)	
Info Technology Infrastructure	0.00	
Info Technology Service Delivery	(100.00)	
Logistics and Materials	99,200.00	
OD Talent Management	38,000.00	
Office of Emergency Preparedness	2,500.00	
Office of the CIO	34,500.00	
Owners' Representative	(24,100.00)	
Procurement Director	(47,500.00)	
Public Affairs	(45,000.00)	
Suburban Only Green Infrastructure Allocation	(1,110,000.00)	Adjust budget due to review of obligations under the current permit
Wastewater Director	(190,000.00)	
Wastewater Operations	(700,000.00)	Reduction in use of HVAC contract

ADDENDUM 2

Supplemental Information
Enterprise-wide Operations & Maintenance
Account Type and Department Level Amendments

Expense Categories and Departmental Level Amendments	Total 2nd Quarter FY 2022 Amendments	Explanation of Key Items
Wastewater Process Control	(360,400.00)	Deferral due to SCADA system support contract renewal which is currently being negotiated
Unallocated Reserve	(691,700.00)	
Administrative Services Unallocated Reserves	(783,300.00)	Primarily used to offset the amendment to the AECOM contract for the independent investigation into the June and July rain events.
Wastewater System Operations Unallocated Reserves	153,300.00	
Centralized Services Unallocated Reserves	(61,700.00)	
Utilities	42,900.00	
Logistics and Materials	42,900.00	
Grand Total	0	

Totals may be off due to rounding

Great Lakes Water Authority

Resolution 2022 -117

Resolution Adopting the Budget Amendments through the Second Quarter of FY 2022

By Board Member:

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

WHEREAS In accordance with the by-laws of the GLWA, further defined by its budget amendment policy, the Board shall amend the budget as needed based upon a quarterly report from the Chief Financial Officer; and

WHEREAS The GLWA Board adopted the FY 2022 budget on March 24, 2021, for the twelve-month fiscal year beginning July 1, 2021;

WHEREAS Following a review of the budget amendment report through the FY 2022 Second Quarter, the appropriations established with the adoption of the general operating budget for the water system and the sewer system are amended as shown in the table below;

General Operating Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Revenues				
Suburban Wholesale Customer Charges	\$ 321,110,900	\$ 318,710,900	\$ 272,130,000	\$ 266,730,000
Retail Service Charges	21,697,300	No Change	188,662,200	No Change
Industrial Waste Control Charges	-	-	9,024,800	8,324,800
Pollutant Surcharges	-	-	4,188,900	No Change
Investment Earnings	1,047,300	1,923,800	1,023,300	1,876,200
Other Revenues	175,000	291,000	400,000	490,000
Total Revenues	\$ 344,030,500	\$ 342,623,000	\$ 475,429,200	\$ 470,272,100
Revenue Requirements				
Operations & Maintenance Expense	\$ 143,933,800	No Change	\$ 181,299,800	No Change
General Retirement System Legacy Pension	6,048,000	No Change	10,824,000	No Change
Debt Service	135,481,000	135,121,000	207,209,500	204,984,500
General Retirement System Accelerated Pension	6,268,300	No Change	11,620,700	No Change
Extraordinary Repair & Replacement Deposit	-	No Change	-	No Change
Water Residential Assistance Program Contribution	1,705,500	No Change	2,358,300	No Change
Regional System Lease	22,500,000	No Change	27,500,000	No Change
DWSD Budget Shortfall Pending	-	No Change	-	No Change
Improvement & Extension Fund Transfer	28,093,900	27,046,400	34,616,900	31,684,800
Total Revenue Requirements	\$ 344,030,500	\$ 342,623,000	\$ 475,429,200	\$ 470,272,100

WHEREAS Following a review of the budget amendment report through the FY 2022 Second Quarter, the appropriations established with the adoption of the amounts necessary to pay the principal of and interest on all Regional bonds and to restore any reserves therefore established in the Master Bond Ordinance for the water system and the sewer system are amended as shown in the table below;

Debt Service Coverage Calculation				
Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Debt Service by Lien				
Senior Lien Bonds	124,309,700	No Change	133,195,700	130,820,700
Second Lien Bonds	46,840,400	No Change	51,893,000	No Change
SRF Junior Lien Bonds	6,695,100	6,335,100	53,921,600	54,071,600
Total Debt Service	<u>\$ 177,845,200</u>	<u>\$ 177,485,200</u>	<u>\$ 239,010,300</u>	<u>\$ 236,785,300</u>

WHEREAS Following a review of the budget amendment report through the FY 2022 Second Quarter, the appropriations established with the adoption of the improvement and extension fund budget for the water system and the sewer system are amended as shown in the table below;

Improvement & Extension Fund				
Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Revenues				
Transfers In from General Operating	\$ 28,093,900	\$ 27,046,400	\$ 34,616,900	\$ 31,684,800
Receipt of DWSD Shortfall Loan	-	-	406,400	144,900
Earnings on Investments	-	1,329,000	-	1,004,900
Net Use of Reserves	97,220,700	93,766,200	28,487,800	50,970,000
Total Revenues	<u>\$ 125,314,600</u>	<u>\$ 122,141,600</u>	<u>\$ 63,511,100</u>	<u>\$ 83,804,600</u>
Expenditures				
Water/Sewer System Revenue Transfers Out	\$ -	\$ 1,329,000	\$ -	\$ 1,004,900
Capital Spending - Other	-	567,400	-	722,200
Capital Outlay	17,006,600	13,975,800	15,965,100	17,345,900
Revenue Financed Capital - Operating				
Transfer to Construction Fund	108,308,000	106,269,400	47,546,000	64,731,600
Total Expenditures	<u>\$ 125,314,600</u>	<u>\$ 122,141,600</u>	<u>\$ 63,511,100</u>	<u>\$ 83,804,600</u>

WHEREAS Following a review of the budget amendment report through the FY 2022 Second Quarter, the appropriations established with the adoption of the construction fund budget for the water system and the sewer system are amended as shown in the table below;

Construction Fund Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Revenues				
Transfer from Improvement & Extension Fund	\$ 108,308,000	106,269,400	\$ 47,546,000	64,731,600
Bond Proceeds	-	No Change	-	No Change
Grant Revenues (SRF Loans)	26,100,000	36,527,000	31,992,000	14,149,000
Earnings on Investments	-	No Change	-	No Change
Net Use of Reserves	-	772,700	-	3,108,200
Total Revenues	<u>\$ 134,408,000</u>	<u>\$ 143,569,100</u>	<u>\$ 79,538,000</u>	<u>\$ 81,988,800</u>
Expenditures				
Project Expenditures	\$ 134,408,000	143,569,100	\$ 79,538,000	81,988,800
Total Expenditures	<u>\$ 134,408,000</u>	<u>\$ 143,569,100</u>	<u>\$ 79,538,000</u>	<u>\$ 81,988,800</u>
Capital Spending Ratio	75.0%	80.4%	75.0%	78.0%

WHEREAS The GLWA Audit Committee reviewed the budget amendments at its meetings on March 25, 2022; and

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

NOW THEREFORE BE IT:

RESOLVED That the GLWA Board approves the FY 2022 Second Quarter Budget Amendments; and be it finally

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

..Title

Proposed FY 2022 Second Quarter Budget Amendments

..Body

Agenda of: April 27, 2022

Item No.: **2022-117**

Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Suzanne R. Coffey, P.E.
Interim Chief Executive Officer
Great Lakes Water Authority

DATE: April 27, 2022

RE: Proposed FY 2022 Second Quarter Budget Amendments

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), approves the **Proposed FY 2022 Second Quarter Budget Amendments as presented**; and authorizes the Interim Chief Executive Officer to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The founding legal documents for the Great Lakes Water Authority (GLWA) provide a structure for budget preparation, adoption, and amendment. The Board of Directors adopts a biennial budget by resolution which specifies appropriation amounts which may be modified through budget amendments. To the extent that there is a proposed amendment of the budget among the appropriation categories, the matter is brought to

the Audit Committee for review and consideration of a recommendation to the Board of Directors for their consideration for approval.

JUSTIFICATION

Attached is the communication to the Audit Committee dated March 25, 2022, which presents the proposed budget amendments for the second quarter of FY 2022. The reports included in this communication include the following.

1. Quarterly Budget Amendment Report for FY 2022 ending December 31, 2021.
2. Resolution Adopting the Budget Amendments through the Second Quarter of FY 2022.

BUDGET IMPACT

The overall budget, despite amendment, continues to be balanced.

COMMITTEE REVIEW

This matter was reviewed by the Audit Committee at its meeting on March 25, 2022. The Audit Committee *[insert action]* that the Board of Directors for the Great Lakes Water Authority adopt the proposed FY 2022 second quarter budget amendments.

SHARED SERVICES IMPACT

The impact of the second quarter FY 2022 budget amendments is an increase of \$153,300 to OPS-008 – Systems Control Center, Detroit Only Pump Stations/CSO.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

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

Re: Calendar Year 2022 Financing Team Selection

Background: In order to fund the capital improvement program, the current long-term financial plan contemplates a bond transaction by the end of the current fiscal year. A key next step in that process is assembling a financing team. The team includes the financial advisor, bond counsel, and feasibility consultant. Those roles are currently under contract. The open decision is related to the underwriting syndicate, including the book running senior manager.

The Great Lakes Water Authority [Debt Management Policy](#) (page 5) provides the following guidance related to the selection of the senior manager.

Underwriter Selection

Senior Manager Selection. GLWA will select the senior manager for a proposed negotiated sale. The selection criteria will include, but not be limited to, the following:

- The firm's ability and experience in managing complex transactions
- Prior knowledge and experience with GLWA, if applicable
- The firm's willingness to risk capital and demonstration of such risk
- Quality and experience of personnel assigned to GLWA's engagement
- Financing plan presented
- Underwriting fees

Co-Manager Selection. Co-managers will be selected on the same basis as the senior manager. In addition to their qualifications, co-managers appointed to specific transactions will be a function of transaction size and the necessity to ensure maximum distribution of GLWA's bonds.

Selling Groups. GLWA may establish selling groups in certain transactions in order to broaden the reach to potential investors.

GLWA has had three financing programs since its inception on January 1, 2016. The underwriter pool has consisted of the following firms.

Role	Sewage Disposal System Revenue Refunding Bonds 2016 (B&C) (\$421,295,000)	Sewage Disposal System Revenue & Refunding Bonds 2018 (A,B,C) (\$257,465,000)	Sewage Disposal System Revenue Refunding Bonds 2020 (A&B) (\$687,455,000)
Book Running Senior Manager	Citigroup	Citigroup	Citigroup
Co-Senior Manager	Goldman Sachs and Co. LLC	Wells Fargo Securities	Siebert Williams Shank & Co., LLC
Co-Managers		Goldman Sachs and Co. LLC	Goldman Sachs
	J.P. Morgan	J.P. Morgan	J.P. Morgan
	Morgan Stanley	Morgan Stanley	Morgan Stanley
	Ramirez & Co., Inc	Ramirez & Co., Inc	Ramirez & Co., Inc
	Siebert Williams Shank & Co., LLC	Siebert Cisneros Shank & Co., LLC	
	Wells Fargo Securities		Wells Fargo Securities

Analysis: Given the changing market conditions, the GLWA administration would like to proceed with the proposed bond transaction sooner rather than later. While it is good to “refresh” the underwriter pool periodically, the timing, along with competing priorities, dictates that we assemble the team to being working on the transaction soon.

A few considerations as we proceed.

1. GLWA administration meets with the firms listed above on a regular basis. That pool reflects excellence in the field of public sector utility finance who are very interested in continuing to work with GLWA.
2. In prior conversations with the Board, there was a strong preference to rotate the “bookrunning senior manager” role. Citigroup has held that role for the last three transactions. Accordingly, it is recommended that Citigroup be asked to participate as a co-manager in the next financing so that GLWA can meet the Board’s rotational objective among the underwriting firms.
3. That being said, continuity and experience as a co-manager are incredibly important to GLWA in a successor in the bookrunning senior manager role. It is therefore recommended that Goldman Sachs and Co. LLC, Siebert Williams Shank & Co., LLC and Wells Fargo Securities, who have all served as co-managers, be invited to a) submit proposals to GLWA for the bookrunning senior manager role as well as b) prepare a 10-minute presentation based on that proposal to present to the Audit Committee at its regular meeting on April 22, 2022. Based on the proposals submitted and the presentation, it is recommended that the Audit Committee make a recommendation to the Board of Directors for the May 11, 2022 Board meeting for Book Running

Senior Manager and Co-Senior Manager. The proposals should include the fee structure.

4. All firms that have served on the financing team in the past would be invited to submit letters of interest to serve as co-managers for the 2022 transaction.
5. Within 12 months after the close of the 2022 transaction, GLWA will solicit proposals to refresh the pool. It is anticipated that the vacant Public Finance Manager role will be filled by then (this position has been vacant since April 2021; an active recruitment process has been underway).

Recommendation: It is recommended that the Audit Committee adopt the approach outlined above for the selection of the Book Running Senior Manager and Co-Senior Manager for the 2022 bond transaction and authorize staff to proceed with soliciting the proposals and presentations.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

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

Re: CFO Update

External Auditor Proposals Due Monday, March 28, 2022

Attached is an outline of talking points from Joan Salwasser, Procurement Management Professional who is supporting the Audit Committee with the selection process. Joan will cover a few points at today's meeting as well as follow-up with you individually.

Moody's Credit Opinion - Great Lakes Water Authority, March 23, 2022

This week, Moody's completed a surveillance credit review of the Great Lakes Water Authority. The report is included in the Communications section of this binder.

Key Introductory Comments

- ✓ Water and sewer enterprises have solid credit profiles, bolstered by very large service areas and a sizable scale of operations.
- ✓ GLWA has effectively balanced its hefty capital needs with an affordable rate structure, stable operating performance, consistent debt service coverage and good liquidity for both systems since its inception in 2016.
- ✓ The systems have above-average leverage, however, and the City of Detroit (Ba2 positive) makes up a significant portion of their service area.

Credit strengths

- » Very large utility systems, providing essential water and wastewater services to a substantial portion of the state's population
- » Commitment to annual revenue enhancements to support sound debt service coverage and healthy liquidity
- » Track record of strong budget management and good transparency

Credit challenges

- » Declining water usage trends
- » High leverage will moderate slowly given outstanding capital needs and plans to issue additional debt
- » Increasing occurrence of extreme wet weather events placing strain on stormwater and sewer treatment capacity in certain segments of the system

Rating outlook

The outlook is stable because each system will sustain sound financial metrics given GLWA's track record of strong budget management and ability to raise rates. These strengths will continue to mitigate the challenges associated with high leverage and capital needs.

Factors that could lead to an upgrade

- » Sustained expansion and diversification of the service area's economic base
- » Growth in revenue that continues to outpace borrowing so as to moderate leverage of pledged resources

Factors that could lead to a downgrade

- » Renewed economic stress that pressures consumption and revenue trends
- » Material reduction to the water or sewer system's liquidity or debt service coverage ratios
- » Growth in leverage of the water or sewer system's net revenue

Bond Insurer Assured Guaranty Municipal Corporation Receives Rating Upgrade

As of March 18, 2022, Moody's released a Bond Insurer/Liquidity Provider rating change for Assured Guaranty Municipal Corporation (AGM). Moody's upgraded the financial strength rating of AGM from A2 to A1. AGM provides bond insurance and reserve fund sureties for certain GLWA debt. GLWA will be issuing a continuing disclosure statement to communicate this change as required by SEC Rule 15c2-12.

March is Procurement Month

Procurement Month is dedicated to honoring the unique role of public procurement professionals and expanding awareness of the vital work that they perform every day for their organizations and for the public. At GLWA, Procurement Month offers us the opportunity to acknowledge our own outstanding Procurement Team who procure the goods and services that support GLWA's mission of providing water of unquestionable

quality to the southeastern Michigan communities that we serve. Dedicated and service-oriented, the GLWA Procurement Team provides the best possible information to its internal business partners as well as creates a productive and transparent environment for qualified vendors with open and fair access to GLWA opportunities.

This month's Audit Committee binder includes the Annual Procurement Report which is a testament to the volume of work that this team produces with their cross-functional partners across GLWA. We are also proud of our team members who are regular speakers at procurement and vendor events. Finally, it is important to note the leadership roles that GLWA Procurement team members have assumed in their field including Ms. Tina Clinkscales, CPPO, CPPB, who is presently the President for the Michigan Public Purchasing Officers Association. Thank you, Tina!



PRE-SCORING EVALUATION TEAM MEETING

Contract No. 2104125

External Auditor Services

Date: Friday, 3-25-22; 8:00 a.m.
Location: Audit Committee Meeting

AGENDA

1. The Procurement staff member responsible for the Procurement activities associated with this project is Joan Salwasser.
2. Thank you for your participation. Your time and efforts are greatly appreciated!
3. The following information is to provide Evaluators with information pertaining to project including the current status, next steps, and to advise/review key dates.
4. Discussion Parameters:
 - a. As a gentle reminder, discussions pertaining to this project must remain between Evaluators, Procurement and Advisors.
 - b. Please refer any vendor inquiries pertaining to this project to Procurement.
5. Current status:
 - a. Proposals are due Monday, 3-28-22 at noon.
 - b. At 12:01 p.m. vendors will no longer be able to upload any documents as the bidding period will be officially closed.
6. Next steps:
 - a. Vendors will submit proposals.
 - b. Immediately following the bid close, Procurement will go into Bonfire, and release the proposals to the Evaluation Team/Advisors/Observers.
7. Bonfire: The contracting platform that GLWA uses which includes the solicitation and evaluation process.
 - a. Evaluators, Advisors and Observers should have received an invitation from Bonfire to register. Anyone who hasn't received it, please let me know.
 - b. At the invitation stage, Evaluators will be asked to register if they haven't already done so. It's a relatively short process but again, reach out to me if you need assistance.
 - c. Following registration and in order to view proposals received, Bonfire will require each Evaluator/Advisor/Observer to sign a Conflict-of-Interest form.
 - d. Once registration is complete and the Conflict-of-Interest form is signed, the Evaluator/Advisor/Observer will be able to view all of the public solicitation files as well as the proposals.

8. Key Points on Scoring:

- a. It is acceptable for Evaluators to have discussion with other Evaluators and Advisers if needed.
- b. It is not a requirement that all Evaluators' scores are identical.
- c. What is necessary is that evaluators collectively agree on the most qualified source.

9. Key Dates:

- | | |
|----------------------------|--|
| a. 3-28-22; 12:00 p.m. | Proposals due |
| b. 4-4-22; End of Business | Evaluations complete |
| c. 4-14-22; Time TBD | Vendor presentations |
| d. 4-22-22; Time TBD | Audit Committee recommendation finalized |
| e. 5-11-22 | Tentative Board award of contract |
| f. 5-25-22 | Alternate date for Board award of contract |

QUESTIONS?

*Note: Procurement remains available to assist Evaluators/Advisors/Observers and Stakeholders throughout the entire Procurement process (evaluation, vendor presentation and award recommendation).

GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

December 2021

**Presented to the
Great Lakes Water Authority
Audit Committee on March 25, 2022**

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Key Financial Metrics

The table below provides key report highlights and flags the financial risk of a budget shortfall by year-end as follows:

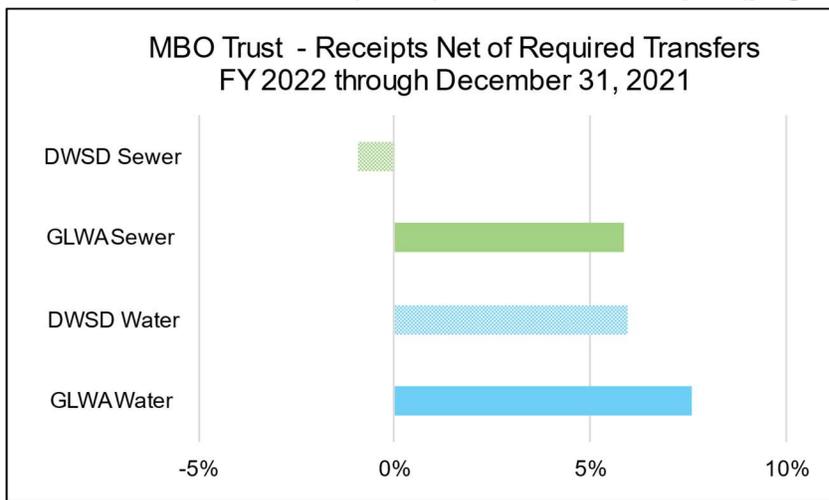
No Risk (green) - Potential (yellow) - Likely (red)

Each variance is monitored by the Great Lakes Water Authority (GLWA) management and, where appropriate, operating and/or budget priorities are re-evaluated. Budget amendments are prepared and presented quarterly based on most current information. To address the wholesale water revenue shortfall, a first quarter budget amendment was approved for \$2.4 million.

As of December 31, 2021					
Metric	FY 2022 Budget	FY 2022 Amended Budget	FY 2022 Actual	Variance from Financial Plan	Report Page Reference
Wholesale Water Billed Revenue (\$M)	\$170.9	\$168.5	\$166.6	-1%	47
Wholesale Water Billed Usage (mcf)	7,406,000	7,186,000	6,995,000	-3%	
Wholesale Sewer Billed Revenue (\$M)	\$135.7	\$135.7	\$135.7	0%	49
Wholesale Water Operations & Maintenance (\$M)	\$72.0	\$72.0	\$67.1	-7%	5
Wholesale Sewer Operations & Maintenance (\$M)	\$90.7	\$90.7	\$89.6	-1%	
Investment Income (\$M)	\$1.5	\$1.5	\$1.9	27%	37
Water Prorated Capital Spend w/SRA* (\$M)	\$90.0	\$67.5	\$84.2	25%	28
Sewer Prorated Capital Spend w/SRA* (\$M)	\$53.0	\$40.5	\$32.1	-21%	29

*SRA refers to the capital spending ratio assumption which allows capital program delivery realities to align with the financial plan.

Master Bond Ordinance (MBO) Trust Net Receipts (page 52)



Net cash flow receipts remain positive for GLWA Water and Sewer. This means that all legal commitments of the MBO Trust and the lease payment are fully funded – and that positive cash flow is available for additional capital program funding in subsequent year(s). DWSD Water reports a surplus of \$2.9 million and

DWSD Sewer reports a \$1.4 million shortfall of net receipts over disbursements through December 2021. On August 26, 2021, the DWSD Board of Water Commissioners proactively adopted budget amendments to address potential shortfalls for FY 2022. These budget amendments are reflected in this December 2021 report. DWSD continues to monitor these balances and anticipates improved monthly receipts supplemented by tax lien collections will resolve the current Sewer shortfall before yearend.

The current DWSD loan receivable balance for fiscal year 2018 is \$4.2 million.

Budget to Actual Analysis (page 3)

- FY 2022 information includes the first quarter budget amendments which were approved by the GLWA Board on December 8, 2021. The information does not include the proposed second quarter budget amendments.
- The total Revenue Requirements are on target through December 2021.
- The total Operations & Maintenance expenses are at 48.2% of budget through December 2021.

Basic Financial Statements (page 9)

- The Basic Financial Statements are prepared on a full accrual basis and reflect preliminary, unaudited results.
- Operating income for December 2021 is \$45.5 million for the Water fund (25.7% of total revenues) and \$68.3 million for the Sewer fund (28.8 % of total revenues).
- Water Net Position increased by \$2.9 million, and Sewage Disposal Net Position increased by \$10.0 million for the year to date through December 2021.

Capital Improvement Plan Financial Summary (page 27)

- Water systems exceed the 75% Capital Spend Ratio assumption.
- Sewer systems also exceed the 75% Capital Spend Ratio assumption.

Master Bond Ordinance Transfers (page 30)

- For December, transfers of \$13.6 million and \$17.6 million were completed for the GLWA Water and Sewer funds, respectively.
- Also for December, transfers of \$3.2 million and \$7.4 million were completed for the DWSD Water and Sewer funds, respectively.

Cash Balances & Investment Income (page 36)

- Total cash & investments are \$439 million in the Water fund and \$446 million in the Sewer fund.
- Total, combined, cumulative, FY 2022 investment income through December is \$1.9 million.

DWSD Retail Revenues, Receivables & Collections (page 41)

- Water usage through December 31, 2021 is at 108.38% and revenues at 100.08% of budget.
- Sewer usage through December 31, 2021 is at 103.59% and revenues at 99.82% of budget.
- Combined accounts receivable balances for the water and sewer funds report an increase of \$44.0 million over the prior year.
- Past dues over 180 days make up 65.9% of the total accounts receivable balance. The current bad debt allowance covers 101.6% of past dues over 60 days.

GLWA Wholesale Billing, Receivables & Collections (page 46)

- GLWA accounts receivable past due balance net of Highland Park is 8.15% of the total accounts receivable balance, with the majority of that balance related to one water account dispute currently under discussion.
- The Highland Park past due balance is \$51.9 million. It includes \$39.7 million for wastewater treatment services, \$1.8 million for industrial waste control services, and \$10.4 million for water supply services. Highland Park has not made a payment in FY 2022 through December 2021.

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



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

The FY 2022 information presented in these sections includes the first quarter budget amendments approved by the GLWA Board on December 8, 2021, but not the proposed second quarter budget amendments.

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 December 2021, the pro-rata benchmark is 50.0% (6 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 2022 revenues are either at or above target. Detailed schedules related to revenues are provided in the *Wholesale Billings, Collections, and Receivables* section of this financial report binder.

Water revenues presented in Table 1A differ from those presented in *Table 2 – Statement of Revenues, Expenses and Changes in Net Position* found in the *Basic Financial Statement* section of this report. Water Revenues presented in Table 1A for revenue requirement purposes are reduced by the monthly payment to the City of Flint for a license to raw water rights under the Flint Raw Water Contract as documented in Appendix A-2 of the [Flint Water Agreement](#). Through December 31, 2021, these payments total \$3.3 million for FY 2022.

2. **Investment Earnings:** For *both* systems, investment earnings are above the pro-rata benchmark for FY 2022; the *water* system is at 68.3%; while the *sewer* system is at 54.9%. 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 less than the pro-rata benchmark for FY 2022 at 46.6%. The *sewer* system O&M expenses, at 49.4%, is slightly under the pro-rata benchmark.
5. **Debt Service:** For both systems, debt service is on target with the pro-rata benchmark for FY 2022; the *water* system is at 50.2%; while the *sewer* system is at 50.6%. The activity is based on the payment schedules adjusted for the State Revolving Fund loans that are still being drawn down.
6. **Operating Reserve Deposit:** GLWA has established a target balance in the O&M Fund of 45 days of operating expense which works in tandem with the I&E Funds to provide liquidity to the utility. Adequate funding is in place to meet this requirement; therefore, it is expected that additional transfers to this reserve will not be required in FY 2022.
7. **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 2021, DWSD management successfully implemented a formal plan to end the year with positive net cash flows for both the DWSD *water* system and the DWSD *sewer* system. For FY 2022, the DWSD *water* system does not have a budgetary shortfall and the DWSD *sewer* system has a budgetary shortfall of \$1.4 million through December 31, 2021. GLWA and DWSD staff are meeting regularly to discuss steps to mitigate this shortfall as outlined in the 2018 MOU.
8. **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.
9. **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.
10. **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 is 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)

	FY2021 AMENDED BUDGET	FY 2021 ACTIVITY THRU 12/31/2020	Percent Year-to- Date	FY 2022 BOARD ADOPTED BUDGET	FY 2022 AMENDED BUDGET	FY 2022 ACTIVITY THRU 12/31/2021	Percent Year-to- Date
Water System							
Revenues							
Suburban Wholesale Customer Charges	\$ 317,034	\$ 163,824	51.7%	\$ 321,111	\$ 318,711	\$ 162,993	51.1%
Retail Service Charges	21,926	11,094	50.6%	21,697	21,697	10,849	50.0%
Investment Earnings	3,956	2,514	63.5%	1,047	1,547	1,057	68.3%
Other Revenues	229	160	70.0%	175	175	247	141.1%
Total Revenues	\$ 343,144	\$ 177,592	51.8%	\$ 344,031	\$ 342,131	\$ 175,145	51.2%
Revenue Requirements							
Operations & Maintenance Expense	\$ 134,127	\$ 64,554	48.1%	\$ 143,934	\$ 143,934	\$ 67,115	46.6%
General Retirement System Legacy Pension	6,048	3,024	50.0%	6,048	6,048	3,024	50.0%
Debt Service	137,436	69,784	50.8%	135,481	135,121	67,854	50.2%
General Retirement System Accelerated Pension	6,268	3,134	50.0%	6,268	6,268	3,134	50.0%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	1,669	835	50.0%	1,706	1,706	853	50.0%
Regional System Lease	22,500	11,250	50.0%	22,500	22,500	11,250	50.0%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending Improvement & Extension Fund Transfer Pending	-	-	0.0%	-	-	-	0.0%
	35,095	14,140	40.3%	28,094	26,554	13,699	51.6%
Total Revenue Requirements	\$ 343,144	\$ 166,721	48.6%	\$ 344,031	\$ 342,131	\$ 166,929	48.8%
Net Difference		\$ 10,871				\$ 8,217	
<i>Recap of Net Positive Variance</i>							
		Revenue Variance	\$ 6,020			\$ 4,080	
		Revenue Requirement Variance	4,851			4,137	
		Overall Variance	\$ 10,871			\$ 8,217	

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

	FY 2021 AMENDED BUDGET	FY 2021 ACTIVITY THRU 12/31/2020	Percent Year-to- Date	FY 2022 BOARD ADOPTED BUDGET	FY 2022 AMENDED BUDGET	FY 2022 ACTIVITY THRU 12/31/2021	Percent Year-to- Date
Sewer System							
Revenues							
Suburban Wholesale Customer Charges	\$ 272,454	\$ 134,310	49.3%	\$ 272,130	\$ 269,130	\$ 136,135	50.6%
Retail Service Charges	187,960	94,428	50.2%	188,662	188,662	94,331	50.0%
Industrial Waste Control Charges	7,685	3,943	51.3%	9,025	9,025	4,159	46.1%
Pollutant Surcharges	6,108	3,225	52.8%	4,189	4,189	2,627	62.7%
Investment Earnings	2,778	1,631	58.7%	1,023	1,523	836	54.9%
Other Revenues	2,195	296	13.5%	400	400	288	71.9%
Total Revenues	\$ 479,179	\$ 237,833	49.6%	\$ 475,429	\$ 472,929	\$ 238,376	50.4%
Revenue Requirements							
Operations & Maintenance Expense	\$ 182,296	\$ 84,038	46.1%	\$ 181,300	\$ 181,300	\$ 89,629	49.4%
General Retirement System Legacy Pension	10,824	5,412	50.0%	10,824	10,824	5,412	50.0%
Debt Service	201,780	102,957	51.0%	207,210	204,985	103,656	50.6%
General Retirement System Accelerated Pension	11,621	5,810	50.0%	11,621	11,621	5,810	50.0%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	2,415	1,208	50.0%	2,358	2,358	1,179	50.0%
Regional System Lease	27,500	13,750	50.0%	27,500	27,500	13,750	50.0%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending Improvement & Extension Fund Transfer Pending	-	275	0.0%	-	-	1,358	0.0%
	42,743	20,103	47.0%	34,617	34,342	16,749	48.8%
Total Revenue Requirements	\$ 479,179	\$ 233,553	48.7%	\$ 475,429	\$ 472,929	\$ 237,545	50.2%
Net Difference		\$ 4,280				\$ 832	
<i>Recap of Net Positive Variance</i>							
		Revenue Variance	\$ (1,757)			\$ 1,912	
		Revenue Requirement Variance	6,037			(1,080)	
		Overall Variance	\$ 4,280			\$ 832	

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of December 31, 2021, is 50.0% (six months). When comparing FY 2022 to FY 2021 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.

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

Major Budget Categories	FY 2021		Percent Year-to-Date	FY 2022		FY 2022	
	FY 2021 AMENDED BUDGET	ACTIVITY THRU 12/31/2020		BOARD ADOPTED BUDGET	FY 2022 AMENDED BUDGET	ACTIVITY THRU 12/31/2021	Percent Year-to-Date
Water	\$ 70,820	\$ 36,219	51.1%	\$ 74,813	\$ 74,813	\$ 38,647	51.7%
Sewer	114,975	52,850	46.0%	111,971	111,971	56,535	50.5%
Centralized	100,339	45,687	45.5%	103,846	103,846	45,845	44.1%
Administrative	30,290	13,713	45.3%	34,603	34,603	15,718	45.4%
Employee Benefits	-	123	0.0%	-	-	-	0.0%
Total O&M Budget	\$ 316,424	\$ 148,592	47.0%	\$ 325,234	\$ 325,234	\$ 156,744	48.2%

Totals may be off due to rounding

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 48.2% which is reasonably within the pro-rata benchmark of 50.0%. This positive variance equates to a dollar amount of \$5.9 million. The expense category commentary is provided below for items highlighted on Table 3.

Personnel Costs: The overall category is slightly under the pro-rata benchmark; coming in at 48.0% through December 2021.

Utilities: The overall category is higher than the pro-rata benchmark; coming in at 55.4% through December 2021. Variances within this category, when they occur, are not unexpected as usage varies throughout the year.

- **Electric** is higher than the pro-rata benchmark, coming in at 56.3%. The first three months of GLWA's fiscal year (July, August, and September) are typically peak months for the usage of electricity. June, the last month of GLWA's fiscal year, is typically a peak month as well.
- **Gas** is coming in at 55.8% which is higher than the benchmark of 50.0%. Variances within this category are not unexpected as usage is variable throughout the year.
- **Sewage service** is higher than the benchmark, coming in at 61.5%. Bills for a meter for a large line at the WRRF, which previously had been estimated, are now being received for actual readings.
- **Water service** is lower than the benchmark, coming in at 38.8%. Usage of this account varies throughout the year. A review of this category is being conducted.

Chemicals: This category is higher than the pro-rate benchmark; coming in at 58.5% through December 2021. While variances within this category are not unexpected as usage varies throughout the year, the increase in chemical costs is the primary driver for this variance.

Supplies & Other: This category is lower than the benchmark; coming in at 35.1% through December 2021. Given that the nature of the items in this category are subject to one-time expenses that do not occur evenly throughout the year, variances are not unexpected. A review of this category is being conducted.

Contractual Services: The overall category is slightly higher than the pro-rata benchmark; coming in at 51.2% through December 2021. Variances in this category, when they occur, are not unexpected as the usage of contracts varies throughout the year (projects scheduled to begin during the latter half of the year as well as contracts that are on an as needed basis). Budget amendments will be processed for those projects in which the actual start dates have been delayed from that in which they were budgeted.

Capital Program Allocation: This category is lower than the benchmark; coming in at 40.0% through December 2021. The amount in the Capital Program Allocation account is shown as negative as this is a "contra" account which represents an offset to the Personnel Costs section of the Operations & Maintenance (O&M) budget.

Shared Services: This category is on target with the benchmark; coming in at 49.3% through December 2021. 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 reflect the forecasted activity more accurately for FY 2022. A first quarter budget amendment was entered to adjust the shared services budget to this revised FY 2022 forecast. In addition, it is important to note that some of the shared services agreements are not billed at a monthly rate of 1/12 of the annual budgeted amount.

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

Expense Categories	FY 2021 AMENDED BUDGET	FY 2021 ACTIVITY THRU 12/31/2020	Percent Year-to- Date at 12/31/2020	FY 2021 ACTIVITY THRU 6/30/2021	Percent Year-to- Date at 6/30/2021	FY 2022				FY 2022	
						FY 2022 AMENDED BUDGET	PRORATED AMENDED BUDGET (6 MONTHS)	FY 2022 ACTIVITY THRU 12/31/2021	Percent Year-to- Date 12/31/2021	PRORATED BUDGET LESS FY 2022 ACTIVITY	
Entity-wide											
Salaries & Wages	\$ 67,306	\$ 32,600	48.4%	\$ 64,910	50.2%	\$ 71,001	\$ 35,501	\$ 32,642	46.0%	\$ 2,858	
Workforce Development	895	444	49.7%	829	53.6%	977	488	379	38.8%	109	
Overtime	7,537	3,848	51.1%	7,365	52.2%	6,898	3,449	3,859	55.9%	(410)	
Employee Benefits	26,806	13,369	49.9%	25,448	52.5%	26,829	13,415	12,693	47.3%	721	
Transition Services	8,557	3,972	46.4%	8,392	47.3%	8,296	4,148	5,106	61.5%	(958)	
Employee Benefits Fund	-	123	0.0%	-	0.0%	-	-	-	0.0%	-	
Personnel Costs	111,100	54,356	48.9%	106,945	50.8%	114,001	57,000	54,680	48.0%	2,321	
Electric	41,554	21,434	51.6%	41,982	51.1%	39,633	19,817	22,302	56.3%	(2,485)	
Gas	5,924	2,153	36.4%	5,706	37.7%	5,566	2,783	3,107	55.8%	(325)	
Sewage Service	2,297	907	39.5%	2,075	43.7%	2,079	1,040	1,279	61.5%	(239)	
Water Service	2,608	1,294	49.6%	2,987	43.3%	3,120	1,560	1,212	38.8%	348	
Utilities	52,383	25,788	49.2%	52,749	48.9%	50,398	25,199	27,900	55.4%	(2,701)	
Chemicals	14,362	7,358	51.2%	13,982	52.6%	16,044	8,022	9,384	58.5%	(1,362)	
Supplies & Other	35,595	15,402	43.3%	31,216	49.3%	39,617	19,808	13,911	35.1%	5,897	
Contractual Services	99,977	49,447	49.5%	92,020	53.7%	104,835	52,417	53,627	51.2%	(1,210)	
Capital Program Allocation	(3,447)	(1,463)	42.5%	(3,192)	45.8%	(3,471)	(1,736)	(1,389)	40.0%	(347)	
Shared Services	(4,512)	(2,296)	50.9%	(2,567)	89.5%	(2,776)	(1,388)	(1,369)	49.3%	(19)	
Unallocated Reserve	10,966	-	0.0%	-	0.0%	6,586	3,293	-	0.0%	3,293	
Total Expenses	\$ 316,424	\$ 148,592	47.0%	\$ 291,153	51.0%	\$ 325,234	\$ 162,617	\$ 156,744	48.2%	\$ 5,872	
<i>Totals may be off due to rounding</i>											



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 June 2021 comparative amounts shown in the tables below 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 December 31, 2021
(\$000)**

	Water	Sewage Disposal	Total Business- type Activities	Comparative June 30, 2021
Assets				
Cash - unrestricted (a)	\$ 132,560	\$ 176,614	\$ 309,174	\$ 354,351
Cash - restricted (a)	53,556	52,313	105,869	162,646
Investments - unrestricted (a)	169,064	121,524	290,588	322,930
Investments - restricted (a)	59,706	111,152	170,858	70,225
Accounts Receivable	95,196	64,816	160,013	165,059
Due from (to) Other Funds (b)	(921)	921	-	-
Other Assets (c)	677,291	424,381	1,101,671	1,098,362
Cash Held FBO DWSD Advance (d)	-	(1,556)	(1,556)	-
Capital Assets, net of Depreciation	1,280,132	2,149,457	3,429,589	3,546,027
Land	293,897	124,377	418,274	417,512
Construction Work in Process (e)	272,322	217,938	490,261	395,973
Total assets	3,032,803	3,441,937	6,474,740	6,533,085
Deferred Outflows (f)	65,450	154,100	219,550	225,074
Liabilities				
Liabilities - Liabilities-ST	153,265	168,528	321,793	329,279
Due to (from) Other Funds (b)	-	-	-	-
Other Liabilities (h)	2,336	6,255	8,591	7,500
Cash Held FBO DWSD (d)	11,859	4,176	16,035	6,064
Liabilities - Long-Term (i)	2,974,907	3,477,650	6,452,557	6,529,068
Total liabilities	3,142,366	3,656,609	6,798,975	6,871,911
Deferred Inflows (f)	50,297	42,316	92,613	96,380
Total net position (j)	\$ (94,410)	\$ (102,888)	\$ (197,298)	\$ (210,132)
<i>Totals may be off due to rounding</i>				

In general, the Statement of Net Position reflects a mature organization with no unexpected trends.

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 2032 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* are reported at market value. Investments at June 30, 2021 are also reported at market value. The December 31, 2021 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 Other Funds* and *Due to Other Funds* are shown at gross 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 mainly 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 only adjusted in the interim 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 because 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 December 2021 Financial Report Binder. Prior year ending balances are provided in the June 30, 2021 column as a reference for comparative purposes. Explanatory notes follow this statement.

Water revenues presented below in Table 2 differ from those presented in *Table 1A – Water Revenue Requirement Budget* found in the *Budget to Actual Analysis* section of this report because water revenues presented in Table 1A for revenue requirement purposes are reduced by the monthly payment to the City of Flint for a license to raw water rights.

Table 2 – Statement of Revenues, Expenses and Changes in Net Position
– All Funds Combined
For the Six Months ended December 31, 2021
(\$000)

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- Type Activities	Comparative June 30, 2021
Revenue						
Wholesale customer charges	\$ 166,280	93.7%	\$ 136,135	57.3%	\$ 302,415	\$ 589,992
Local system charges	10,849	6.1%	94,331	39.7%	105,180	209,885
Industrial waste charges		0.0%	4,159	1.8%	4,159	8,005
Pollutant surcharges		0.0%	2,627	1.1%	2,627	6,720
Other revenues	247	0.1%	288	0.1%	535	767
Total Revenues	177,376	100.0%	237,540	100.0%	414,915	815,369
Operating expenses						
Operations and Maintenance	68,277	38.5%	90,750	38.2%	159,027	301,740
Depreciation	61,770	34.8%	78,264	32.9%	140,034	274,044
Amortization of intangible assets	1,783	1.0%	220	0.1%	2,003	3,677
Total operating expenses	131,830	74.3%	169,234	71.2%	301,064	579,460
Operating Income	45,546	25.7%	68,306	28.8%	113,851	235,909
Total Nonoperating (revenue) expense	42,690	24.1%	58,327	24.6%	101,018	224,464
Increase/(Decrease) in Net Position	2,855	1.6%	9,979	4.2%	12,834	11,445
Net Position (deficit), beginning of year	(97,266)		(112,867)		(210,132)	(221,578)
Net position (deficit), end of year	\$ (94,410)		\$ (102,888)		\$ (197,298)	\$ (210,132)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is \$2.9 million.
- ✓ Wholesale water customer charges of \$166.3 million account for 93.7% of Water System revenues.
- ✓ Operating expenses of \$131.8 million represent 74.3% of total operating revenue. Depreciation is the largest operating expense at \$61.8 million or 46.9% of operating expense.
- ✓ Amortization of intangible assets represents activity for raw water rights.
- ✓ Operating income after operating expenses (including depreciation) equals \$45.5 million or 25.7% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$39.2 million (this equates to the bonded debt interest expense less the offset from DWSD contractual obligation income).

Sewage Disposal Fund

- ✓ The increase in the Sewage Disposal Fund Net Position is \$10.0 million.
- ✓ Wholesale customer charges of \$136.1 million account for 57.3% 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 \$94.3 million account for 39.7% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$169.2 million represent 71.2% of total operating revenue. Depreciation is the largest operating expense at \$78.3 million or 46.2% of total operating expense.
- ✓ Amortization of intangible assets represents activity for a warehouse lease.
- ✓ Operating income after operating expenses (including depreciation) equals \$68.3 million or 28.8% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$45.7 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 December 2021 Financial Report Binder. Explanatory notes follow this schedule.

**Table 3 – Supplemental Schedule of Operations & Maintenance Expenses
– All Funds Combined
For the Six Months ended December 31, 2021
(\$000)**

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- Type Activities	Percent of Total
Operating Expenses						
Personnel						
Salaries & Wages	11,433	16.7%	26,694	29.4%	38,128	24.0%
Overtime	2,494	3.7%	1,364	1.5%	3,859	2.4%
Benefits	8,798	12.9%	3,895	4.3%	12,693	8.0%
Total Personnel	\$ 22,725	33.3%	\$ 31,954	35.2%	\$ 54,679	34.4%
Utilities						
Electric	13,673	20.0%	8,629	9.5%	22,302	14.0%
Gas	447	0.7%	2,661	2.9%	3,107	2.0%
Sewage	515	0.8%	764	0.8%	1,279	0.8%
Water	1	0.0%	1,210	1.3%	1,211	0.8%
Total Utilities	\$ 14,636	21.4%	\$ 13,264	14.6%	\$ 27,900	17.5%
Chemicals	3,541	5.2%	5,843	6.4%	9,384	5.9%
Supplies and other	4,370	6.4%	9,343	10.3%	13,714	8.6%
Contractual services	25,152	36.8%	31,013	34.2%	56,165	35.3%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(941)	-1.4%	(447)	-0.5%	(1,389)	-0.9%
Intergovernmental Agreement	(10)	0.0%	(47)	-0.1%	(58)	0.0%
Shared services allocation	(1,197)	-1.8%	(172)	-0.2%	(1,369)	-0.9%
Operations and Maintenance Expenses	\$ 68,277	100.0%	\$ 90,750	100.0%	\$ 159,027	100.0%

Totals may be off due to rounding

- ✓ Core expenses for water and sewage disposal systems are utilities (17.5% of total O&M expenses) and chemicals (5.9% of total O&M expenses).
- ✓ Personnel costs (34.4% 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 (35.3%) includes:
 - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately \$5.8 million);
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$8.2 million); and
 - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenance, field, planning and other services.
- ✓ The Capital Program Allocation, Intergovernmental Agreement and Shared Services Allocation are shown as negative amounts because they are 'contra' expense accounts representing offsets to associated costs in other Operations and Maintenance expense categories.

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 Six Months ended December 31, 2021
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2021
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (12,514)	\$ (8,507)	\$ (21,021)	\$ (43,087)
Interest income DWSD Shortfall	-	(106)	(106)	(635)
Investment earnings	(1,064)	(843)	(1,906)	(7,040)
Net incr (decr) in fair value of invstmt	1,500	1,006	2,505	5,781
Other nonoperating revenue	(73)	(2)	(75)	476
Interest Expense				
Bonded debt	51,720	54,191	105,911	218,857
Lease obligation	8,542	10,440	18,981	38,332
Other obligations	2,275	832	3,107	6,296
Total interest expense	62,537	65,462	127,999	263,485
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	-
Capital Contribution	-	34	34	(5,960)
Amortization, issuance costs, debt	(7,790)	1,157	(6,633)	(12,966)
(Gain) loss on disposal of capital assets	(13)	(22)	(35)	365
Loss on impairment of capital assets	-	-	-	-
Water Residential Assistance Program	107	147	254	1,517
Legacy pension expense	-	-	-	22,528
Total Nonoperating (Revenue)/Expense	42,690	58,327	101,018	224,464

Totals may be off due to rounding

- ✓ Interest income on contractual obligation relates to the portion of the total GLWA debt obligation attributable to DWSD. This interest income offsets the total debt interest expense paid by GLWA on behalf of both entities monthly.
- ✓ Interest income DWSD shortfall represents interest from a budgetary shortfall loan from fiscal years 2016, 2017 and 2018 and is paid in accordance with the 2018 Memorandum of Understanding (MOU).
- ✓ Investment earnings in this report are reflected at book value. Any differences between the Basic Financial report and Cash and Investment section of this Financial Report binder are due to accrued interest. FY 2020 market value adjustments for Water and Sewer totaled \$4.9 million and \$3.3 million, respectively.

FY 2021 market value adjustments for Water and Sewer totaled \$1.5 million and \$1.0 million, respectively.

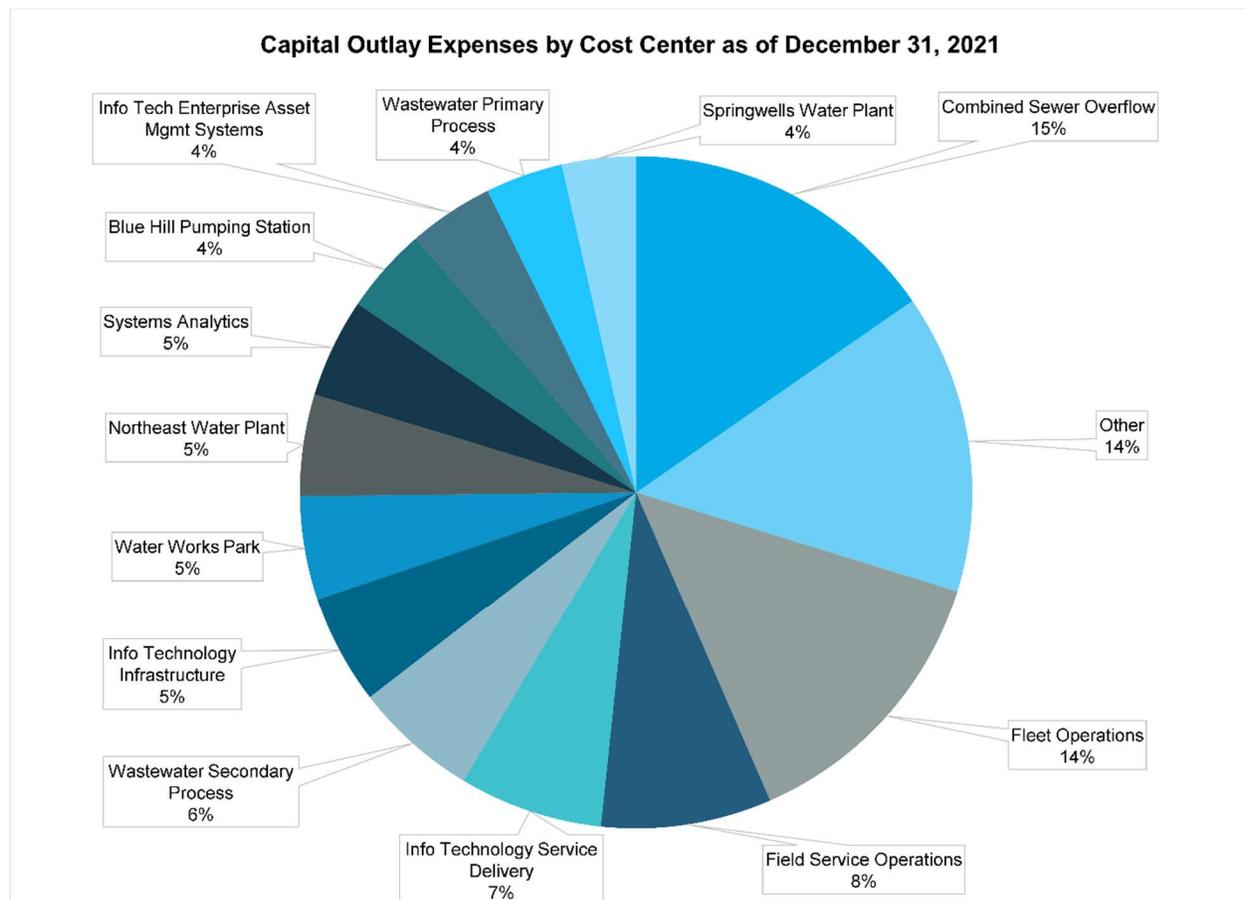
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:
 - Bonded debt;
 - Lease obligation for the regional assets from the City of Detroit; and
 - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to assumed DWSD liabilities; acquisition of raw water rights related to the KWA Pipeline.
- ✓ The FY 2021 capital contribution in Nonoperating (revenue) expense represents one-half of an \$11.92 million payment made by Oakland Macomb Interceptor Drainage District (OMIDD). The payment was part of an amendment to the OMIDD Wastewater Disposal Services Contract and was split between FY 2020 and FY 2021 based on budgeted revenue requirements for those respective years.

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 December 31, 2021, total capital outlay spend is \$5.0 million. Following this chart is a sample list of projects and purchases from the total spend of \$5.0 million:



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

Water Operations: 14 Mile Water Main Assessment (\$350k); Turbidimeter at Northeast Water Plant (\$216k); power inverter (\$141k); Water Works Park furniture (\$115k); Southwest Water Plant furniture (\$74k); high pressure water tank (\$65k); buoy system

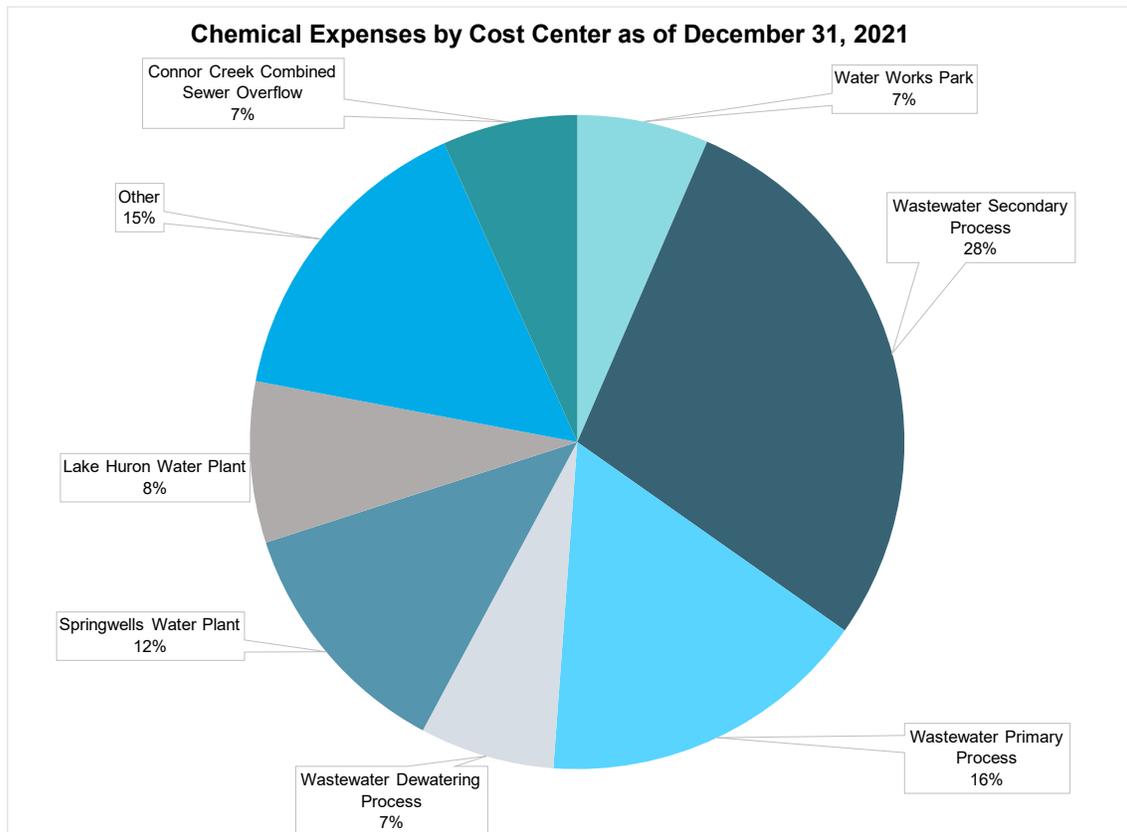
(\$56k); excitation motor retrofit (\$42k); vacuum regulator (\$40k) and steam generator (\$39k).

Wastewater Operations: PQM Meters for CSO Facilities (\$771k); wastewater pump (\$347k); B-houses (\$167k); Main Lift Pump emergency repair (\$140k) and metering pump (\$33k).

Centralized & Administrative Facilities: Trucks and vehicles (\$689k); IT computers and hardware (\$344k); IT software (\$336k); sewer meter support (\$239k); and chemical monitoring equipment (\$78k).

Chart 2 – Chemical Expenses – Water and Sewer System Combined

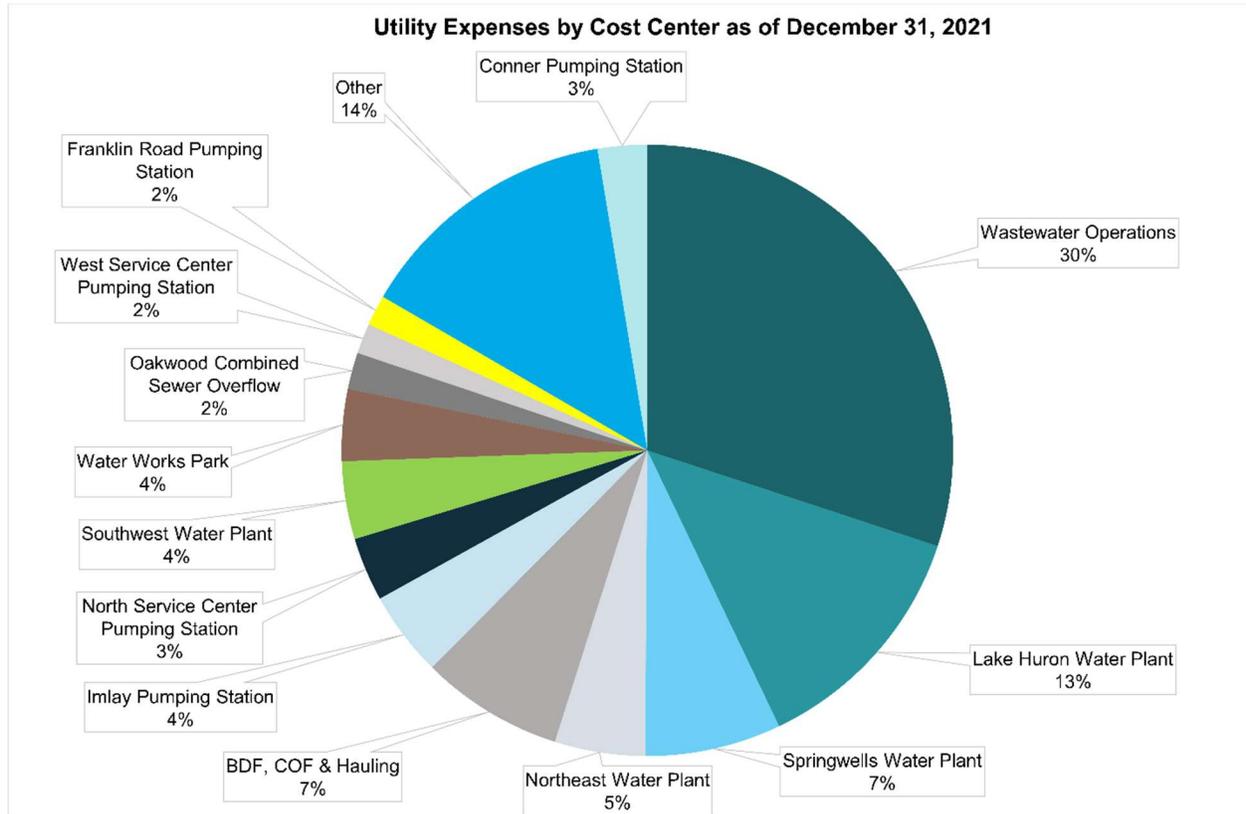
Chemical expenses are \$9.4 million through December 31, 2021. The allocation is shown in the chart below and remains consistent with prior periods.



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 Expenses – Water and Sewer System Combined

Utility expenses are \$27.9 million through December 31, 2021. 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. Through December 31, 2021 all reconciliations are up-to-date and complete.

There were no changes in accounts since November 2021.

Chart 1 – Bank Reconciliation Completion Status

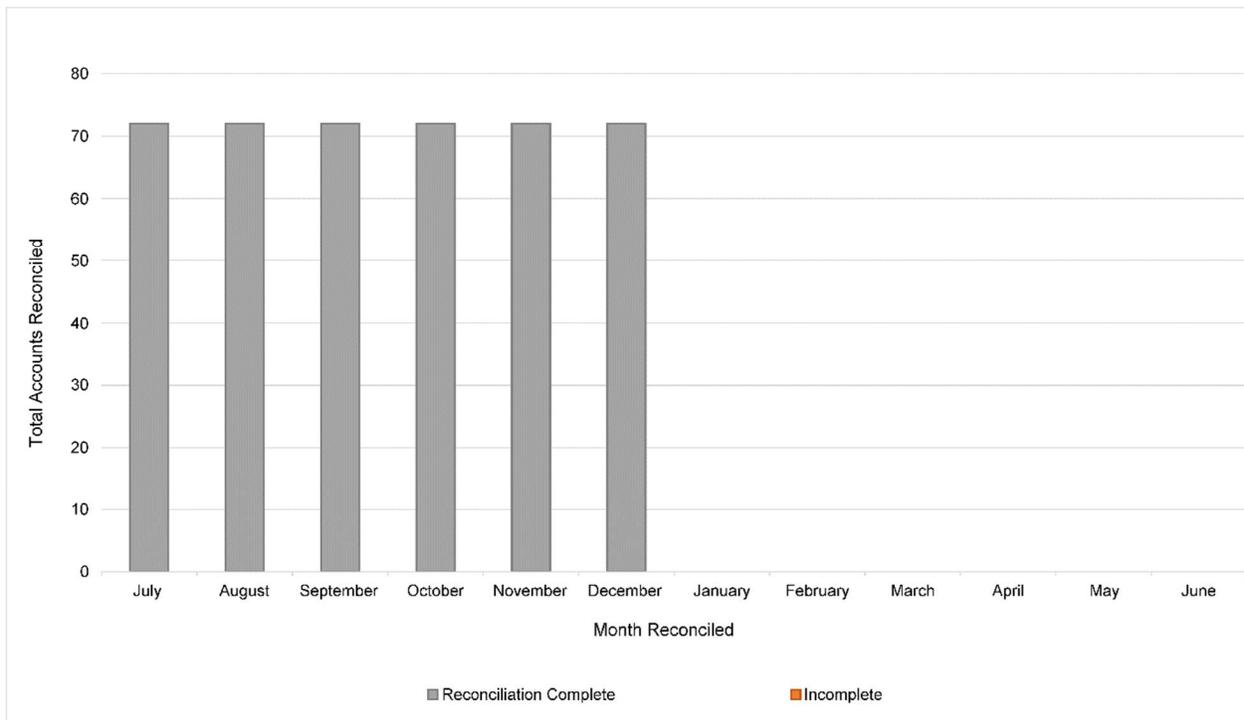


Table 1 – Fiscal Year 2022 GL Cash Account Rollforward

Total GL Cash accounts as of July 1, 2021	72
New GL Cash accounts	0
Inactivated GL Cash accounts	0
Total GL Cash accounts as of December 31, 2021	72

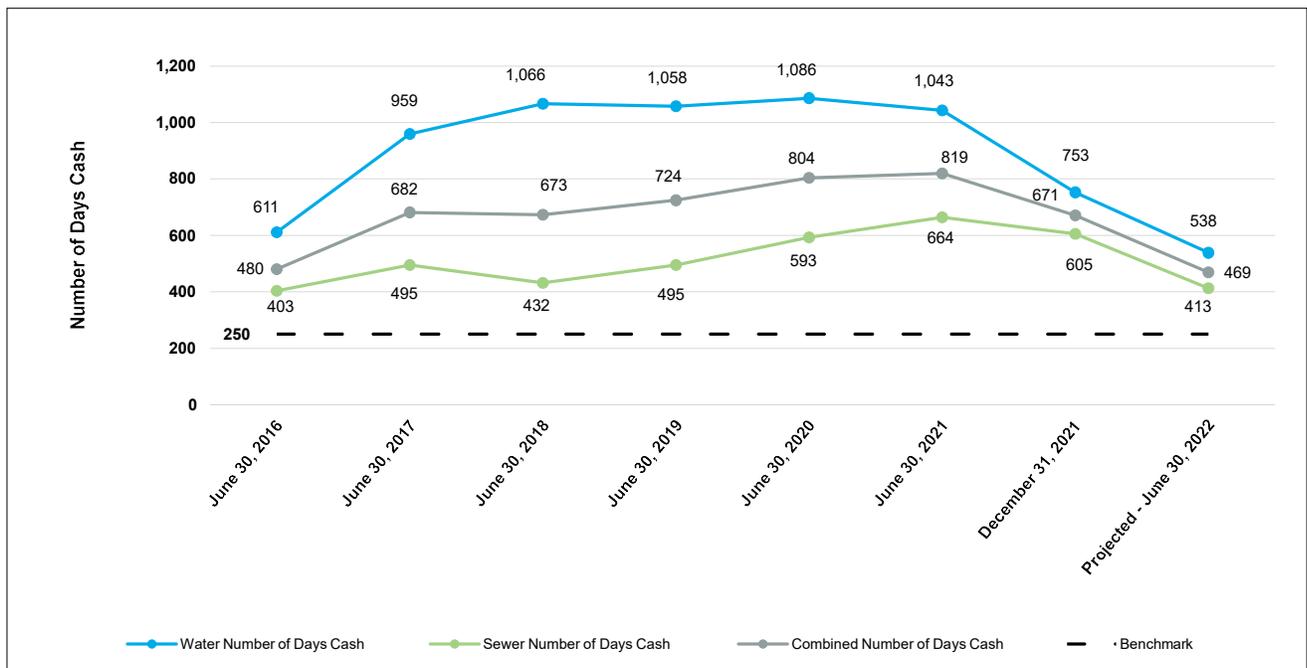


Financial Operations KPI - Liquidity

This key performance indicator shown in **Chart 1 – Historical Schedule of Days Cash on Hand – Liquidity – Regional System** and **Table 1 – Schedule of Days Cash on Hand – Liquidity – Regional System** below provides a measure of a utility’s ability to meet expenses, cope with emergencies and navigate business interruptions. Liquidity is one of several key metrics monitored by bond rating agencies reflecting an organization’s financial strength. A best practice benchmark for this key performance indicator is greater than 250 days cash on hand as shown by the dashed line in Chart 1 below.

Both GLWA Water and Sewer funds continue to exceed this target with Water at 753 and Sewer at 605 days cash on hand as of December 31, 2021. These balances remain strong for the regional system in large part due to the need to fund CIP projects with I&E funds but drop in the FY 2022 projection as these funds are depleted and GLWA transitions to a planned bond issue. The FY 2022 projection is calculated based on values from the GLWA FY 2022 – 2026 Budget & Five-Year Plan.

Chart 1 – Historical Schedule of Days Cash on Hand – Liquidity – Regional System



Note: The GLWA Annual Comprehensive Financial Reports are the source of all historic data referenced. Refer to these reports for detailed calculations by fiscal year.

Table 1 – Schedule of Days Cash on Hand – Liquidity – Regional System

	<u>June 30, 2021</u>	<u>December 31, 2021</u>	<u>Projected June 30, 2022</u>
Water Fund			
Cash and Investments - Unrestricted	\$ 353,308,000	\$ 301,624,000	\$ 217,600,000
Operating Expense			
Operating Expense (a)	\$ 250,476,000	\$ 138,200,000	\$ 276,400,000
Less: Depreciation (a)	(123,272,000)	(62,667,000)	(125,333,000)
Less: Amortization of Intangible Asset (a)	(3,567,000)	(1,783,000)	(3,567,000)
Net Operating Expense	\$ 123,638,000	\$ 73,750,000	\$ 147,500,000
Operating Expense per Day	\$ 339,000	\$ 401,000	\$ 404,000
Days Cash			
Number of Days Cash	1,043	753	538
Sewage Disposal Fund			
Cash and Investments - Unrestricted	\$ 323,973,000	\$ 298,138,000	\$ 205,000,000
Operating Expense			
Operating Expense (a)	\$ 328,983,000	\$ 164,050,000	\$ 328,100,000
Less: Depreciation (a)	(150,772,000)	(73,400,000)	(146,800,000)
Less: Amortization of Intangible Asset (a)	(110,000)	-	-
Net Operating Expense	\$ 178,101,000	\$ 90,650,000	\$ 181,300,000
Operating Expense per Day	\$ 488,000	\$ 493,000	\$ 497,000
Days Cash			
Number of Days Cash	664	605	413
Combined			
Cash and Investments - Unrestricted	\$ 677,281,000	\$ 599,762,000	\$ 422,600,000
Operating Expense			
Operating Expense (a)	\$ 579,460,000	\$ 302,250,000	\$ 604,500,000
Less: Depreciation (a)	(274,044,000)	(136,067,000)	(272,133,000)
Less: Amortization of Intangible Asset (a)	(3,677,000)	(1,783,000)	(3,567,000)
Net Operating Expense	\$ 301,740,000	\$ 164,400,000	\$ 328,800,000
Operating Expense per Day	\$ 827,000	\$ 893,000	\$ 901,000
Days Cash			
Number of Days Cash	819	671	469
<i>Totals may be off due to rounding</i>			

(a) Current year expenses are expressed as a proration of the annual budget for the purposes of this metric.



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 Difference” 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 Six Months Ended December 31, 2021**

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 8,217	\$ 832	\$ 9,049
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	5,720	10,238	15,958
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	28,648	57,972	86,620
Accelerated pension B&C notes obligation portion (g)	97	219	316
Regional System lease (h)	2,708	3,310	6,018
Right to use lease - warehouse (h)		132	132
WRAP (i)	746	1,032	1,778
DWSD short term allocation (j)	-	1,358	1,358
Operating Reserve Deposit (j)	-	-	-
Improvement & Extension Fund transfers (j)	12,538	15,382	27,920
Nonbudgeted financial reporting categories adjustments			
Depreciation and amortization (k)	(63,553)	(78,484)	(142,037)
Amortization - debt related (k)	7,790	(1,157)	6,633
Other nonoperating income (k)	73	2	75
Other nonoperating expense (k)	-	-	-
Gain(loss) on disposal of capital assets (k)	13	22	35
Raw water rights obligation (l)	1,353	-	1,353
Investment earnings for construction fund (m)	5	8	13
Interest on DWSD note receivable (n)	-	106	106
Investment earnings unrealized gain/loss (o)	(1,500)	(1,006)	(2,506)
Interlocal agreement reimbursements to improvement & extension fund (p)	-	47	47
Capital Contribution (q)	-	(34)	(34)
Net Position Increase/(Decrease) per Financial Statements (b)	\$ 2,855	\$ 9,979	\$ 12,834

Table 2 - Explanatory Notes for Crosswalk

- (a) Source: Budget to Actual Table 1A and Table 1B in Monthly Financial Report
- (b) Source: Basic Financial Statements Table 2 in Monthly Financial Report
- (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, Operating Reserve Deposit, and Improvement & Extension Fund transfers are shown as an expense for budget purposes but not for financial reporting purposes. For FY 2022, the Water Improvement and Extension fund reflects \$1.2 million, and the Sewer Improvement and Extension fund reflects \$1.4 million in expenses relating to repairs paid for through the Water and Sewer Improvement and Extension funds, respectively. 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.
- (n) Interest on the DWSD note receivable is budgeted as part of the Sewer improvement and extension fund and is transferred directly to that fund as payments are made.
- (o) Unrealized gains and losses are recorded annually as required for financial reporting purposes but do not reflect actual investment earnings and are not included in cash basis reporting.
- (p) GLWA enters Interlocal Agreements with other local governments to coordinate projects and services and reduce overlapping expense. Many of these agreements relate to current capital improvement projects. Where another local government reimburses GLWA for direct expenses associated with a capital improvement project financed using improvement and extension funds, those reimbursements received under the agreement are transferred back to the Improvement and Extension fund.



The Monthly Capital Improvement Plan Financial Summary includes the following.

1. Water System Capital Improvement Plan Spend Incurred to date
2. Sewer System Capital Improvement Plan Spend Incurred to date

Capital Improvement Plan Financial Summary

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 five-year capital improvement plan (CIP). The CIP is a five-year, rolling plan which is updated annually and formally adopted by the GLWA Board of Directors. In addition, the Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established.

This report presents quarterly and monthly CIP spending against the prorated CIP in total and the CIP adjusted for the SRA. The prorated CIP is calculated by dividing the total fiscal year 2022 board-approved CIP plan by twelve equal months. It should be noted that for operational purposes, GLWA utilizes Primavera P6 for refined monthly projections for cash management and project management.

Beginning January 1, 2021, GLWA has intentionally depleted Bond funds and has moved to solely using I&E and State Revolving Loans to fund CIP expenditures to lower the cost of debt. It is expected that the I&E funds will be sufficient to fund the capital program through FY 2022 including an allowance to provide flexibility in the timing of future bond issues.

Chart 1 – Water System Capital Improvement Plan Spend Incurred to Date

As of December 2021, the Water system incurred over \$84 million of construction costs to date. This is 94% of the fiscal year 2022 CIP through December and 125% of the financial plan which is labeled as the FY 2022 CIP w/SRA in the chart below.

Chart 1 – Water System Capital Improvement Plan Spend Incurred to Date

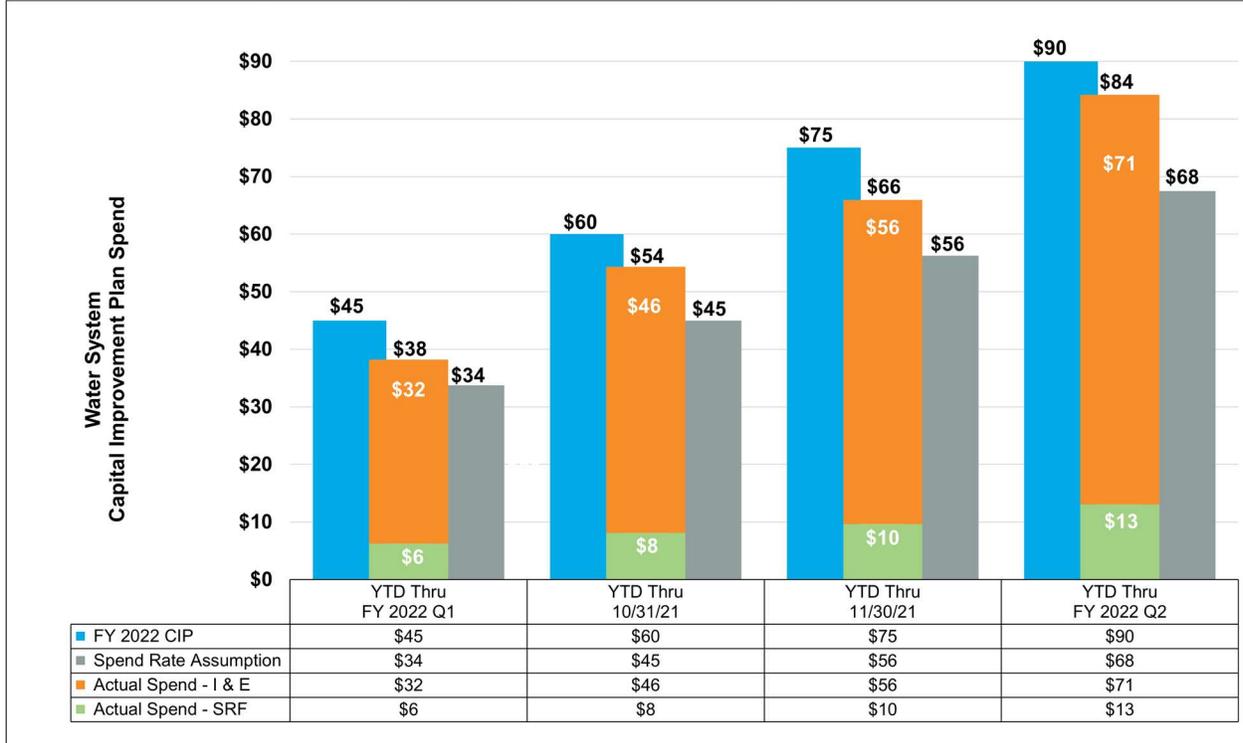


Chart 2 – Sewer System Capital Improvement Plan Spend Incurred to Date

As of December 2021, the Sewer system incurred over \$32 million of construction costs to date. This is 61% of the fiscal year 2022 CIP through December and 79% of the financial plan which is labeled as the FY 2022 CIP w/SRA in the chart below.

Chart 2 – Sewer System Capital Improvement Plan Spend Incurred to Date





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 2022 Water MBO Transfers reflects the required transfers for FY 2022 completed through December 1, 2021. MBO transfers for water totaling \$81.5 million have been transferred to GLWA accounts.

Table 2 – GLWA FY 2022 Sewer MBO Transfers reflects the required transfers for FY 2022 completed through December 1, 2021. MBO transfers for sewer totaling \$105.3 million have been transferred to GLWA accounts.

Table 3 – GLWA MBO Transfer History reflects historical transfers for FY 2016 through FY 2022 to date.

Table 1 – GLWA FY 2022 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 2022							
July 2021	\$ 11,994,483	\$504,000	\$921,308	\$198,050	-	-	\$13,617,841
August 2021	11,994,483	504,000	921,308	198,050	-	-	13,617,841
September 2021	11,994,483	504,000	831,488	198,050	-	-	13,528,021
October 2021	11,994,483	504,000	921,308	198,050	-	-	13,617,841
November 2021	11,994,483	504,000	861,308	198,050	-	-	13,557,841
December 2021	11,994,483	504,000	891,308	198,050	-	-	13,587,841
Total FY 2022	\$ 71,966,898	\$3,024,000	\$5,348,028	\$1,188,300	\$ -	\$ -	\$81,527,226

Table 2 – GLWA FY 2022 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 2022							
July 2021	\$ 15,108,317	\$902,000	\$1,223,950	\$322,392	-	-	\$17,556,659
August 2021	15,108,317	902,000	1,223,950	322,392	-	-	17,556,659
September 2021	15,108,317	902,000	1,223,950	322,392	-	-	17,556,659
October 2021	15,108,317	902,000	1,223,950	322,392	-	-	17,556,659
November 2021	15,108,317	902,000	1,223,950	322,392	-	-	17,556,659
December 2021	15,108,317	902,000	1,223,950	322,392	-	-	17,556,659
Total FY 2022	\$90,649,902	\$5,412,000	\$7,343,700	\$1,934,352	\$ -	\$ -	\$105,339,954

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	126,840,204	6,048,000	10,695,683	1,980,804	-	-	145,564,691
Total FY 2021	134,127,300	6,048,000	10,695,700	2,324,200	-	-	153,195,200
Total FY 2022 (6 months)	71,966,898	3,024,000	5,348,028	1,188,300	-	-	81,527,226
Life to Date	\$758,991,210	\$39,290,300	\$68,725,203	\$13,774,204	\$2,686,900	\$606,000	\$884,073,817
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	181,925,800	10,824,000	14,687,517	2,887,300	-	-	210,324,617
Total FY 2021	182,296,000	10,824,000	14,687,500	3,764,300	-	-	211,571,800
Total FY 2022 (6 months)	90,649,902	5,412,000	7,343,700	1,934,352	-	-	105,339,954
Life to Date	\$1,113,754,894	\$70,384,800	\$94,146,309	\$19,395,548	\$8,246,100	\$779,600	\$1,306,707,251

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 2022 Water MBO Transfers reflects the required transfers for FY 2022 completed through December 1, 2021. MBO transfers for Water totaling \$23.3 million have been transferred to accounts held by DWSD. For FY 2022, DWSD originally requested that \$6,690,600 of the lease payment be utilized to offset a portion of debt service. Beginning with the October transfers, DWSD amended budget required an additional portion of the lease payment be directed to offset debt service. The total offset for FY 2022 is now \$14,277,800.

Table 5 – DWSD FY 2022 Sewer MBO Transfers reflects the required transfers for FY 2022 completed through December 1, 2021. MBO transfers for Sewer totaling \$47.2 million have been transferred to accounts held by DWSD.

Table 6 – DWSD Water MBO and Lease Payment Transfer History reflects historical transfers for FY 2016 through FY 2022 to date.

Table 7 – DWSD Sewer MBO and Lease Payment Transfer History reflects historical transfers for FY 2016 through FY 2021 to date.

Table 4 – DWSD FY 2022 Water MBO Transfers

WATER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Water</u>
FY 2022				
July 2021	\$2,887,383	\$356,000	\$1,317,450	\$4,560,833
August 2021	2,887,383	356,000	1,317,450	4,560,833
September 2021	2,887,383	356,000	1,317,450	4,560,833
October 2021	2,369,650	356,000	479,983	3,205,633
November 2021	2,369,650	356,000	479,983	3,205,633
December 2021	2,369,650	356,000	479,983	3,205,633
Total FY 2022	\$15,771,099	\$2,136,000	\$5,392,299	\$23,299,398

Table 5 – DWSD FY 2022 Sewer MBO Transfers

SEWER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Sewer</u>
FY 2022				
July 2021	\$5,769,417	\$238,000	\$2,291,667	\$8,299,084
August 2021	5,769,417	238,000	2,291,667	8,299,084
September 2021	5,769,417	238,000	2,291,667	8,299,084
October 2021	4,888,083	238,000	2,291,667	7,417,750
November 2021	4,888,083	238,000	2,291,667	7,417,750
December 2021	4,888,083	238,000	2,291,667	7,417,750
Total FY 2022	\$31,972,500	\$1,428,000	\$13,750,002	\$47,150,502

Table 6 – DWSD Water 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				
MBO/Lease Requirement	34,662,400	4,272,000	22,500,000	61,434,400
Offset to Debt Service	-	-	(3,548,000)	(3,548,000)
Net MBO Transfer	34,662,400	4,272,000	18,952,000	57,886,400
FY 2021				
MBO/Lease Requirement	35,833,900	4,272,000	22,500,000	62,605,900
Offset to Debt Service	-	-	(8,278,300)	(8,278,300)
Net MBO Transfer	35,833,900	4,272,000	14,221,700	54,327,600
FY 2022 (6 months)				
MBO/Lease Requirement	15,771,099	2,136,000	11,250,000	29,157,099
Offset to Debt Service	-	-	(5,857,701)	(5,857,701)
Net MBO Transfer	15,771,099	2,136,000	5,392,299	23,299,398
Life-to-Date				
MBO/Lease Requirement	216,593,403	27,749,100	146,250,000	390,592,503
Offsets	-	-	(25,858,101)	(25,858,101)
Total Water	216,593,403	27,749,100	120,391,899	364,734,402

Table 7 – DWSD Sewer MBO and Lease Payment Transfer History

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				
MBO/Lease Requirement	62,343,500	2,856,000	27,500,000	92,699,500
Offset to address shortfall	(7,100,000)	-	-	(7,100,000)
Offset to Debt Service	-	-	(5,032,700)	(5,032,700)
Total MBO Transfer	55,243,500	2,856,000	22,467,300	80,566,800
FY 2021				
MBO/Lease Requirement	69,915,700	2,856,000	27,500,000	100,271,700
Offset to Debt Service	-	-	(3,257,200)	(3,257,200)
Total MBO Transfer	69,915,700	2,856,000	24,242,800	97,014,500
FY 2022 (6 months)				
MBO/Lease Requirement	31,972,500	1,428,000	13,750,002	47,150,502
Offset to Debt Service	-	-	-	-
Total MBO Transfer	31,972,500	1,428,000	13,750,002	47,150,502
Life-to-Date				
MBO/Lease Requirement	342,827,512	18,575,800	178,750,002	540,153,314
Offsets	(7,100,000)	-	(41,863,064)	(48,963,064)
Total Sewer	335,727,512	18,575,800	136,886,938	491,190,250

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



This report includes the following:

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

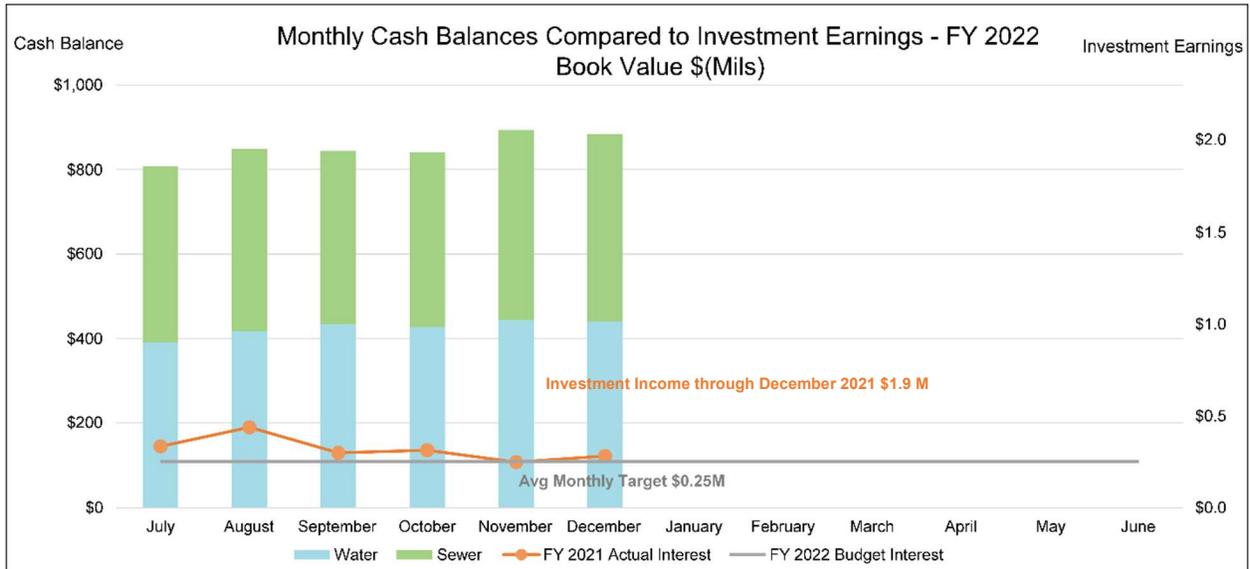
Monthly Cash Balances Compared to Investment Income

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

Cash and investment balances change each month based on Master Bond Ordinance (MBO) funding requirements, operational needs, capital spending pace, and mandatory debt payments. Investment income fluctuates monthly based on cash and investment balances as well as market conditions and investment strategy. For the month of December 2021, GLWA earned investment income of \$0.3 million and the cumulative FY 2022 earnings through December 2021 is \$1.9 million. Total investment income reported includes earnings from revenue requirement funds as well as construction bond funds.

GLWA continues to refine cash flows and work with its investment advisor to identify strategies to maximize future investment income while meeting the objectives of safety and liquidity.

Chart 1 – Monthly Cash Balances Compared to Investment Income – Through December 2021



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$391	\$416	\$433	\$426	\$443	\$439	-	-	-	-	-	-
Sewer	\$417	\$432	\$410	\$414	\$450	\$445	-	-	-	-	-	-
Total	\$808	\$848	\$844	\$840	\$893	\$884	-	-	-	-	-	-
Investment Income	\$0.3	\$0.4	\$0.3	\$0.3	\$0.2	\$0.3	-	-	-	-	-	-

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:

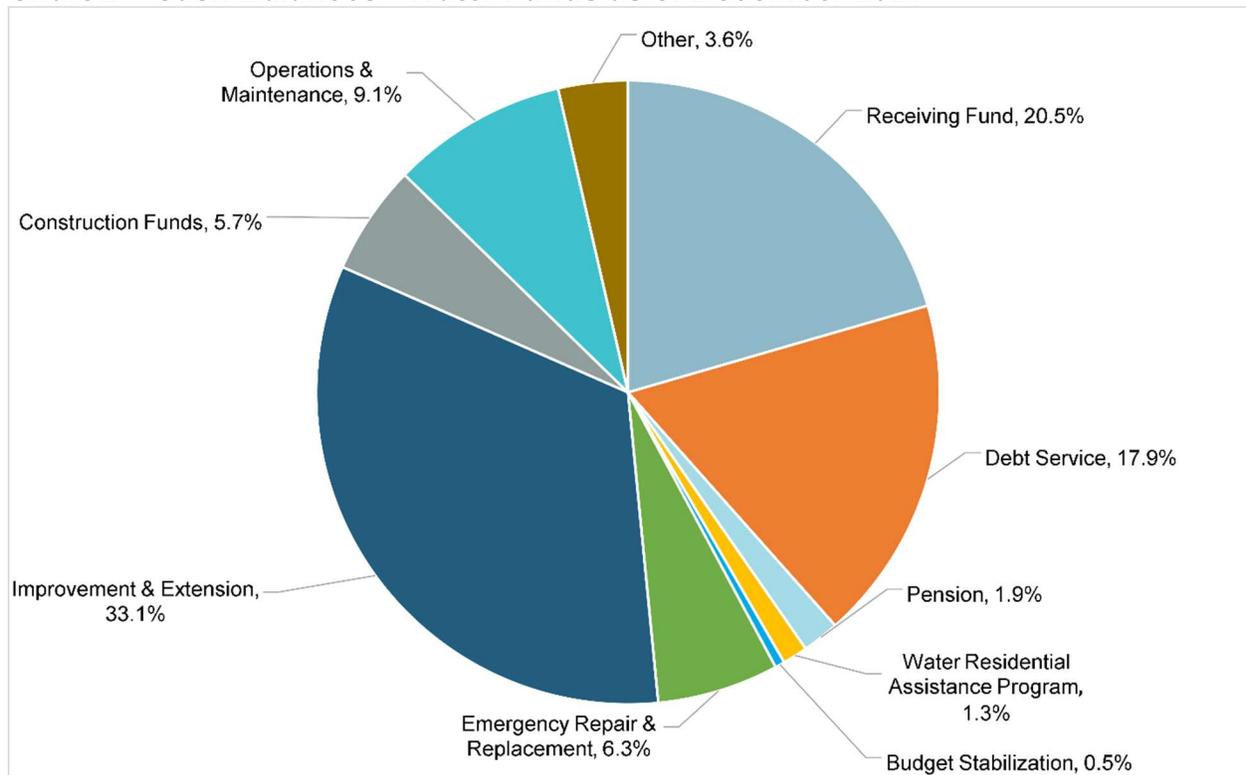
- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors 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 December 2021 - Shows the allocation of the balance among the different categories defined in the section above. The total cash balance for Water Funds as of December 31, 2021 is \$439 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.

It should be noted existing proceeds from revenue bonds are depleted. This means that all capital projects will now be funded with Improvement & Extension (I&E) funds, except for SRF funded projects. It is expected that the I&E funds supplemented with SRF low-interest loan funding will be sufficient to fund the capital program through FY 2022 including an allowance to provide flexibility in the timing of future bond issues.

Chart 2 – Cash Balances - Water Funds as of December 2021

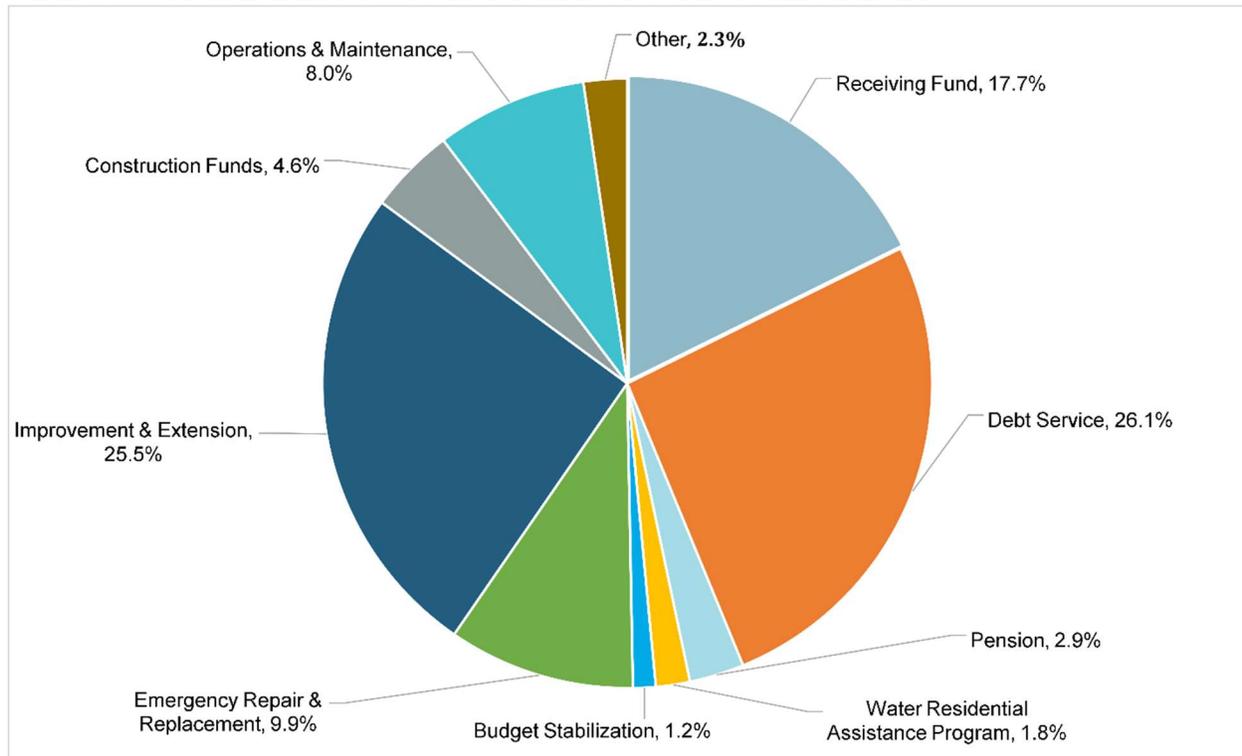


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of December 2021 - Shows the allocation of the balance among the different funds defined in the section above. The total cash balance for Sewer Funds as of December 31, 2021 is \$445 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.

It should be noted existing proceeds from revenue bonds are depleted. This means that all capital projects will now be funded with Improvement & Extension (I&E) funds, except for SRF funded projects. It is expected that the I&E funds supplemented with SRF low-interest loan funding will be sufficient to fund the capital program through FY 2022 including an allowance to provide flexibility in the timing of future bond issues.

Chart 3 – Cash Balances - Sewer Funds as of December 2021



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 2022 water usage and billed revenue which are provided by DWSD staff. As of December 31, 2021, the DWSD usage was at 108.38% of the budget and billed revenue was at 100.08% 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 – DWSD Retail Water Billing

RETAIL WATER CUSTOMERS								
Month (1)	FY 2022 - Original Budget		FY 2022 - Actual		FY 2022 - Variance		FY 2021 - Actuals	
	Volume	Revenue	Volume	Revenue (2)	Volume	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	245,000	9,963,800	266,704	10,064,683	21,704	100,883	265,796	9,747,518
August	235,000	9,697,500	264,644	9,994,589	29,644	297,089	250,308	9,378,385
September	210,000	9,032,500	232,348	9,169,300	22,348	136,800	218,840	8,544,457
October	195,000	8,633,500	204,290	8,422,092	9,290	(211,408)	197,362	7,978,833
November	195,000	8,633,500	209,830	8,544,611	14,830	(88,889)	194,648	7,952,436
December	195,000	8,633,500	204,072	8,442,152	9,072	(191,348)	197,125	7,985,955
January	190,000	8,500,500					190,289	7,827,536
February	190,000	8,500,500					191,180	7,895,496
March	200,080	8,768,700					205,631	8,242,563
April	210,000	9,032,500					214,288	8,438,333
May	210,000	9,032,500					214,232	8,519,154
June	240,000	9,830,500					243,301	9,249,694
Total	2,515,080	108,259,500	1,381,888	54,637,427	106,888	43,127	2,583,000	101,760,360
Subtotals ytd	1,275,000	54,594,300	1,381,888	54,637,427	106,888	43,127		
Achievement of Budget			108.38%	100.08%				

(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
January	7,884,889	9,076,091	(1,191,202)	-13.12%
February	6,426,553	8,281,985	(1,855,432)	-22.40%
March	8,458,827	6,948,308	1,510,519	21.74%
April	7,536,272	5,956,105	1,580,167	26.53%
May	7,365,204	8,109,469	(744,265)	-9.18%
June	8,917,831	7,821,791	1,096,040	14.01%
July	8,387,705	8,017,490	370,215	4.62%
August	8,588,507	7,135,456	1,453,051	20.36%
September	8,041,683	9,031,966	(990,283)	-10.96%
October	8,512,614	9,079,199	(566,585)	-6.24%
November	7,926,331	10,803,009	(2,876,678)	-26.63%
December	8,121,586	7,409,888	711,698	9.60%
Rolling, 12-Month Total	96,168,002	97,670,757		
Rolling, 12-Month Average	8,014,000	8,139,230		

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 2022 sewer billed revenue which are provided by DWSD staff. As of December 31, 2021, the DWSD usage was at 103.59% of the budget and billed revenue was at 99.82% 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 - DWSD Retail Sewer Billings

RETAIL SEWER CUSTOMERS								
Month (1)	FY 2022 - Original Budget		FY 2022 - Actual		FY 2022 - Variance		FY 2021 - Actuals	
	Volume	Revenue	Volume	Revenue (2)	Volume	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	233,100	30,779,300	219,791	29,462,804	(13,309)	(1,316,496)	252,929	29,802,377
August	225,700	30,357,000	249,522	31,231,624	23,822	874,624	240,390	29,261,344
September	198,500	28,805,000	215,748	29,401,234	17,248	596,234	206,880	27,232,400
October	186,000	28,091,700	190,483	27,936,280	4,483	(155,420)	188,816	26,230,683
November	186,000	28,091,700	194,135	28,032,939	8,135	(58,761)	184,240	25,933,888
December	186,000	28,091,700	189,283	27,836,982	3,283	(254,718)	187,397	26,628,891
January	178,700	27,675,200					179,115	26,098,738
February	184,600	28,011,800					185,696	26,370,674
March	192,030	28,435,800					197,486	27,090,940
April	199,600	28,867,800					203,684	27,447,662
May	200,100	28,896,300					204,107	27,765,537
June	228,500	30,516,800					231,627	29,058,129
Total	2,398,830	346,620,100	1,258,962	173,901,863	43,662	(314,537)	2,462,367	328,921,263
Subtotals ytd	1,215,300	174,216,400	1,258,962	173,901,863		(314,537)		
Achievement of Budget/Goal			103.59%	99.82%				

(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
January	22,057,276	23,512,702	(1,455,426)	-6.19%
February	22,777,467	22,682,982	94,485	0.42%
March	25,002,508	19,325,377	5,677,131	29.38%
April	21,196,170	17,105,146	4,091,024	23.92%
May	21,888,687	23,639,652	(1,750,965)	-7.41%
June	32,508,249	22,558,827	9,949,422	44.10%
July	24,185,252	20,652,159	3,533,093	17.11%
August	25,036,198	22,395,220	2,640,978	11.79%
September	22,635,796	26,463,387	(3,827,591)	-14.46%
October	25,119,240	26,683,109	(1,563,869)	-5.86%
November	23,505,249	28,730,139	(5,224,890)	-18.19%
December	24,880,743	22,856,217	2,024,526	8.86%
Rolling 12-Month Total	290,792,835	276,604,917		
Rolling, 12-Month Average	24,232,736	23,050,410		

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 December 31, 2021 with comparative totals from December 31, 2020. This table does not include past due accounts that have been transferred to the City of Detroit for collection as tax liens.

DWSD regularly adjusts the bad debt allowance to cover the past due balance over 180 days. To the extent this allowance is adjusted, and bad debt expense is recognized in the DWSD budget, it does not impact GLWA.

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

Sales Class	# of Accounts	Avg. Balance	Current	> 30 Days	> 60 Days	> 180 Days	Balance
Residential	209,760	\$ 667.25	\$ 13,259,000 9.5%	\$ 7,812,000 5.6%	\$ 25,382,000 18.1%	\$ 93,508,000 66.8%	\$ 139,962,000 100.0%
Commercial	21,160	1,352.53	7,964,000 27.8%	2,578,000 9.0%	7,363,000 25.7%	10,714,000 37.4%	28,620,000 100.0%
Industrial	3,474	4,397.03	4,657,000 30.5%	1,379,000 9.0%	2,777,000 18.2%	6,462,000 42.3%	15,275,000 100.0%
Tax Exempt	3,659	732.02	562,000 21.0%	184,000 6.9%	497,000 18.5%	1,435,000 53.6%	2,678,000 100.0%
Government	55,779	319.40	2,285,000 12.8%	875,000 4.9%	3,171,000 17.8%	11,486,000 64.5%	17,816,000 100.0%
Drainage	40,931	697.79	2,726,000 9.5%	1,603,000 5.6%	5,208,000 18.2%	19,024,000 66.6%	28,561,000 100.0%
Subtotal - Active Accounts	334,763	\$ 695.75	\$ 31,453,000 13.5%	\$ 14,431,000 6.2%	\$ 44,398,000 19.1%	\$ 142,630,000 61.2%	\$ 232,912,000 100.0%
Inactive Accounts	306,495	105.87	56,000 0.2%	(199,000) (0.6%)	351,000 1.1%	32,239,000 99.4%	32,448,000 100.0%
Total	641,258	\$ 413.81	\$ 31,510,000 11.9%	\$ 14,232,000 5.4%	\$ 44,750,000 16.9%	\$ 174,869,000 65.9%	\$ 265,360,000 100.0%
% of Total A/R							
Water Fund	232,836	222.93	\$ 6,949,000	\$ 2,595,000	\$ 9,377,000	\$ 32,985,000	\$ 51,905,000
Sewer Fund	271,289	786.82	\$ 24,561,000	\$ 11,637,000	\$ 35,373,000	\$ 141,884,000	\$ 213,455,000
Total December 31, 2021 (a)	641,258	413.81	\$ 31,510,000	\$ 14,232,000	\$ 44,750,000	\$ 174,869,000	\$ 265,360,000
Water Fund- Allowance							\$ (42,033,000)
Sewer Fund- Allowance							\$ (181,092,000)
Total Bad Debt Allowance							\$ (223,125,000)
Comparative - December 2020 (b)	625,190	353.99	\$ 28,198,000	\$ 15,633,000	\$ 36,440,000	\$ 141,041,000	\$ 221,311,000
Difference (a) - (b)	16,068	59.82	\$ 3,312,000	\$ (1,401,000)	\$ 8,310,000	\$ 33,828,000	\$ 44,049,000



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	83
Emergency	1
Older Contracts	<u>3</u>
Total	<u><u>87</u></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 2022 water billed usage and revenues. As of December 31, 2021, the billed usage was at 93.57% of the original plan and billed revenue at 97.17% of the original plan. Billings and usage from the City of Flint are included as they were assumed in the FY 2022 Budget.

This table also reflects the positive impact of approved FY 2022 budget amendments and known billing adjustments on the original plan.

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. Collections report lower than prior year for November and December 2021 due to issues with receipt of payments via US mail service over the holiday season. Payment activity rebounds in January when many of these timing issues were resolved.

Table 1 – FY 2022 Wholesale Water Billings Report

WHOLESALE WATER CHARGES								
Month (1)	FY 2022 Charges (3)		FY 2022 - Actual		FY 2022 - Variance		FY 2021 - Actuals	
	Volume Mcf	Revenue \$	Volume Mcf	Revenue (2) \$	Volume Mcf	Revenue \$	Volume Mcf	Revenue \$
July	1,677,100	33,302,700	1,342,686	29,642,785	(334,414)	(3,659,915)	1,862,791	33,583,619
August	1,509,200	31,598,500	1,417,142	30,604,230	(92,058)	(994,270)	1,622,324	31,230,027
September	1,316,400	29,141,000	1,298,750	29,065,588	(17,650)	(75,412)	1,313,440	27,836,560
October	1,034,000	26,280,800	1,006,217	26,123,483	(27,783)	(157,317)	1,070,660	25,454,840
November	896,800	25,001,500	905,525	25,117,181	8,725	115,681	956,542	24,390,303
December	972,100	25,612,000	958,879	25,542,432	(13,221)	(69,568)	981,770	24,600,202
January	972,000	25,650,600					969,483	25,235,130
February	884,400	24,852,700					920,467	24,794,259
March	979,500	25,678,200					1,001,073	25,450,418
April	914,000	25,117,700					954,308	25,140,003
May	1,059,200	26,721,900					1,181,186	27,569,969
June	1,374,300	30,029,900					1,424,230	30,066,884
Total	13,589,000	328,987,500	6,929,199	166,095,698	(476,401)	(4,840,802)	14,258,274	325,352,214
Subtotals ytd	7,405,600	170,936,500	6,929,199	166,095,698	(476,401)	(4,840,802)		
Achievement of Original Plan			93.57%	97.17%				
1st Quarter Budget Amendments	(220,000)	(2,400,000)			220,000	2,400,000		
Billing Adjustments			65,470	544,190	65,470	544,190		
Revised Subtotal	7,185,600	168,536,500	6,994,669	166,639,888	(190,931)	(1,896,612)		
Achievement of Amended Plan			97.34%	98.87%				

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

(2) Water Revenues differ from Table 1A because amounts are reduced by the monthly payment to the City of Flint for a license to raw water rights under the Flint Raw Water Contract in Table 1A

(3) Charges are based on the approved FY 2022 water supply system charge schedule.

Table 2 - Wholesale Water Collections

Water				
Month	Current Year	Prior Year	Variance	Ratio
January	20,716,948	25,470,795	(4,753,847)	-18.66%
February	25,694,176	24,629,768	1,064,408	4.32%
March	20,854,506	25,017,989	(4,163,483)	-16.64%
April	23,545,123	17,856,644	5,688,479	31.86%
May	24,878,479	24,811,582	66,897	0.27%
June	25,403,968	27,098,783	(1,694,815)	-6.25%
July	23,709,847	25,080,575	(1,370,728)	-5.47%
August	31,668,492	26,241,018	5,427,474	20.68%
September	23,849,618	26,078,015	(2,228,397)	-8.55%
October	29,212,277	29,292,690	(80,413)	-0.27%
November	25,265,770	32,218,822	(6,953,052)	-21.58%
December	25,302,369	29,609,061	(4,306,692)	-14.55%
Rolling 12-Month Total	300,101,573	313,405,742		
Rolling, 12-Month Average	25,008,464	26,117,145		

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 2022 sewer billed revenue. As of December 31, 2021 the billed revenue is at 100.00% of the original plan.

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 2021 to FY 2022 shows slight improvement as of December 31.

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 2022 Wholesale Sewer Billings Report

WHOLESALE SEWER CHARGES								
Month (1)	FY 2022 Charges		FY 2022 - Actual		FY 2022 - Variance		FY 2021 - Actuals	
	Volume (2)	Revenue	Volume (2)	Revenue	Volume (2)	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
August	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
September	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
October	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
November	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
December	N/A	22,615,000	N/A	22,615,000	N/A	-	N/A	22,323,183
January	N/A	22,615,000	N/A		N/A		N/A	22,633,025
February	N/A	22,615,000	N/A		N/A		N/A	22,633,025
March	N/A	22,615,000	N/A		N/A		N/A	22,633,025
April	N/A	22,615,000	N/A		N/A		N/A	22,633,025
May	N/A	22,615,000	N/A		N/A		N/A	22,633,025
June	N/A	22,615,000	N/A		N/A		N/A	22,633,025
Total		271,380,000		135,690,000		-		269,737,248
Subtotals ytd		135,690,000		135,690,000		-		
Achievement of Budget				100.00%				

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

(2) Not tracked as part of the wholesale sewer charges.

Table 4 - Wholesale Sewer Collections

Sewer				
Month	Current Year	Prior Year	Variance	Ratio
January	25,968,849	17,121,812	8,847,037	51.67%
February	16,872,900	23,284,737	(6,411,837)	-27.54%
March	22,368,124	21,108,100	1,260,024	5.97%
April	28,128,933	10,024,575	18,104,358	180.60%
May	15,972,800	21,189,047	(5,216,247)	-24.62%
June	28,523,650	28,598,467	(74,817)	-0.26%
July	21,842,125	22,297,737	(455,612)	-2.04%
August	22,191,725	25,354,280	(3,162,555)	-12.47%
September	26,706,558	19,593,613	7,112,945	36.30%
October	22,176,058	16,853,983	5,322,075	31.58%
November	16,534,758	18,966,208	(2,431,450)	-12.82%
December	21,765,958	25,232,649	(3,466,691)	-13.74%
Rolling 12-Month Total	269,052,438	249,625,208		
Rolling, 12-Month Average	22,421,037	20,802,101		

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 December 31, 2021, Highland Park had a delinquent balance of \$51.9 million, including \$39.7 million for wastewater treatment services, \$1.8 million for industrial waste control services, and \$10.4 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 2022 through December 31, 2021. 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
January 31, 2021 Balance	9,237,168	35,080,899	1,749,502	46,067,569
February 2021 Billing	95,775	478,900	4,032	578,707
February 2021 Payments	-	-	-	-
February 28, 2021 Balance	9,332,943	35,559,799	1,753,534	46,646,276
March 2021 Billing	95,121	478,900	4,060	578,081
March 2021 Payments	-	(220,241)	-	(220,241)
March 31, 2021 Balance	9,428,064	35,818,458	1,757,594	47,004,116
April 2021 Billing	96,950	478,900	4,051	579,901
April 2021 Payments	-	(224,583)	-	(224,583)
April 30, 2021 Balance	9,525,014	36,072,775	1,761,645	47,359,434
May 2021 Billing	94,839	478,900	4,065	577,804
May 2021 Payments	-	-	-	-
May 31, 2021 Balance	9,619,853	36,551,675	1,765,710	47,937,238
June 2021 Billing	99,337	478,900	4,053	582,290
June 2021 Payments	-	-	-	-
June 30, 2021 Balance	9,719,190	37,030,575	1,769,763	48,519,528
July 2021 Billing	102,730	478,900	3,972	585,602
July 2021 Payments	-	-	-	-
July 31, 2021 Balance	9,821,920	37,509,475	1,773,735	49,105,130
August 2021 Billing	109,067	446,400	4,067	559,534
August 2021 Payments	-	-	-	-
August 31, 2021 Balance	9,930,987	37,955,875	1,777,802	49,664,664
September 2021 Billing	110,440	446,400	4,062	560,902
September 2021 Payments	-	-	-	-
September 30, 2021 Balance	10,041,427	38,402,275	1,781,864	50,225,566
October 2021 Billing	109,853	446,400	4,053	560,306
October 2021 Payments	-	-	-	-
October 31, 2021 Balance	10,151,280	38,848,675	1,785,917	50,785,872
November 2021 Billing	103,417	446,400	4,069	553,886
November 2021 Payments	-	-	-	-
November 30, 2021 Balance	10,254,697	39,295,075	1,789,986	51,339,758
December 2021 Billing	100,908	446,400	4,075	551,383
December 2021 Payments	-	-	-	-
December 31, 2021 Balance	10,355,605	39,741,475	1,794,061	51,891,141

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 December 31, 2021.

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. One member partner contract dispute accounts for \$5.36 million of the current water past due balance. The remaining water past due accounts were paid in early January.

The IWC past due balance relates to one member partner that was paid in full in January.

Pollutant surcharge past dues generally consist of smaller account holders that GLWA staff continue to communicate with. The pollutant surcharge balance over 105 days is related to a bankruptcy that is currently pending further court action.

Table 6 - Wholesale Accounts Receivable Aging Report Summary

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 57,034,085.07	\$ 41,297,800.98	\$ 2,742,457.96	\$ 819,375.19	\$ 12,174,450.94
Sewer	\$ 61,100,030.08	\$ 21,804,954.92	\$ 446,400.00	\$ 446,400.00	\$ 38,402,275.16
IWC	\$ 2,469,885.82	\$ 671,879.30	\$ 16,142.40	\$ -	\$ 1,781,864.12
Pollutant Surcharge	\$ 486,616.57	\$ 444,682.68	\$ 17,253.40	\$ 133.01	\$ 24,547.48
Total	\$ 121,090,617.54	\$ 64,219,317.88	\$ 3,222,253.76	\$ 1,265,908.20	\$ 52,383,137.70
	100.00%	53.03%	2.66%	1.05%	43.26%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 46,678,480.50	\$ 41,093,476.26	\$ 2,632,604.59	\$ 708,935.59	\$ 2,243,464.06
Sewer	\$ 21,358,554.92	\$ 21,358,554.92	\$ -	\$ -	\$ -
IWC	\$ 675,824.63	\$ 663,735.53	\$ 12,089.10	\$ -	\$ -
Pollutant Surcharge	\$ 486,616.57	\$ 444,682.68	\$ 17,253.40	\$ 133.01	\$ 24,547.48
Total	\$ 69,199,476.62	\$ 63,560,449.39	\$ 2,661,947.09	\$ 709,068.60	\$ 2,268,011.54
	100.00%	91.85%	3.85%	1.02%	3.28%

Note: percentages vary from 100% due to rounding.



The Monthly Trust Receipts & Disbursements Report includes the following.

1. GLWA Trust Receipts & Disbursements – Net Cash Flows and Receipts
2. DWSD Trust Receipts & Disbursements – Net Cash Flows, Receipts & Loan Receivable
3. Combined System Trust Receipts & Disbursements – Net Cash Flows

GLWA Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e., Great Lakes Water Authority or GLWA) and local retail (i.e., Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

This report provides an ongoing status of the net cash flow of both organizations (GLWA and DWSD) to fund their allocated share of Master Bond Ordinance requirements in accordance with the leases for the regional systems.

Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year. Fiscal year 2022 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 8% through December 31, 2021 compared to the four-year historical average ratio of required receipts exceeding disbursements by 13% since July 1, 2017.

Sewer fund receipts exceeded required disbursements by 6% through December 31, 2021 consistent with the four-year historical average ratio of required receipts exceeding disbursements by 6% since July 1, 2017.

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 2018	FY 2019	FY 2020	FY 2021	FY 2022 Thru Dec 31
Water					
1 Receipts	\$ 338,452,001	\$ 336,594,234	\$ 332,606,196	\$ 336,642,021	\$ 171,071,777
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	338,452,001	336,594,234	332,606,196	336,642,021	171,071,777
4 Disbursements	(297,064,810)	(289,230,481)	(296,190,425)	(308,713,407)	(158,081,352)
5 Receipts Net of Required	41,387,191	47,363,753	36,415,771	27,928,614	12,990,425
6 I&E Transfer	(25,739,700)	(47,695,000)	(25,719,751)	(31,991,687)	(6,839,662)
7 Net Receipts	\$ 15,647,491	\$ (331,247)	\$ 10,696,020	\$ (4,063,073)	\$ 6,150,763
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	114%	116%	112%	109%	108%
Sewer					
9 Receipts	\$ 476,269,761	\$ 467,743,744	\$ 490,461,356	\$ 472,871,853	\$ 234,175,325
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	476,269,761	467,743,744	490,461,356	472,871,853	234,175,325
12 Disbursements	(458,903,335)	(453,406,636)	(445,604,952)	(436,600,883)	(220,457,637)
13 Receipts Net of Required	17,366,426	14,337,108	44,856,404	36,270,970	13,717,688
14 I&E Transfer	(22,698,100)	(22,547,700)	(19,096,200)	(40,504,727)	(23,342,663)
15 DWSD Shortfall Advance	(24,113,034)	-	-	-	-
16 Shortfall Repayment (principal)	-	9,367,355	17,542,669	18,206,431	4,115,066
17 Net Receipts	\$ (29,444,708)	\$ 1,156,763	\$ 43,302,873	\$ 13,972,674	\$ (5,509,909)
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	104%	103%	110%	108%	106%
Combined					
19 Receipts	\$ 814,721,762	\$ 804,337,978	\$ 823,067,552	\$ 809,513,874	\$ 405,247,102
20 MOU Adjustments	-	-	-	-	-
21 Adjusted Receipts	814,721,762	804,337,978	823,067,552	809,513,874	405,247,102
22 Disbursements	(755,968,145)	(742,637,117)	(741,795,377)	(745,314,290)	(378,538,989)
23 Receipts Net of Required	58,753,617	61,700,861	81,272,175	64,199,584	26,708,113
24 I&E Transfer	(48,437,800)	(70,242,700)	(44,815,951)	(72,496,414)	(30,182,325)
25 Shortfall Advance	(24,113,034)	-	-	-	-
26 Shortfall Repayment	-	9,367,355	17,542,669	18,206,431	4,115,066
27 Net Receipts	\$ (13,797,217)	\$ 825,516	\$ 53,998,893	\$ 9,909,601	\$ 640,854
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	108%	108%	111%	109%	107%

Chart 1 – GLWA 12-Month Net Receipts – Water

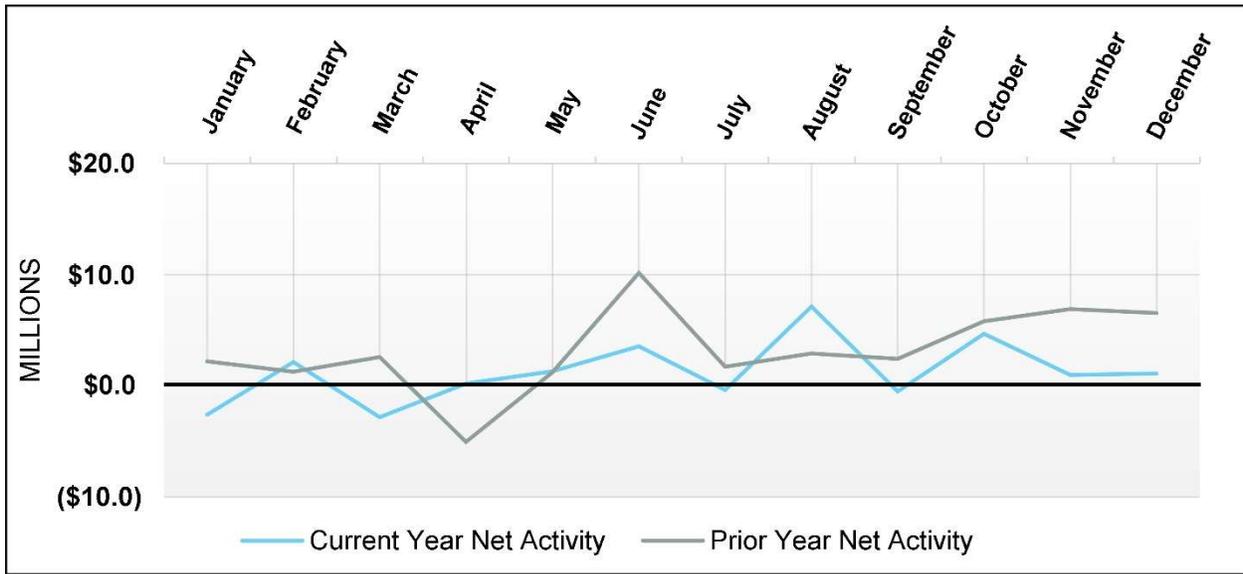
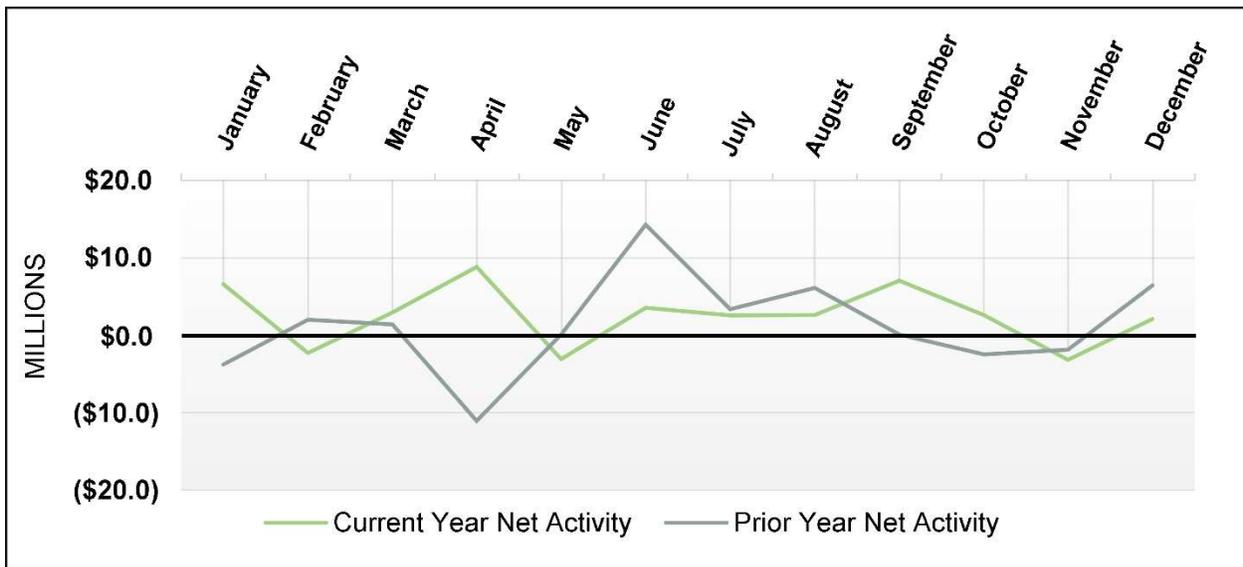


Chart 2 – GLWA 12-Month Net Receipts – Sewer



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. Fiscal year 2022 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 6% through December 31, 2021 compared to the four-year historical average ratio of required receipts exceeding disbursements by 3% since July 1, 2017.

Sewer fund receipts fell short of required disbursements by 1% through December 31, 2021 compared to the four-year historical average ratio of required receipts falling short of disbursements by 2% since July 1, 2017.

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

Table 4 – 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 2018	FY 2019	FY 2020	FY 2021	FY 2022 Thru Dec 31
Water					
1 Receipts	\$ 101,233,147	\$ 99,868,219	\$ 96,885,723	\$ 102,067,423	\$ 49,578,558
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	101,233,147	99,868,219	96,885,723	102,067,423	49,578,558
4 Disbursements	(93,049,457)	(97,694,600)	(97,823,097)	(100,707,200)	(46,629,396)
5 Receipts Net of Required	8,183,690	2,173,619	(937,374)	1,360,223	2,949,162
6 I&E Transfer	-	(8,407,080)	-	-	-
7 Net Receipts	\$ 8,183,690	\$ (6,233,461)	\$ (937,374)	\$ 1,360,223	\$ 2,949,162
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	109%	102%	99%	101%	106%
Sewer					
9 Receipts	\$ 242,104,791	\$ 265,339,797	\$ 264,689,559	\$ 308,210,767	\$ 145,362,709
10 MOU Adjustments	-	6,527,200	-	-	-
11 Adjusted Receipts	242,104,791	271,866,997	264,689,559	308,210,767	145,362,709
12 Disbursements	(266,217,825)	(271,018,306)	(275,507,374)	(295,100,771)	(146,721,142)
13 Receipts Net of Required	(24,113,034)	848,691	(10,817,815)	13,109,996	(1,358,433)
14 I&E Transfer	-	-	-	-	-
15 Shortfall Advance from GLWA	24,113,034	-	-	-	-
16 Net Receipts	\$ -	\$ 848,691	\$ (10,817,815)	\$ 13,109,996	\$ (1,358,433)
17 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	91%	100%	96%	104%	99%
Combined					
18 Receipts	\$ 343,337,938	\$ 365,208,016	\$ 361,575,282	\$ 410,278,190	\$ 194,941,267
19 MOU Adjustments	-	6,527,200	-	-	-
20 Adjusted Receipts	343,337,938	371,735,216	361,575,282	410,278,190	194,941,267
21 Disbursements	(359,267,282)	(368,712,906)	(373,330,471)	(395,807,971)	(193,350,538)
22 Receipts Net of Required	(15,929,344)	3,022,310	(11,755,189)	14,470,219	1,590,729
23 I&E Transfer	-	(8,407,080)	-	-	-
24 Shortfall Advance from GLWA	24,113,034	-	-	-	-
25 Net Receipts	\$ 8,183,690	\$ (5,384,770)	\$ (11,755,189)	\$ 14,470,219	\$ 1,590,729
26 <i>Ratio of Receipts to Required Disbursements (Line 20/Line 21)</i>	96%	101%	97%	104%	101%

Table 3 – FY 2018 DWSD Loan Receivable – Sewer

Date	Transaction	Amount	Balance
06-30-19	Record Loan Receivable		24,113,034
07-15-19	Payment for July 2019	638,978	23,474,056
08-08-19	Payment for August 2019	640,686	22,833,370
09-06-19	Payment for September 2019	642,400	22,190,970
10-02-19	Payment for October 2019	644,118	21,546,852
11-04-19	Payment for November 2019	645,840	20,901,012
12-03-19	Payment for December 2019	647,567	20,253,445
01-06-20	Payment for January 2020	649,299	19,604,146
02-04-20	Payment for February 2020	651,035	18,953,111
03-03-20	Payment for March 2020	652,776	18,300,335
04-15-20	Payment for April 2020	654,522	17,645,813
05-06-20	Payment for May 2020	656,272	16,989,541
06-02-20	Payment for June 2020	658,027	16,331,514
07-07-20	Payment for July 2020	659,787	15,671,727
08-04-20	Payment for August 2020	661,551	15,010,176
09-02-20	Payment for September 2020	663,320	14,346,855
10-05-20	Payment for October 2020	665,094	13,681,761
11-03-20	Payment for November 2020	666,873	13,014,888
12-03-20	Payment for December 2020	668,656	12,346,232
01-05-21	Payment for January 2021	670,444	11,675,788
02-02-21	Payment for February 2021	672,237	11,003,551
03-03-21	Payment for March 2021	674,035	10,329,517
04-05-21	Payment for April 2021	675,837	9,653,679
05-04-21	Payment for May 2021	677,644	8,976,035
06-03-21	Payment for June 2021	679,457	8,296,578
07-02-21	Payment for July 2021	681,274	7,615,305
08-03-21	Payment for August 2021	683,095	6,932,209
09-03-21	Payment for September 2021	684,922	6,247,287
10-05-21	Payment for October 2021	686,754	5,560,534
11-03-21	Payment for November 2021	688,590	4,871,944
12-06-21	Payment for December 2021	690,432	4,181,512
		19,931,522	4,181,512

Table 4 – FY 2018 DWSD Loan Receivable Payments – Sewer

Date	Transaction	Principal	Interest	Total Paid
07-15-19	Payment for July 2019	638,978	64,482	703,460
08-08-19	Payment for August 2019	640,686	62,774	703,460
09-06-19	Payment for September 2019	642,400	61,060	703,460
10-02-19	Payment for October 2019	644,118	59,342	703,460
11-04-19	Payment for November 2019	645,840	57,620	703,460
12-03-19	Payment for December 2019	647,567	55,893	703,460
01-06-20	Payment for January 2020	649,299	54,161	703,460
02-04-20	Payment for February 2020	651,035	52,425	703,460
03-03-20	Payment for March 2020	652,776	50,684	703,460
04-15-20	Payment for April 2020	654,522	48,938	703,460
05-06-20	Payment for May 2020	656,272	47,188	703,460
06-02-20	Payment for June 2020	658,027	45,433	703,460
07-07-20	Payment for July 2020	659,787	43,673	703,460
08-04-20	Payment for August 2020	661,551	41,909	703,460
09-02-20	Payment for September 2020	663,320	40,140	703,460
10-05-20	Payment for October 2020	665,094	38,366	703,460
11-03-20	Payment for November 2020	666,873	36,587	703,460
12-03-20	Payment for December 2020	668,656	34,804	703,460
01-05-21	Payment for January 2021	670,444	33,016	703,460
02-02-21	Payment for February 2021	672,237	31,223	703,460
03-03-21	Payment for March 2021	674,035	29,425	703,460
04-05-21	Payment for April 2021	675,837	27,623	703,460
05-04-21	Payment for May 2021	677,644	25,816	703,460
06-03-21	Payment for June 2021	679,457	24,003	703,460
07-02-21	Payment for July 2021	681,274	22,186	703,460
08-03-21	Payment for August 2021	683,095	20,365	703,460
09-03-21	Payment for September 2021	684,922	18,538	703,460
10-05-21	Payment for October 2021	686,754	16,706	703,460
11-03-21	Payment for November 2021	688,590	14,870	703,460
12-06-21	Payment for December 2021	690,432	13,028	703,460
		19,931,522	1,172,278	21,103,800

Chart 3 – DWSD 12-Month Net Receipts – Water

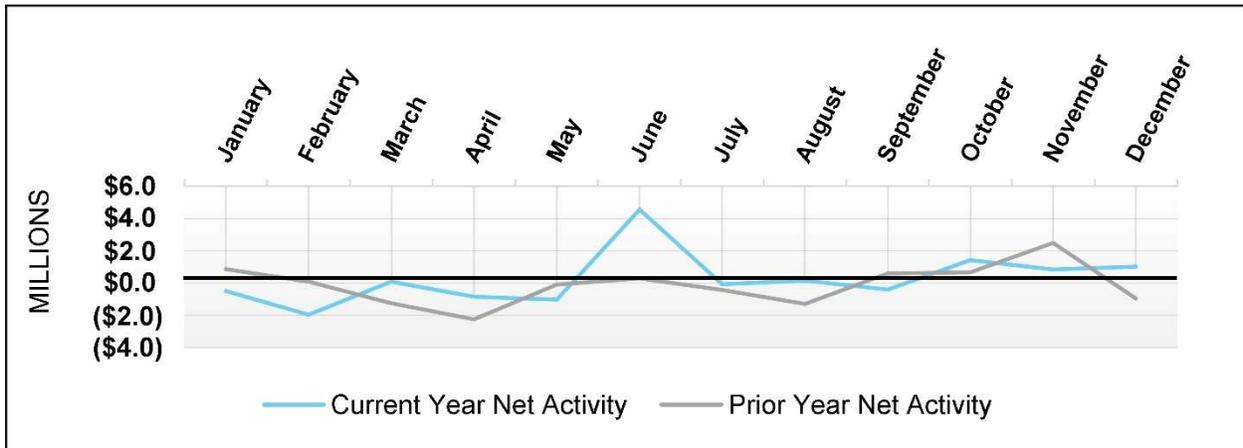
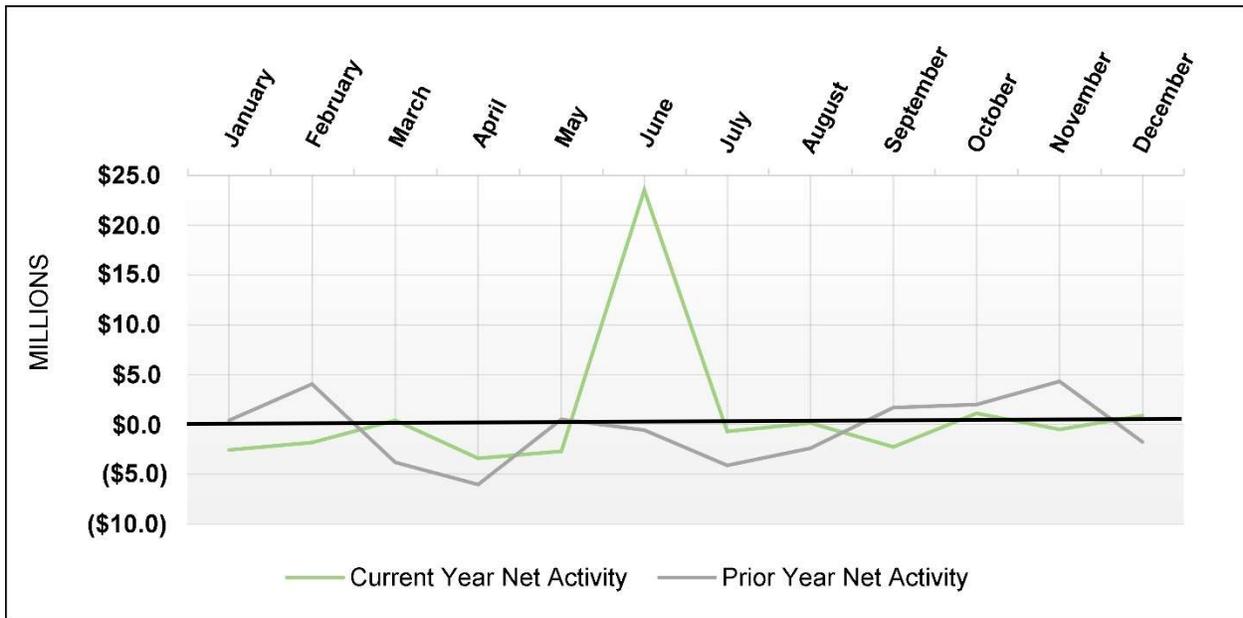


Chart 4 – DWSD 12-Month Net Receipts – Sewer



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 5 – Combined Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year. Fiscal year 2022 reflects six months of activity to date.

Water fund net receipts exceeded required disbursements by 8% through December 31, 2021 compared to the four-year historical average ratio of required receipts exceeding disbursements by 10% since July 1, 2017.

Sewer fund receipts exceeded required disbursements by 3% through December 31, 2021 consistent with the four-year historical average ratio of required receipts exceeding disbursements by 3% since July 1, 2017.

Table 5 – Combined Net Cash Flows from Trust Receipts & Disbursements

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022 Thru Dec 31
Water					
1 Receipts	\$ 439,685,148	\$ 436,462,453	\$ 429,491,919	\$ 438,709,444	\$ 220,650,335
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	439,685,148	436,462,453	429,491,919	438,709,444	220,650,335
4 Disbursements	(390,114,267)	(386,925,081)	(394,013,522)	(409,420,607)	(204,710,748)
5 Receipts Net of Required	49,570,881	49,537,372	35,478,397	29,288,837	15,939,587
6 I&E Transfer	(25,739,700)	(56,102,080)	(25,719,751)	(31,991,687)	(6,839,662)
7 Net Receipts	\$ 23,831,181	\$ (6,564,708)	\$ 9,758,646	\$ (2,702,850)	\$ 9,099,925
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	113%	113%	109%	107%	108%
Sewer					
9 Receipts	\$ 718,374,552	\$ 733,083,541	\$ 755,150,915	\$ 781,082,620	\$ 379,538,034
10 MOU Adjustments	-	6,527,200	-	-	-
11 Adjusted Receipts	718,374,552	739,610,741	755,150,915	781,082,620	379,538,034
12 Disbursements	(725,121,160)	(724,424,942)	(721,112,326)	(731,701,654)	(367,178,779)
13 Receipts Net of Required	(6,746,608)	15,185,799	34,038,589	49,380,966	12,359,255
14 I&E Transfer	(22,698,100)	(22,547,700)	(19,096,200)	(40,504,727)	(23,342,663)
15 Shortfall Advance	-	-	-	-	-
16 Shortfall Repayment (principal)	-	9,367,355	17,542,669	18,206,431	4,115,066
17 Net Receipts	\$ (29,444,708)	\$ (7,361,901)	\$ 32,485,058	\$ 27,082,670	\$ (6,868,342)
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	99%	102%	105%	107%	103%
Combined					
19 Receipts	\$1,158,059,700	\$1,169,545,994	\$1,184,642,834	\$1,219,792,064	\$ 600,188,369
20 MOU Adjustments	-	6,527,200	-	-	-
21 Adjusted Receipts	1,158,059,700	1,176,073,194	1,184,642,834	1,219,792,064	600,188,369
22 Disbursements	(1,115,235,427)	(1,111,350,023)	(1,115,125,848)	(1,141,122,261)	(571,889,527)
23 Receipts Net of Required	42,824,273	64,723,171	69,516,986	78,669,803	28,298,842
24 I&E Transfer	(48,437,800)	(78,649,780)	(44,815,951)	(72,496,414)	(30,182,325)
25 Shortfall Advance	-	-	-	-	-
26 Shortfall Repayment	-	9,367,355	17,542,669	18,206,431	4,115,066
27 Net Receipts	\$ (5,613,527)	\$ (4,559,254)	\$ 42,243,704	\$ 24,379,820	\$ 2,231,583
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	104%	106%	106%	107%	105%

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$451,635.57	\$451,635.57	\$0.00	\$0.00	\$0.00
ALMONT VILLAGE	\$20,207.81	\$20,207.81	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$136,569.02	\$136,569.02	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$27,630.37	\$27,630.37	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$62,443.71	\$62,443.71	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$598,275.00	\$598,275.00	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$53,364.59	\$53,364.59	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$25,150.96	\$25,150.96	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$834,038.50	\$834,038.50	\$0.00	\$0.00	\$0.00
CENTER LINE	\$81,097.49	\$81,097.49	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$717,779.12	\$717,779.12	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$614,237.59	\$614,237.59	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$565,494.53	\$565,494.53	\$0.00	\$0.00	\$0.00
DEARBORN	\$7,038,126.40	\$1,680,080.64	\$2,405,646.11	\$708,935.59	\$2,243,464.06
DEARBORN HEIGHTS	\$614,808.59	\$614,808.59	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$256,037.75	\$256,037.75	\$0.00	\$0.00	\$0.00
ECORSE	\$110,967.88	\$110,967.88	\$0.00	\$0.00	\$0.00
FARMINGTON	\$84,502.16	\$84,502.16	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$1,510,565.11	\$1,510,565.11	\$0.00	\$0.00	\$0.00
FERNDALE	\$174,339.14	\$174,339.14	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$325,045.49	\$212,133.90	\$112,911.59	\$0.00	\$0.00
FLINT	\$251,928.82	\$251,928.82	\$0.00	\$0.00	\$0.00
FRASER	\$101,959.98	\$101,959.98	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GARDEN CITY	\$137,786.22	\$137,786.22	\$0.00	\$0.00	\$0.00
GIBRALTAR	\$86,378.63	\$60,380.30	\$25,998.33	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$91,177.00	\$91,177.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$258,658.13	\$258,658.13	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$46,273.61	\$46,273.61	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$100,320.02	\$100,320.02	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$65,882.45	\$65,882.45	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$151,692.26	\$151,692.26	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$272,299.77	\$272,299.77	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$121,572.56	\$121,572.56	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$10,355,604.57	\$204,324.72	\$109,853.37	\$110,439.60	\$9,930,986.88
HURON TOWNSHIP	\$127,399.68	\$127,399.68	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$124,672.16	\$124,672.16	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP	\$1,194.73	\$1,194.73	\$0.00	\$0.00	\$0.00
INKSTER	\$105,555.60	\$105,555.60	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$50,629.75	\$50,629.75	\$0.00	\$0.00	\$0.00
LAPEER	\$138,659.76	\$138,659.76	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$77,358.30	\$51,298.34	\$26,059.96	\$0.00	\$0.00
LINCOLN PARK	\$416,002.83	\$416,002.83	\$0.00	\$0.00	\$0.00
LIVONIA	\$1,850,520.63	\$1,850,520.63	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$994,710.61	\$994,710.61	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$166,776.23	\$166,776.23	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MAYFIELD TOWNSHIP	\$6,444.20	\$6,444.20	\$0.00	\$0.00	\$0.00
MELVINDALE	\$114,754.25	\$114,754.25	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$31,912.03	\$31,912.03	\$0.00	\$0.00	\$0.00
NOCWA	\$1,745,496.45	\$1,745,496.45	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$125,113.30	\$125,113.30	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$430,499.73	\$430,499.73	\$0.00	\$0.00	\$0.00
NOVI	\$1,468,777.93	\$1,468,777.93	\$0.00	\$0.00	\$0.00
OAK PARK	\$236,891.58	\$236,891.58	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$13,095.64	\$13,095.64	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$87,430.62	\$87,430.62	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$709,167.41	\$709,167.41	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$539,894.54	\$539,894.54	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$181,755.41	\$119,766.81	\$61,988.60	\$0.00	\$0.00
RIVERVIEW	\$147,336.99	\$147,336.99	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$46,718.22	\$46,718.22	\$0.00	\$0.00	\$0.00
ROMEO	\$41,724.73	\$41,724.73	\$0.00	\$0.00	\$0.00
ROMULUS	\$373,513.48	\$373,513.48	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$444,958.37	\$444,958.37	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$32,751.68	\$32,751.68	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$2,259,607.83	\$2,259,607.83	\$0.00	\$0.00	\$0.00
SOCWA	\$3,777,178.63	\$3,777,178.63	\$0.00	\$0.00	\$0.00
SOUTH ROCKWOOD	\$10,041.89	\$10,041.89	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$187,011.71	\$187,011.71	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ST. CLAIR CNTY-GREENWOOD ENE	\$112,577.13	\$112,577.13	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$528,225.00	\$528,225.00	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$2,601,671.05	\$2,601,671.05	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$127,476.50	\$127,476.50	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$23,235.71	\$23,235.71	\$0.00	\$0.00	\$0.00
TAYLOR	\$389,594.51	\$389,594.51	\$0.00	\$0.00	\$0.00
TRENTON	\$282,490.21	\$282,490.21	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,055,770.71	\$1,055,770.71	\$0.00	\$0.00	\$0.00
UTICA	\$94,951.95	\$94,951.95	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$575,940.61	\$575,940.61	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$132,069.87	\$132,069.87	\$0.00	\$0.00	\$0.00
WARREN	\$1,768,413.02	\$1,768,413.02	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$181,696.51	\$181,696.51	\$0.00	\$0.00	\$0.00
WAYNE	\$528,918.66	\$528,918.66	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,747,197.13	\$1,747,197.13	\$0.00	\$0.00	\$0.00
WESTLAND	\$1,034,541.72	\$1,034,541.72	\$0.00	\$0.00	\$0.00
WIXOM	\$399,647.83	\$399,647.83	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$278,120.37	\$278,120.37	\$0.00	\$0.00	\$0.00
YCUA	\$1,762,138.88	\$1,762,138.88	\$0.00	\$0.00	\$0.00
TOTAL WATER ACCOUNTS	\$57,034,085.07	\$41,297,800.98	\$2,742,457.96	\$819,375.19	\$12,174,450.94

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$69,800.00	\$69,800.00	\$0.00	\$0.00	\$0.00
CENTER LINE	\$85,799.50	\$85,799.50	\$0.00	\$0.00	\$0.00
DEARBORN	\$1,671,500.00	\$1,671,500.00	\$0.00	\$0.00	\$0.00
EVERGREEN-FARMINGTON	\$2,980,500.00	\$2,980,500.00	\$0.00	\$0.00	\$0.00
FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$18,000.00	\$18,000.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$39,741,475.16	\$446,400.00	\$446,400.00	\$446,400.00	\$38,402,275.16
MELVINDALE	\$129,500.00	\$129,500.00	\$0.00	\$0.00	\$0.00
OAKLAND COUNTY GWK DD	\$3,819,000.00	\$3,819,000.00	\$0.00	\$0.00	\$0.00
OMID	\$5,887,955.42	\$5,887,955.42	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$22,200.00	\$22,200.00	\$0.00	\$0.00	\$0.00
ROUGE VALLEY	\$4,605,600.00	\$4,605,600.00	\$0.00	\$0.00	\$0.00
SOUTH MACOMB SANITATION DIST	\$2,064,400.00	\$2,064,400.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$4,300.00	\$4,300.00	\$0.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$61,100,030.08	\$21,804,954.92	\$446,400.00	\$446,400.00	\$38,402,275.16

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$3,210.78	\$3,210.78	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O)	\$11,412.96	\$11,412.96	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O) ADMIN	\$1,970.81	\$1,970.81	\$0.00	\$0.00	\$0.00
AUBURN HILLS (E-F)	\$384.09	\$384.09	\$0.00	\$0.00	\$0.00
BERKLEY	\$3,147.06	\$3,147.06	\$0.00	\$0.00	\$0.00
BEVERLY HILLS	\$994.74	\$994.74	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$2,431.98	\$2,431.98	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$5,667.54	\$5,667.54	\$0.00	\$0.00	\$0.00
BLOOMFIELD HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$7,533.12	\$7,533.12	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$169.92	\$169.92	\$0.00	\$0.00	\$0.00
CENTER LINE	\$7,334.88	\$7,334.88	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$25,125.15	\$25,125.15	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$200.01	\$200.01	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$8,867.70	\$8,867.70	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$3,708.15	\$3,708.15	\$0.00	\$0.00	\$0.00
CLARKSTON (C-O) ADMIN	\$69.06	\$69.06	\$0.00	\$0.00	\$0.00
CLAWSON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$26,452.65	\$26,452.65	\$0.00	\$0.00	\$0.00
DEARBORN	\$72,396.54	\$72,396.54	\$0.00	\$0.00	\$0.00
DEARBORN HEIGHTS	\$19,907.19	\$19,907.19	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$106.20	\$106.20	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
EASTPOINTE	\$12,853.74	\$12,853.74	\$0.00	\$0.00	\$0.00
FARMINGTON	\$3,991.35	\$3,991.35	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRASER	\$4,938.30	\$4,938.30	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$6,113.58	\$6,113.58	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$1,573.53	\$1,573.53	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$2,079.75	\$2,079.75	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$1,177.05	\$1,177.05	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$339.84	\$339.84	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$2,646.15	\$2,646.15	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$8,311.92	\$8,311.92	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$1,893.90	\$1,893.90	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$2,851.47	\$2,851.47	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$3,272.73	\$3,272.73	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,794,061.19	\$8,143.77	\$4,053.30	\$0.00	\$1,781,864.12
HUNTINGTON WOODS	\$284.97	\$284.97	\$0.00	\$0.00	\$0.00
INDEPENDENCE (C-O) ADMIN	\$1,295.83	\$1,295.83	\$0.00	\$0.00	\$0.00
INKSTER	\$5,536.56	\$5,536.56	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LAKE ORION	\$1,600.08	\$1,600.08	\$0.00	\$0.00	\$0.00
LATHRUP	\$1,400.07	\$1,400.07	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$647.82	\$647.82	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
LIVONIA	\$40,439.19	\$40,439.19	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$410.64	\$410.64	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELVINDALE	\$7,002.12	\$7,002.12	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$612.42	\$612.42	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$1,773.54	\$1,773.54	\$0.00	\$0.00	\$0.00
NOVI	\$17,627.43	\$17,627.43	\$0.00	\$0.00	\$0.00
OAK PARK	\$14,423.73	\$14,423.73	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$8,366.79	\$8,366.79	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O) ADMIN	\$973.76	\$973.76	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$1,115.10	\$1,115.10	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$1,253.16	\$1,253.16	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$272.58	\$272.58	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$3,883.38	\$3,883.38	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$272.58	\$272.58	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$25,040.19	\$25,040.19	\$0.00	\$0.00	\$0.00
ROCHESTER HILLS	\$18,519.51	\$18,519.51	\$0.00	\$0.00	\$0.00
ROMULUS	\$1,557.60	\$1,557.60	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$29,139.51	\$29,139.51	\$0.00	\$0.00	\$0.00
ROYAL OAK	\$13,809.54	\$13,809.54	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SHELBY TOWNSHIP	\$14,724.63	\$14,724.63	\$0.00	\$0.00	\$0.00
SOUTHFIELD (E-F)	\$55,617.80	\$55,617.80	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$7,836.33	\$7,836.33	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$36,267.30	\$24,178.20	\$12,089.10	\$0.00	\$0.00
STERLING HEIGHTS	\$63,872.22	\$63,872.22	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UTICA	\$6,071.10	\$6,071.10	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$2,077.98	\$2,077.98	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$1,513.35	\$1,513.35	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP DPW (ADMI	\$3,120.16	\$3,120.16	\$0.00	\$0.00	\$0.00
WAYNE	\$4,996.71	\$4,996.71	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$6,364.92	\$6,364.92	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP. (C-O) P	\$243.39	\$243.39	\$0.00	\$0.00	\$0.00
WESTLAND	\$22,726.80	\$22,726.80	\$0.00	\$0.00	\$0.00
TOTAL IWC ACCOUNTS	\$2,469,885.82	\$671,879.30	\$16,142.40	\$0.00	\$1,781,864.12

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
3M COMPANY (MINNESOTA MINING	\$1,308.86	\$0.00	\$1,308.86	\$0.00	\$0.00
A & R PACKING CO., LLC	\$2,416.37	\$2,416.37	\$0.00	\$0.00	\$0.00
AACTRON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACADEMY PACKING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACME RUSTPROOF	\$63.78	\$63.78	\$0.00	\$0.00	\$0.00
ADORING PET FUNERAL HOME	\$299.20	\$199.48	\$49.86	\$49.86	\$0.00
AEVITAS SPECIALITY SERVICES	\$635.35	\$635.35	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNUNG	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNUNG	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALL CHEM CORP, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALPHA STAMPING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERICAN WASTE TECH INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERITI MFG. CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
APPLIED TECHNOLOGY INDUSTRIE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ATWATER IN THE PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AUTOMOTIVE FINISH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AXLE BREWING COMPANY, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
B. NEKTAR MEADERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BAFFIN BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BARON INDUSTRIES	\$502.24	\$0.00	\$502.24	\$0.00	\$0.00
BARTZ BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$991.97	\$0.00	\$71.83	\$0.00	\$920.14
BAYS MICHIGAN CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BEIRUT BAKERY, INC.	\$37.00	\$0.00	\$0.00	\$0.00	\$37.00
BETTER MADE SNACK FOOD	\$60,716.23	\$60,716.23	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$61.25	\$0.00	\$0.00	\$0.00	\$61.25
BOZEK'S MARKET	\$42.01	\$42.01	\$0.00	\$0.00	\$0.00
BREW DETROIT	\$6,077.29	\$3,779.24	\$2,298.05	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROOKS BREWING, LLC.	\$26.36	\$0.00	\$26.36	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$0.00	\$0.00	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CF BURGER CREAMERY	\$29,047.24	\$29,047.24	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$1,992.59	\$21.60	\$10.23	\$12.50	\$1,948.26
CINTAS CORP. - MACOMB TWP.	\$0.00	\$0.00	\$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.	\$5.89	\$5.89	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COCA-COLA REFRESHMENTS USA,	\$0.00	\$0.00	\$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
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

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
COUNTRY FRESH DAIRY CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CROSS CHEMICAL COMPANY, INC.	\$752.71	\$0.00	\$752.71	\$0.00	\$0.00
DARLING INGREDIENTS, INC.	\$5,469.65	\$5,469.65	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$ (55.40)	\$0.00	\$0.00	\$0.00	\$ (55.40)
DEARBORN SAUSAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT BEER CO.	\$ (66.68)	\$0.00	\$0.00	\$ (66.68)	\$0.00
DETROIT LINEN SERVICE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT RIVERTOWN BREWERY CC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$26.53	\$15.48	\$6.63	\$4.42	\$0.00
DETRONIC INDUSTRIES, INC.	\$73.15	\$73.15	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DIVERSIFIED CHEM TECH. INC.	\$93.83	\$93.83	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$7,678.77	\$7,678.77	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$3,210.82	\$3,210.82	\$0.00	\$0.00	\$0.00
DOWNEY BREWING COMPANY	\$29.89	\$0.00	\$29.89	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$3,314.27	\$3,314.27	\$0.00	\$0.00	\$0.00
EASTERN MARKET BREWING COMP?	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$2,751.97	\$1,887.66	\$849.07	\$15.24	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
EQ DETROIT, INC.	\$17,111.87	\$12,214.80	\$4,897.07	\$0.00	\$0.00
EQ DETROIT, INC.	\$362.37	\$173.24	\$189.13	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ETON ST BREWERY- GRIFFIN CLF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$85.74	\$85.74	\$0.00	\$0.00	\$0.00
EXTRUDEHODE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FAYGO BEVERAGES, INC.	\$61,093.40	\$61,093.40	\$0.00	\$0.00	\$0.00
FIVES CINETIC CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FOUNDERS BREWING COMPANY	\$27.63	\$0.00	\$27.63	\$0.00	\$0.00
FRESH-PAK	\$592.73	\$592.73	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
G2O ENERGY, LLC	\$1,905.06	\$1,905.06	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$3,928.85	\$2,563.26	\$1,365.59	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$20.41	\$0.00	\$20.41	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GREAT BARABOO BREWING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$1,472.99	\$824.09	\$448.94	\$199.96	\$0.00
HENKEL CORPORATION	\$127.48	\$0.00	\$127.48	\$0.00	\$0.00
HOME STYLE FOOD INC.	\$1,090.36	\$1,090.36	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
HOMEGROWN BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOODS CLEANERS	\$211.33	\$0.00	\$0.00	\$0.00	\$211.33
HOUGHTON INTERNATIONAL INC.	\$ (178.17)	\$0.00	\$0.00	\$0.00	\$ (178.17)
HOUGHTON INTERNATIONAL INC.	\$188.22	\$188.22	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$ (7,724.50)	\$0.00	\$0.00	\$0.00	\$ (7,724.50)
HUNTINGTON CLEANERS	\$265.99	\$0.00	\$0.00	\$265.99	\$0.00
IDP, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDUSTRIAL METAL COATING	\$1,174.51	\$725.58	\$448.93	\$0.00	\$0.00
INTRASTATE DISTRIBUTORS	\$1,435.58	\$1,435.58	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$1,387.00	\$1,387.00	\$0.00	\$0.00	\$0.00
ITALIAN BUTTER BREAD STICKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
JAMEX BREWING CO.	\$25.04	\$0.00	\$25.04	\$0.00	\$0.00
KAR NUT PRODUCTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$ (313.75)	\$0.00	\$0.00	\$ (313.75)	\$0.00
KUHNHENN BREWING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$926.59	\$926.59	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$77.92	\$77.92	\$0.00	\$0.00	\$0.00
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
LIFE TECHNOLOGIES	\$424.22	\$424.22	\$0.00	\$0.00	\$0.00
LILY'S SEAFOOD GRILL & BREWE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MACDERMID, INC.	\$2,666.49	\$2,666.49	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$590.50	\$590.50	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MCNICHOLS POLISHING & ANODIZ	\$44.19	\$15.58	\$0.00	\$0.00	\$28.61
MELLO MEATS INC, - KUBISCH S	\$44.22	\$44.22	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$ (80.72)	\$0.00	\$0.00	\$ (80.72)	\$0.00
MIBA HYDRAMECHANICA CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$71,706.31	\$71,706.31	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MICHIGAN SOY PRODUCTS CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MIDWEST WIRE PRODUCTS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MILANO BAKERY	\$1,017.06	\$1,017.06	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$1,993.55	\$1,993.55	\$0.00	\$0.00	\$0.00
MISTER UNIFORM & MAT RENTALS	\$ (3.53)	\$0.00	\$0.00	\$0.00	\$ (3.53)
MOTOR CITY BREWING WORKS	\$313.23	\$0.00	\$144.98	\$0.00	\$168.25
NATIONAL CHILI COMPANY	\$378.02	\$378.02	\$0.00	\$0.00	\$0.00
NEAPCO DRIVELINES	\$2,534.31	\$2,534.31	\$0.00	\$0.00	\$0.00
NORTH CENTER BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHERN LAKES SEAFOOD & MEA	\$21.57	\$21.57	\$0.00	\$0.00	\$0.00
OAKWOOD BAKERY	\$99.71	\$99.71	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$39.61	\$0.00	\$39.61	\$0.00	\$0.00
PELLERITO FOODS INC.	\$2.02	\$2.02	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$26,735.85	\$26,735.85	\$0.00	\$0.00	\$0.00
PERDUE PREMIUM MEAT COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
PERDUE PREMIUM MEAT COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PERDUE PREMIUM MEAT COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PERSONAL UNIFORM SERVICE, IN	\$59.03	\$39.20	\$19.83	\$0.00	\$0.00
PETRO ENVIRON TECH, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PINE TREE ACRES, INC.	\$19,809.76	\$19,809.76	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$219.84	\$219.84	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$1,890.50	\$0.00	\$1,890.50	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$167.98	\$167.98	\$0.00	\$0.00	\$0.00
RAY'S ICE CREAM CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RED SPOT PAINT #409139	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RIVER ROUGE BREWING COMPANY	\$440.60	\$0.00	\$0.00	\$0.00	\$440.60
ROCHESTER MILLS BEER COMPANY	\$326.51	\$0.00	\$146.85	\$0.00	\$179.66
ROCHESTER MILLS PROD BREWERY	\$2,398.23	\$0.00	\$1,515.65	\$0.00	\$882.58
ROYAL OAK BREWERY	\$(279.51)	\$0.00	\$0.00	\$0.00	\$(279.51)
RTT	\$27,772.36	\$0.00	\$0.00	\$0.00	\$27,772.36
SEAFARE FOODS, INC.	\$104.56	\$104.56	\$0.00	\$0.00	\$0.00
SHERWOOD BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SMITH-WATKINS, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$14.52	\$0.00	\$0.00	\$0.00	\$14.52
SUPERNATURAL SPIRITS & BREWI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$247.36	\$113.93	\$40.03	\$46.19	\$47.21

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOM LAUNDRY CLEANERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TRAFFIC JAM & SNUG	\$(31.16)	\$0.00	\$0.00	\$0.00	\$(31.16)
TURRI'S ITALIAN FOODS	\$24,084.41	\$24,084.41	\$0.00	\$0.00	\$0.00
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$650.29	\$650.29	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$51,071.28	\$51,071.28	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$3,062.01	\$3,062.01	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$4.16	\$4.16	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$195.60	\$195.60	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
URBANREST BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
US ECOLOGY MICHIGAN	\$424.05	\$424.05	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$2,589.35	\$2,589.35	\$0.00	\$0.00	\$0.00
USHER OIL SERVICES	\$2,133.94	\$2,133.94	\$0.00	\$0.00	\$0.00
VALICOR ENVIROMENTAL SERVICE	\$546.79	\$546.79	\$0.00	\$0.00	\$0.00
VAUGHAN INDUSTRIES, INC.	\$41.68	\$41.68	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$14,298.40	\$14,298.40	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$4,181.19	\$4,181.19	\$0.00	\$0.00	\$0.00
VERNOR FOOD PRODUCTS	\$(36.26)	\$0.00	\$0.00	\$0.00	\$(36.26)
WIGLEY'S MEAT PROCESS	\$446.61	\$446.61	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$992.76	\$992.76	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/21

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
WINTER SAUSAGE MFG. CO.	\$130.45	\$130.45	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$4,831.51	\$4,831.51	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$2,359.13	\$2,359.13	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$144.24	\$0.00	\$0.00	\$0.00	\$144.24
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$486,616.57	\$444,682.68	\$17,253.40	\$133.01	\$24,547.48

City of Highland Park Billings and Collections

	<u>Water</u>	<u>Sewer</u>	<u>IWC</u>	<u>Cumulative Total</u>
June 30, 2012 Balance	\$ -	\$ 10,207,956	\$ 852,987	\$ 11,060,943
FY 2013 Billings	485,887	4,987,635	154,444	5,627,966
FY 2013 Payments	<u>(65,652)</u>	<u>(2,206,211)</u>	<u>-</u>	<u>(2,271,863)</u>
June 30, 2013 Balance	\$ 420,235	\$ 12,989,380	\$ 1,007,431	\$ 14,417,046
FY 2014 Billings	1,004,357	6,980,442	161,951	8,146,750
FY 2014 Payments	<u>-</u>	<u>(1,612,633)</u>	<u>-</u>	<u>(1,612,633)</u>
June 30, 2014 Balance	\$ 1,424,592	\$ 18,357,189	\$ 1,169,382	\$ 20,951,163
FY 2015 Billings	1,008,032	5,553,123	165,739	6,726,894
FY 2015 Payments	<u>-</u>	<u>(1,444,623)</u>	<u>-</u>	<u>(1,444,623)</u>
June 30, 2015 Balance	\$ 2,432,625	\$ 22,465,689	\$ 1,335,121	\$ 26,233,435
FY 2016 Billings	1,157,178	5,612,167	106,431	6,875,776
FY 2016 Payments	<u>-</u>	<u>(2,022,335)</u>	<u>-</u>	<u>(2,022,335)</u>
June 30, 2016 Balance	\$ 3,589,803	\$ 26,055,521	\$ 1,441,551	\$ 31,086,875
FY 2017 Billings	1,245,267	5,802,000	101,999	7,149,265
FY 2017 Payments	<u>-</u>	<u>(2,309,186)</u>	<u>-</u>	<u>(2,309,186)</u>
June 30, 2017 Balance	\$ 4,835,070	\$ 29,548,335	\$ 1,543,550	\$ 35,926,954
FY 2018 Billings	1,277,179	5,657,101	80,472	7,014,752
FY 2018 Payments	<u>-</u>	<u>(4,108,108)</u>	<u>-</u>	<u>(4,108,108)</u>
June 30, 2018 Balance	\$ 6,112,248	\$ 31,097,327	\$ 1,624,022	\$ 38,833,597
FY 2019 Billings	1,238,797	5,617,100	51,220	6,907,117
FY 2019 Payments	<u>-</u>	<u>(5,241,583)</u>	<u>-</u>	<u>(5,241,583)</u>
June 30, 2019 Balance	\$ 7,351,045	\$ 31,472,844	\$ 1,675,243	\$ 40,499,132
FY 2020 Billings	1,182,639	5,665,400	47,097	6,895,136
FY 2020 Payments	<u>-</u>	<u>(3,026,117)</u>	<u>-</u>	<u>(3,026,117)</u>
June 30, 2020 Balance	\$ 8,533,684	\$ 34,112,127	\$ 1,722,340	\$ 44,368,151
FY 2021 Billings	1,185,506	5,702,000	47,423	6,934,929
FY 2021 Payments	<u>-</u>	<u>(2,783,552)</u>	<u>-</u>	<u>(2,783,552)</u>
June 30, 2021 Balance	\$ 9,719,190	\$ 37,030,575	\$ 1,769,763	\$ 48,519,528
FY 2022 Billings (6 Months)	636,415	2,710,900	24,298	3,371,613
FY 2022 Payments (6 Months)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Balance as of December 31, 2021	<u>\$ 10,355,605</u>	<u>\$ 39,741,475</u>	<u>\$ 1,794,061</u>	<u>\$ 51,891,141</u>



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Megan Savage, Vendor Outreach Coordinator

Re: Business Inclusion & Diversity Program Update

Background: On November 25, 2020, the GLWA Board of Directors approved an amendment to the Procurement Policy allowing for the formation of a new Business Inclusion & Diversity (B.I.D.) Program within the Financial Services' Procurement Group. The B.I.D. Program Team, which includes internal GLWA Team Members as well as external consultants, executed a Phase I launch of the program on February 1, 2021 and a Phase II launch on July 1, 2021.

Analysis: This month we present tables to recap B.I.D. Program activity from the date of the program launch on February 1, 2021 through February 28, 2022 for procurements budgeted to exceed \$1 million.

Table 1: B.I.D. Eligible Procurements as of February 28, 2022

Table 1 provides an overview of the total number of B.I.D. Program-eligible Procurements awarded, in evaluation, or advertised as active opportunities in GLWA's Bonfire Procurement Portal. Each vendor who submits a response to a B.I.D. Program-eligible procurement must also submit a Business Inclusion and Diversity Plan. The total number of Diversity Plans that GLWA has received for B.I.D.-eligible procurements that have been awarded and that are in evaluation is also provided.

	Awarded	In Evaluation Phase	Active (Advertised)	Total
Procurements Requiring B.I.D. Submittals	23	14	6	43
Total Number of Diversity Plans Submitted	61	44	n/a	105

Table 2: Scored Criteria for Awarded Procurements

Table 2 provides a breakdown of the percentage of B.I.D. Program-eligible procurements awarded thus far that met the B.I.D. Program scored criteria. This scored criteria is based on whether the vendor has a business presence in the state of Michigan, GLWA's Member Partner service area, or a disadvantaged municipality within GLWA's service area.

	Procurements Awarded Meeting B.I.D. Criteria as a % of Total Awards
Michigan Location	91%
Member Partner Service Area	83%
Disadvantaged Service Area Territory	52%

Table 3: Non-Scored Criteria - Disadvantaged, Minority-owned, Women-owned, and Small Businesses

Table 3 provides a breakdown of the percentage of B.I.D. Program-eligible procurements awarded thus far that met the B.I.D. Program Non-Scored Criteria. This Non-Scored Criteria refers to any diversity certifications that the vendor may hold as a Disadvantaged Business Enterprise (DBE), Minority-Owned Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or Small Business Enterprise (SBE).

	Procurements Awarded as a % of Total Awards
Awarded	65%

Table 4: Overall Contracts Awarded

Table 4 provides a breakdown of overall dollars awarded under the B.I.D. Program thus far, distinguishing between firms that met all four B.I.D. Program scoring criteria (including scored and non-scored criteria) and firms that met all three criteria (scored criteria only).

	Total Contract Count	Total Contract Amount (in millions)
Eligible Procurements	23	\$231.4
Firms that met four criteria	15	\$75.8
Firms that met three criteria	8	\$155.6

Other activities completed this month to expand awareness of the B.I.D. Program and to foster the development of effective diversity plans included the following.

- Presented at the Michigan Department of Transportation (MDOT) 41st Annual Disadvantaged Business Enterprise (DBE) Small Business Development Virtual Conference on March 22, 2022.
- Continued attendance of the B.I.D. Program Liaison at all Pre-Bid and Pre-Proposal solicitation meetings to overview the B.I.D. Program requirements and answer any questions from vendors/contractors.

Additionally, the following tasks remain at the top of our priority list.

- Developing contract language for B.I.D. Program requirements.
- Evaluating the insurance and bonding requirements for small, minority-owned, and disadvantaged business enterprises.
- Identifying meaningful reporting and performances measures.
- Review vendor registration and reporting capabilities within Bonfire.

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Dana Bierer, CPA, Manager - Special Projects

Re: Grants, Gifts, and Other Resources Report through February 28, 2022

Background: The Great Lakes Water Authority (GLWA) delegated authority to the Chief Executive Officer to oversee and report on activities identified in the GLWA Articles of Incorporation related to solicitation and receipt of grants, gifts, and other resources as stated in Article 4 – Powers, Section B (4):

(4) Solicit, receive, and accept gifts, grants, labor, loans, contributions of money, property, or other things of value, and other aid or payment from any federal, state, local, or intergovernmental government agency or from any other person or entity, public or private, upon terms and conditions acceptable to the Authority, or participate in any other way in a federal, state, local, or intergovernmental government program.

Other resources in this context refer to labor, contributions of money, property, or other things of value from any other person or entity, public or private with the exception for loans, subject to provisions of the GLWA Board Debt Management Policy, and Intergovernmental agreements and other activities that are addressed in the GLWA Board Procurement Policy.

Participation in any other way in a federal, state local, or intergovernmental government program includes participation in research projects at universities.

Refer to the Grants, Gifts, and Other Resources Delegation Policy at [Grants, Gifts, and Other Resources Delegation Policy - GLWA \(glwater.org\)](https://www.glwwater.org).

Analysis: To ensure transparency and timely communication, this report is provided to the Board, no less than quarterly, documenting activities subject to the policy. The report will, at a minimum, include description, type of activity, dollar amount, compliance and/or performance requirements, if any, and status including, at a minimum, solicitation, acceptance, and close-out.

Bolded items in the attached tables reflect changes from the prior report.

Highlights of this quarter's report includes the following.

- ✓ FEMA DR-4494-MI, Michigan Covid-19 Pandemic, funding was set to expire March 31, 2022. However, we have been informed that this will now be extended through June 30, 2022.
- ✓ FEMA DR-4607-MI, Michigan Severe Storms, Flooding, and Tornadoes, added Public Assistance on November 10, 2021 with a declaration date of July 15, 2021. It is anticipated that funding will approximate \$1,000,000, after insurance coverage is taken into consideration.
- ✓ An application for FEMA Building Resilient Infrastructure and Communities (BRIC), for \$39,611,007 was submitted for this competitive national grant. A panel reviews submitted hazard mitigation projects with selections made in July.

This report presents the Grants, Gifts, and Other Resources across three tables.

Table 1 Grant Submissions reflects open FY2020 submissions, FY2021 submissions, and FY2022 submissions to date. The summarized activity provided identifies seven programs with ten reimbursement requests.

Table 2 Participation in Other Federal, State, Local or Intergovernmental Programs reflects open FY2020 projects, open FY2021 projects, and FY2022 projects to date. The summarized activity provided identifies 17 research projects with GLWA as a contributor and/or participant in research being conducted by a university or government program.

Table 3 Closed Programs reflects seven programs with six reimbursement requests and receipts in FY2021 and FY2022, through February 28, 2022.

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Table 1 Grant Submissions reflects open FY2020 submissions, FY2021 submissions, and FY2022 submissions to date. The summarized activity provided identifies seven programs with ten reimbursement requests.

Table 1 - Grant Submissions

Reference Number	Request Date	Description	Type of Activity	Amount Requested	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-002a	09/15/2020	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 144208	Federal Grant (Reimbursement Basis)	To Be Determined	Federal Audit Requirements (add to existing audit program)	FEMA is reviewing	Dana Bierer
2021-013	12/28/2021	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 552205	Federal Grant (Reimbursement Basis)	\$36,014	Federal Audit Requirements (add to existing audit program)	FEMA approved funding for release	Dana Bierer
2022-001a	03/03/2022	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 435200	Federal Grant (Reimbursement Basis)	\$92,033	Federal Audit Requirements (add to existing audit program)	FEMA is reviewing	Dana Bierer
2022-001b	03/03/2022	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 553382	Federal Grant (Reimbursement Basis)	\$63,842	Federal Audit Requirements (add to existing audit program)	FEMA is reviewing	Dana Bierer
2022-002	01/06/2022	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Multiple projects	Federal Grant (Reimbursement Basis)	\$1,000,000	Federal Audit Requirements (add to existing audit program)	Pending application completion	Dana Bierer
2022-003	01/20/2022	Federal Emergency Management Agency (FEMA), Building Resilient Infrastructure and Communities (BRIC) Northwest Interceptor Diversion Tunnel	Federal Grant (Reimbursement Basis)	\$39,611,007	Federal Audit Requirements (add to existing audit program); Match \$13,203,669	FEMA is reviewing	Jody Caldwell

Reference Number	Request Date	Description	Type of Activity	Amount Requested	Compliance and/or Performance Requirements	Status	Team Member Contact
2022-004	02/23/2022	Water Technician Registered Apprenticeship Program- \$2,225 per apprentice, 25 apprentices	Macomb Community College Tuition	\$55,625	None	Awarded	Patricia Butler
2021-001	01/01/2021	The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Drinking Water Asset Management (DWAM) Grant CS-198	State Grant (Reimbursement Basis)	\$998,047	None	Applied	Jody Caldwell
2021-003	02/18/2021	The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Watershed Council Support Program	State Grant (Reimbursement Basis)	\$40,000	Quarterly Progress Reports	Awarded	Dan Gold
2021-007	06/23/2021	The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Surface Water Intake Protection Program (SWIPP)	State Grant (Reimbursement Basis)	\$50,000	Quarterly Progress Reports; Match \$50,000	Awarded	Mary Lynn Semegen and Terry Daniel

Table 2 Participation in Other Federal, State, Local or Intergovernmental Programs reflects open FY2020 projects, open FY2021 projects, and FY2022 projects to date. The summarized activity provided identifies 17 research projects with GLWA as a contributor and/or participant in research being conducted by a university or government program.

Table 2 - Participation in Other Federal, State, Local, or Intergovernmental Programs

Reference Number	Start Date	Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-003	Pre-FY 2019	Anaerobic Digestion Project CS-217	Michigan State University Project	\$353,282 (Life to date through FY2021) \$355,800 (Contract amount)	None	Ongoing	John Norton

Reference Number	Start Date	Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-004	Pre-FY 2019	Phosphorus & Oxygen Control; Collection System Optimization Contract 1900169	Multiple Projects with University of Michigan	\$94,541 (Life to date through FY2021) \$246,823 (Contract amount)	None	Ongoing	John Norton
2020-005	FY2020	PFAS Health & Ecological Impacts Contract 1902151	Wayne State University Project	\$79,450 (Life to date through FY2021) \$192,153 (Contract amount)	None	Ongoing	John Norton
2020-007	FY2020	Transport/Fate of Nutrients in Biosolids Contract 1902059	Michigan State University Project	\$224,345 (Life to date through FY2021) \$277,470 (Amended contract amount)	None	Ongoing	John Norton
2020-008	FY2020	Surveillance of Covid-19 in Southeast MI Wastewater Contract 2001402	Michigan State University Project	\$177,004 (Life to date through FY2021) \$267,458 (Contract amount)	None	Ongoing	John Norton
2020-009	07/22/2020	Implementation of LTCP modeling Contract 2001434	University of Michigan Project	\$264,348 (Life to date through FY2021) \$636,702 (Contract amount)	None	Ongoing	John Norton
2020-010	08/01/2020	Microplastics and Human Health Contract 1904710	Wayne State University Project	\$39,570 (Life to date through FY2021) \$195,000 (Contract amount)	None	Ongoing	John Norton

Reference Number	Start Date	Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-011	Pre-FY2020	Smart Pipes Contract 1900902	University of Michigan Project	\$310,243 (Life to date through FY2021) \$356,610 (Contract amount)	None	Ongoing	John Norton
2020-013a	08/01/2020	Surveillance of Covid-19 in Southeast MI Wastewater- Expanded project scope- Phase 1	State of Michigan/ CDM Smith and Michigan State University	GLWA receiving samples and analytics (Project worth \$400,000)	None	Ongoing	John Norton
2020-013b	08/01/2020	Surveillance of Covid-19 in Southeast MI Wastewater Contract expanded project scope- Phase 2	State of Michigan/ CDM Smith and Michigan State University	GLWA receiving samples and analytics (Project worth \$2,700,000)	None	Ongoing	John Norton
2020-014	12/29/2020	Assessing biosolid treatment processes on pollutant environmental fate on plant uptake	US Environmental Protection Agency (EPA)/ Michigan State, Colorado State, and University of Georgia	\$100,000 and in-kind labor for program participation (Contract amount) (Project worth \$1,498,000)	None	Awarded	John Norton

Reference Number	Start Date	Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status	Team Member Contact
2021-004	03/17/2021	Project GREEN-Accumulation of Per- and Polyfluoroalkyl Substances in Historically Archived Corn and Wheat Grains	Michigan State University Project	\$20,000 (Contract amount) (Project worth \$69,999)	None	Ongoing	John Norton
2021-005	05/04/2021	Converting Biosolids into Diesel	Department of Energy (DOE)/ Pacific Northwest National Labs (PNNL)	In-kind labor and facility for research and analysis with PNNL (Project worth \$740,750)	None	Ongoing	John Norton
2021-008	07/12/2021	Method Development for Detection of Human Sources of Fecal Contamination in the Watershed (LAMP) Contract 2100771	Wayne State University Project	\$297,560 (Contract amount)	None	Awarded	John Norton
2021-009	03/30/2021	Life cycle assessment Contract 2001595	University of Michigan Project	\$23,680 (Contract amount)	None	Ongoing	John Norton
2021-010	02/11/2021	Prestressed concrete cylinder pipe (PCCP) Study on Loss of Preload	Tarrant Regional Water District	\$20,000 (Contract amount) (Project worth \$100,000)	None	Awarded	John Norton

Reference Number	Start Date	Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status	Team Member Contact
2021-011	04/29/2021	Integrated biochemical electrochemical technologies (IBET)	University of Michigan Project	\$312,500 and in-kind labor and facility for program participation (Contract amount; Project worth \$6,790,983)	None	Awarded	John Norton
2021-012	11/19/2021	Michigan Industry Cluster Approach 3.0 (MICA 3.0) Employer Partnership	Focus: Hope	GLWA leading employer collaboration (Project worth \$250,000)	None	Awarded	Patricia Butler

Table 3 Closed Programs reflects seven programs with six reimbursement requests and receipts in FY2021 and FY2022, through February 28, 2022.

Table 3 - Closed Programs

Reference Number	Request Date	Description	Type of Activity	Amount	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-001	08/31/2020; 09/23/2020; 10/26/2020; 11/23/2020	Wage Incentive used for qualified apprentices	MOU with DESC (Detroit Employment Solutions Corporation) and SER-Metro Detroit	\$12,000 (\$3,000 per month)	Minimum wage and monthly work hour requirements	\$12,000 received	Patricia Butler

Reference Number	Request Date	Description	Type of Activity	Amount	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-006	FY2020	Lake Huron to Lake Erie Monitoring Platform; Photocatalytic UV materials	Multiple Projects with Wayne State University	\$1,284,500 (Contract amount)	None	Program not initiated; no resources provided	John Norton
2021-002	02/01/2021	Southeast Michigan Council of Governments (SEMCOG) Infrastructure Asset Management Program	Organization of Local Governments (Reimbursement Basis)	\$29,951	None	\$29,951 received 02/18/2021	Jody Caldwell
2020-012	Pre-FY2020	Phosphorus and Oxygen Control; Collection System Optimization Contract 1900169	Multiple Projects with University of Michigan	\$250,000 (Contract amount)	None	Program incorporated into similar 2020-004 program	John Norton
2021-006	06/21/2021	Improving Arrested Anaerobic Digestion Using Vacuum-Based IntensiCarb Reactors	Department of Energy, Office of Energy Efficiency and Renewable Energy/ University of California Irvine	In-kind labor for program participation (Project worth \$3,875,000)	None	Program not initiated; no resources provided	John Norton
2020-002b	11/11/2020	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 149797	Federal Grant (Reimbursement Basis)	\$84,244	Federal Audit Requirements (add to existing audit program)	\$84,244 received 10/14/2021	Dana Bierer

Reference Number	Request Date	Description	Type of Activity	Amount	Compliance and/or Performance Requirements	Status	Team Member Contact
2020-002c	02/09/2021	Federal Emergency Management Agency (FEMA) activity related to COVID-19 Project 149800	Federal Grant (Reimbursement Basis)	\$16,123	Federal Audit Requirements (add to existing audit program)	\$16,123 received 10/14/2021	Dana Bierer



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. Refinancing

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 disposal 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 local system improvements. Accordingly, DWSD records an "obligation payable" for a like amount.

GLWA maintains detailed records of all debt issuances and how the responsibility for payment of 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.
- ✓ GLWA has fourteen active State Revolving Fund (SRF) loans, ten for water and four for sewer. On behalf of DWSD, GLWA is administering four projects for water and two for sewer.
- ✓ Existing proceeds from special revenue bonds are depleted. This means that all capital projects are now funded with Improvement & Extension funds, except for SRF funded projects.
- ✓ Other key items of interest include the following balances as of December 31, 2021.

As of December 31, 2021 (\$ Millions)		
	Water	Sewer
FY 2022 Approved SRF Projects - Table 5	\$352.0	\$105.5
DWSD Obligation Receivable - Table 6	\$549.5	\$384.0
GLWA Outstanding Debt - Table 8	\$2,271.4	\$2,870.5

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.*

Table 1 is based on the FY 2022 and FY 2023 Biennial Budget & Five-Year Financial Plan FY 2022 through FY 2026 approved by the GLWA Board of Directors. It should be noted existing proceeds from special revenue bonds are depleted. This means that all capital projects are now funded with Improvement & Extension (I&E) funds, except for SRF funded projects. It is expected that the I&E funds supplemented with SRF low-interest loan funding will be sufficient to fund the capital program through FY 2022 including an allowance to provide flexibility in the timing of future bond issues.

Table 2 is based on the current local system CIP approved 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 Bond Financing FY 2022 – FY 2026

Projected Funding Needs for Regional System					
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Water					
Revenue Bonds	\$ -	\$ 205,000,000	\$ -	\$ 195,000,000	\$ -
SRF loan draws	\$ 26,100,000	\$ 16,600,000	\$ 16,600,000	\$ 16,600,000	\$ 15,810,000
Total projected funding Water	\$ 26,100,000	\$ 221,600,000	\$ 16,600,000	\$ 211,600,000	\$ 15,810,000
Sewer					
Revenue Bonds	\$ -	\$ 130,000,000	\$ -	\$ 115,000,000	\$ -
SRF loan draws	\$ 31,992,000	\$ 4,122,000	\$ -	\$ -	\$ -
Total projected funding Sewer	\$ 31,992,000	\$ 134,122,000	\$ -	\$ 115,000,000	\$ -

Table 2 - DWSD Projected Bond Financing FY 2022 – FY 2026

Projected Funding Needs for Local System					
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Water					
Revenue Bonds		\$ -	\$ -	\$ -	\$ -
SRF loan draws	\$ 25,000,000	\$ 28,500,000	\$ -	\$ -	\$ -
Total projected funding Water	\$ 25,000,000	\$ 28,500,000	\$ -	\$ -	\$ -
Sewer					
Revenue Bonds	\$ -	\$ -	\$ -	\$ -	\$ -
SRF loans draws	\$ 10,000,000	\$ 8,628,000	\$ -	\$ -	\$ -
Total projected funding Sewer	\$ 10,000,000	\$ 8,628,000	\$ -	\$ -	\$ -

Note: Information presented is as of December 31, 2021. 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 March 2020 in advance of the most recent bond refinancing and new money issuance in May and June 2020.

Current Debt Ratings			
	S&P Global Ratings	Moody's Investors Service	Fitch Ratings
Water Supply System Revenue Bonds			
Senior lien	AA-	A1	A+
Second lien	A+	A2	A
Junior lien	A+	N/A	N/A
Outlook	Stable	Stable	Stable
Sewage Disposal System Revenue Bonds			
Senior lien	AA-	A1	A+
Second lien	A+	A2	A
Junior lien	A+	N/A	N/A
Outlook	Stable	Stable	Stable

Debt Allocation: GLWA has over \$2.3 billion in water system debt and nearly \$2.9 billion in sewer system debt for a combined total of over \$5.2 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.

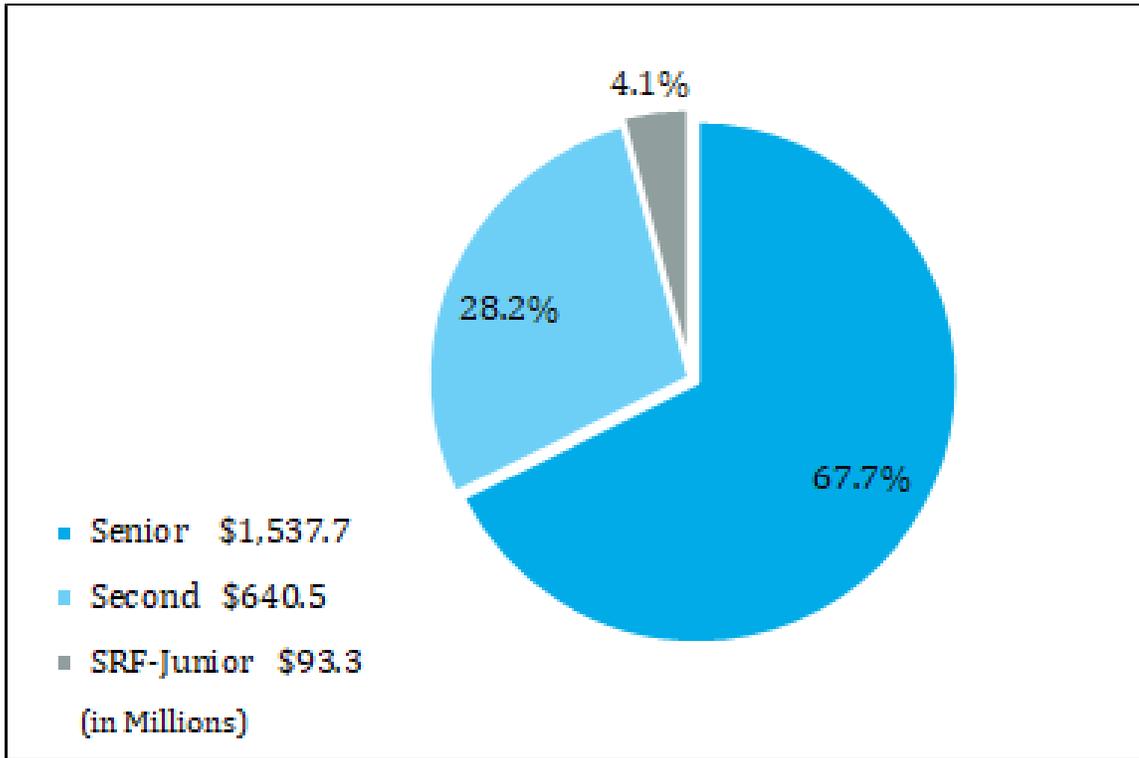


Chart 2 - Debt Type by Lien - Sewer provides a breakdown of the total sewer system debt for both the regional and local systems by lien type.

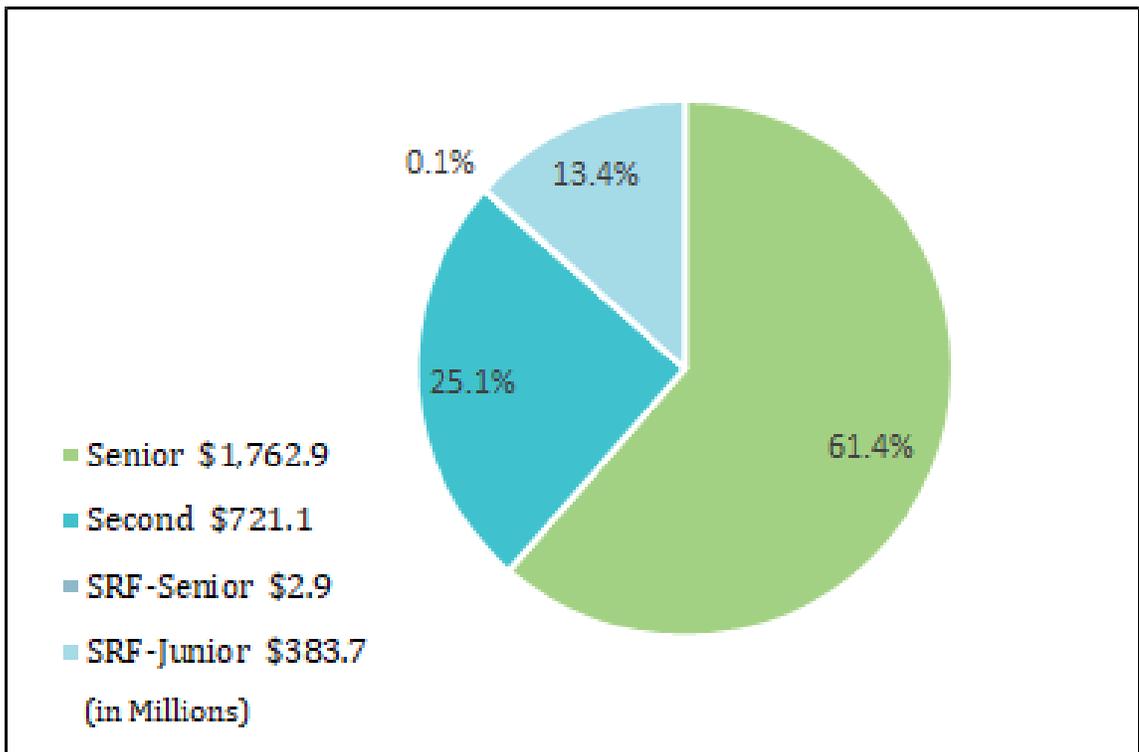


Chart 3 – Annual Debt Service Payments by Lien – Water provides the annual debt service installment requirements for each fiscal year.

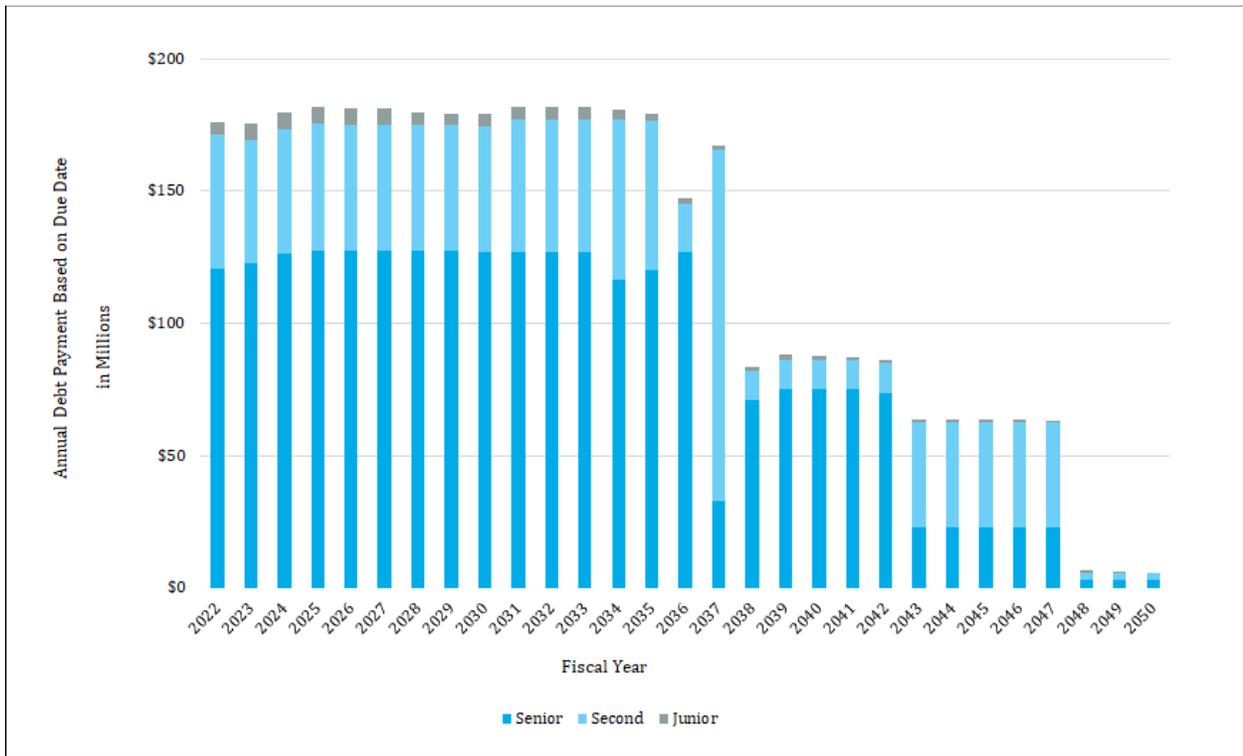


Chart 4 – Annual Debt Service Payments by Lien – Sewer provides the annual debt service installment requirements for each fiscal year.



Note: The figures in these charts reflect the debt service installment requirements for each fiscal year, which are required by the MBO to be set aside monthly in advance of actual payment dates. This information will differ from the Annual Comprehensive Financial Report which reflects when the actual payments are made to the bond paying agent.

State of Michigan’s State Revolving Fund (SRF) Programs: GLWA participates in the State’s Clean Water Revolving Fund (CWRP) to finance qualified sewage disposal system projects and the State’s Drinking Water Revolving Fund (DWRP) 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 1.875% and 2.5%) and are repaid over 20-30 years. For the state’s FY 2022, the DWRP and CWRP program rates are 1.875% for 20-year loans and 2.125% for 30-year loans.

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 the 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 (July 1 for DWRP and June 1 for CWRP) 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 \$93.3 million in outstanding water SRF loans and \$386.6 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			
7447-01	Water Main Replacement (WS-707 & 714)	8/9/2019	\$16.5
7460-01	Water Main Replacement (WS-710 & WS-711)	7/15/2020	\$22.6
7483-01	Water Main Replacement (WS-715 & WS-718)	9/9/2020	\$13.4
7484-01	Water Main Replacement - Jefferson Chalmers (WS-713)	8/6/2021	\$12.8
SRF Water - GLWA Projects			
7445-01	Northeast Transmission Phase 1	8/9/2019	\$30.0
7445-02	Northeast Transmission Main - Phase 2a	8/7/2020	\$9.0
7445-04	Northeast Transmission Main - Phase 3a	5/28/2021	\$11.9
7446-01	Lake Huron Sludge System-Raw Sludge Clarifiers	5/17/2019	\$8.3
7461-01	14 Mile Transmission Main Loop - Phase 1	8/7/2020	\$9.0
7461-02	14 Mile Transmission Main Loop - Phase 2	8/6/2021	\$104.7
		Total Water	\$238.2
SRF Sewer - DWSD Projects			
5688-01	Sewer Main Rehab/Rplcmt (DWS-916) - Project A	9/9/2020	\$4.0
5706-01	Sewer Main Replacements - Project B (DWS-917 & DWS-918)	9/9/2021	\$9.2
SRF Sewer - GLWA Projects			
5655-02	Detroit River Interceptor Segment 2	3/27/2020	\$28.4
5673-01	PS-1 Ferric Chloride System Rehabilitation	2/26/2021	\$12.9
		Total Sewer	\$54.5

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 December 31, 2021 for each loan. On December 31, 2021, the amount of SRF loans authorized and unissued is \$161.0 million for the Water fund and \$38.1 million for the Sewage Disposal Fund.

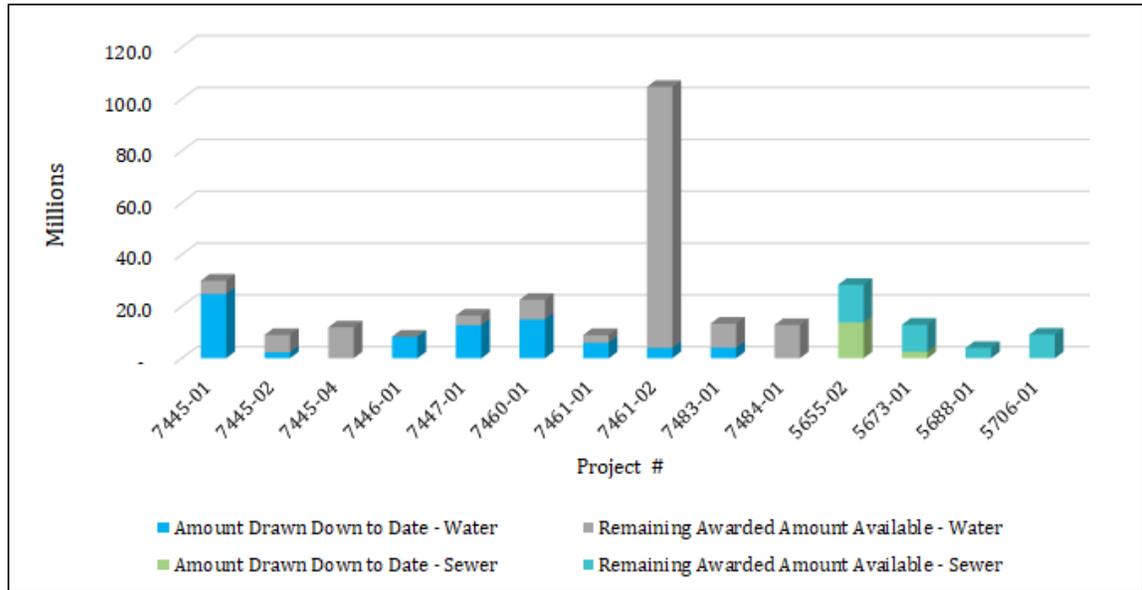


Table 5 - Project Plan Approved by EGLE identifies projects approved by the EGLE but for which applications had not yet been submitted for funding as of December 31, 2021.

Project Owner	Description	Estimated Loan Amount	Anticipated Funding Date
Water SRF			
DWSD	Lead Service Line Water Main Replacement (WS-721)	\$ 1,000,000	2Q 2022
GLWA	96-inch Water Transmission Main Relocation Project - Phase 1	\$ 31,000,000	3.5Q 2022
GLWA	96-inch Water Transmission Main Relocation Project - Phase 2	\$ 111,000,000	4.5Q 2022
GLWA	Ypsilanti Pumping Station	\$ 36,700,000	FY 2023
GLWA	Northeast Transmission Main - Phase 2b	\$ 92,000,000	FY 2023
GLWA	Northeast Transmission Main - Phase 3b	\$ 80,294,000	FY 2024
Total Water SRF		\$ 351,994,000	
Sewer SRF			
GLWA	Detroit River Interceptor - Financial Segment	\$ 38,000,000	3Q 2022
GLWA	Connor Creek Sewer System Rehabilitation	\$ 56,900,000	4Q 2022
GLWA	In-System Storage Device and Dam and Valve Remote Evaluation and Rehabilitation	\$ 10,600,000	1.5Q FY 2023
Total Sewer SRF		\$ 105,500,000	

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:

- a) 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),
- b) 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
- c) 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 December 31, 2021 by pre-bifurcation, revenue bond and SRF component.

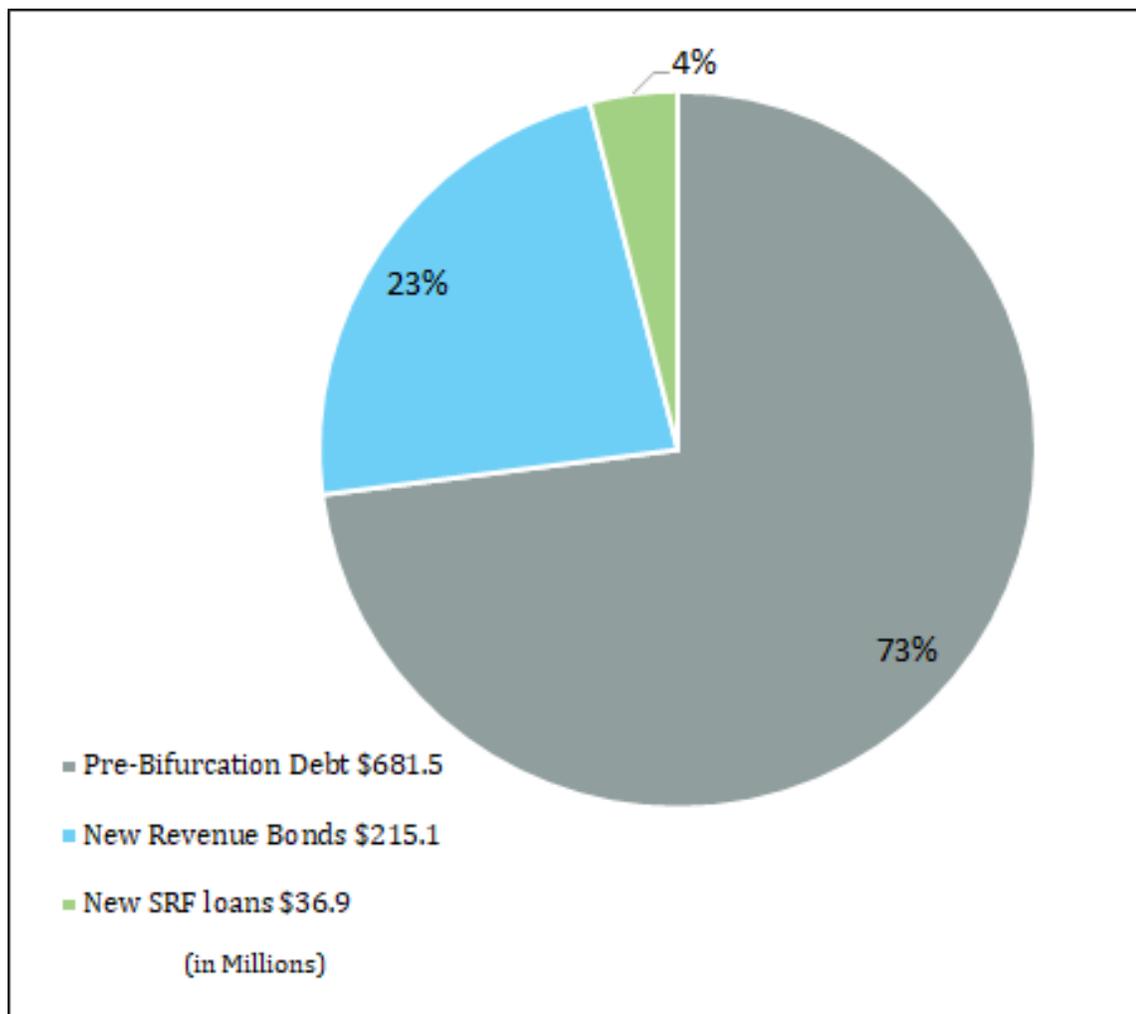


Chart 7 - Obligation Receivable Compared to Total Debt - Water provides context by comparing the Water System Obligation Receivable to the Total Water Debt (excludes unamortized premiums).

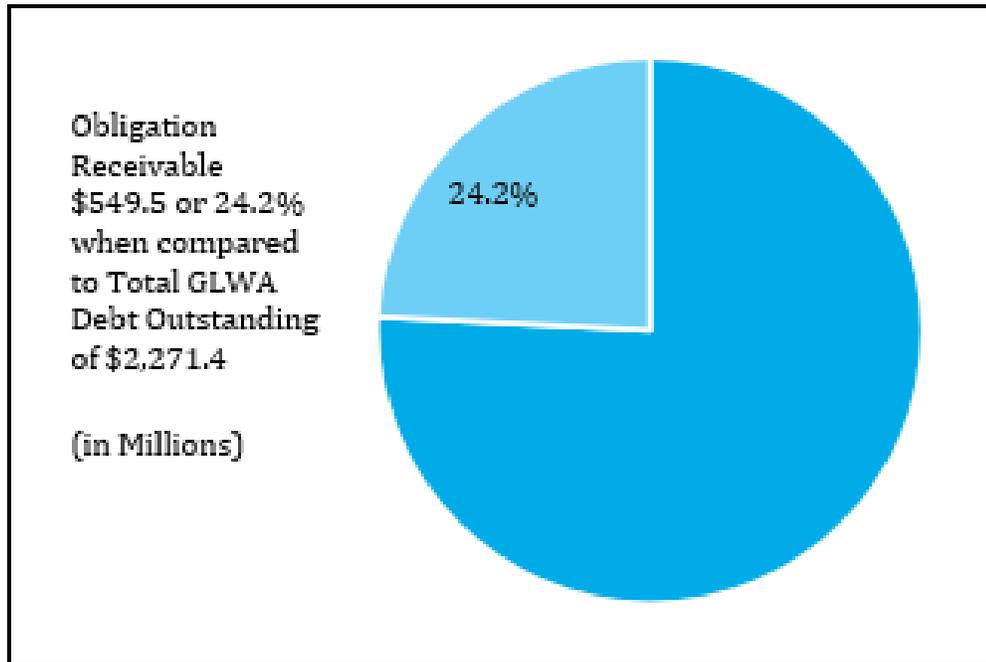


Chart 8 - Obligation Receivable Compared to Total Debt - Sewer provides context by comparing the Sewer System Obligation Receivable to the Total Sewer Debt (excludes unamortized premiums).

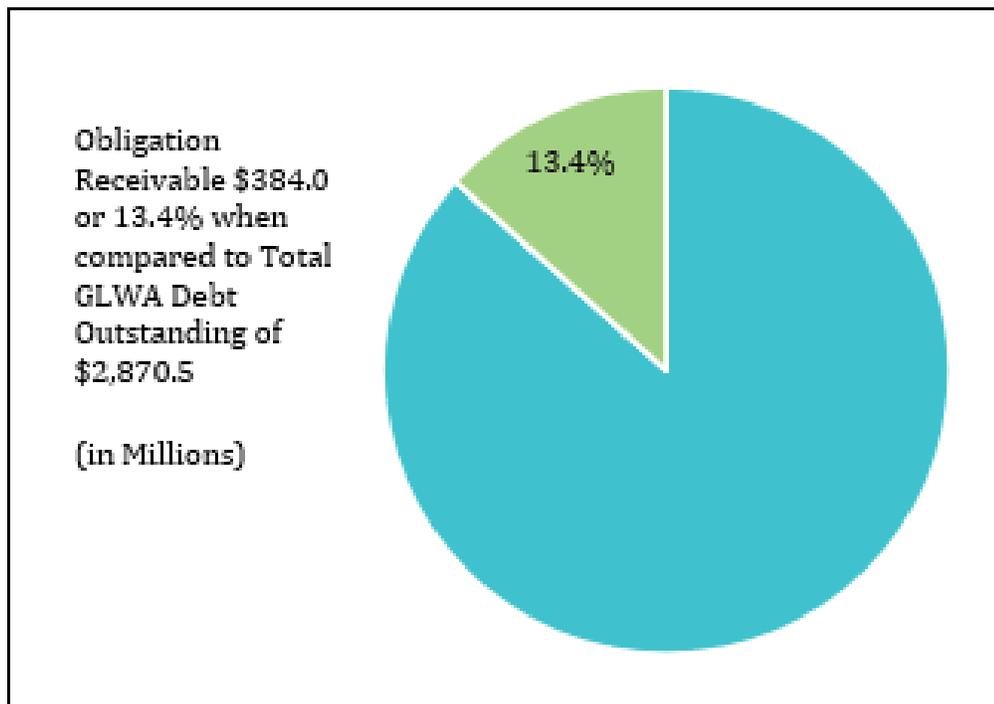


Table 6 - DWSD Obligation Receivable provides obligation receivable detail including fiscal year 2022 beginning balances by debt type and loan issue (for revenue bonds and SRF loans), year-to-date activity and ending balances as of December 31, 2021. Total DWSD debt totals \$962 million. This differs slightly from the total in Chart 6 due to the inclusion of unamortized premiums.

Debt Type	July 1, 2021			SRF Debt Forgiveness	December 31, 2021 End Balance
	Beg Balance	Increase	Decrease		
DWSD Water					
Pre-Bifurcation Debt	\$ 383,841	\$ -	\$ (7,584)		\$ 376,257
Revenue Bond - 2016A	17,725	-	-	-	17,725
Revenue Bond - 2016B	33,015	-	-	-	33,015
Revenue Bond - 2020A	42,445	-	-	-	42,445
Revenue Bond - 2020B	43,135	-	-	-	43,135
SRF 7412-01	4,842	-	-	-	4,842
SRF 7413-01	3,139	-	-	-	3,139
SRF 7414-01	5,503	-	(155)	-	5,348
SRF 7447-01	7,684	347	(288)	-	7,743
SRF 7460-01	7,718	5,247	-	-	12,965
SRF 7483-01	-	3,219	-	(327)	2,892
Total DWSD Obligation	549,046	8,814	(8,027)	(327)	549,506
Unamortized Premiums	19,606	-	(366)		19,240
Subtotal: Water	568,652	8,814	(8,393)	(327)	568,746
DWSD Sewer					
Pre-Bifurcation Debt	311,584	-	(6,390)	-	305,194
Revenue Bond - 2018A	78,810	-	-	-	78,810
SRF 5688-01	-	46	-	(46)	-
Total DWSD Obligation	390,394	46	(6,436)	(46)	384,004
Unamortized Premiums	8,962	-	(194)	-	8,768
Subtotal: Sewer	399,356	46	(6,630)	(46)	392,771
Total DWSD Debt	\$ 968,008	\$ 8,860	\$ (15,023)	\$ (373)	\$ 961,517

Table 7 – Loan Forgiveness provides a summary of loan principal forgiven on DWSD SRF loans closed after January 1, 2016. EGLE grants principal loan forgiveness on qualified planning costs for disadvantaged communities. Through December 31, 2021, over \$16.4 million or 16% of approved, DWSD SRF loans have been forgiven as a disadvantaged community.

Table 7 - DWSD SRF Loan Forgiveness

State Loan #	Approved Amount	Loan Forgiveness
DWSD Water SRF		
SRF 7412-01	10,605,000	1,000,000
SRF 7413-01	5,180,000	1,000,000
SRF 7414-01	8,675,000	2,000,000
SRF 7447-01	16,500,000	4,711,944
SRF 7460-01	22,570,000	2,031,300
SRF 7483-01	13,355,000	1,201,950
SRF 7484-01	12,845,000	1,316,050
Subtotal: Water	89,730,000	13,261,244
DWSD Sewer SRF		
SRF 5688-01	4,040,000	808,000
SRF 5706-01	9,175,000	2,293,750
Subtotal: Sewer	13,215,000	3,101,750
Total DWSD Debt	\$ 102,945,000	\$ 16,362,994

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 8 - Long-Term Debt Summary provides a detail of GLWA’s fiscal year 2021 beginning balances by debt type and loan issues, year-to-date activity, and ending balances as of December 31, 2021. GLWA debt includes financing for both the regional and local share.

Debt Type	June 30, 2021			Debt Forgiveness	December 31, 2021	
	Beg Balance	Increase	Decrease		End Balance	
Water Fund						
Revenue Bonds	\$ 2,192,510	\$ -	\$ (14,390)	\$ -	\$ -	\$ 2,178,120
State Revolving Loans	71,260	24,675	(2,343)	(327)		93,265
Total Installment Debt	2,263,770	24,675	(16,733)	(327)		2,271,385
Unamortized Premiums / Discounts	176,122	-	(7,556)	-		168,566
Subtotal: Water	2,439,892	24,675	(24,289)	(327)		2,439,951
Sewer Fund						
Revenue Bonds	2,515,455	-	(31,545)	-		2,483,910
Capital Appreciation bonds	5,675	-	(5,675)	-		-
State Revolving Loans	416,768	5,089	(35,225)	(46)		386,586
Total Installment Debt	2,937,898	5,089	(72,445)	(46)		2,870,496
Capital Appreciation Bond Discount	(171)	-	171	-		-
Unamortized Premiums / Discounts	62,187	-	(1,773)	-		60,415
Subtotal: Sewer	2,999,914	5,089	(74,047)	(46)		2,930,911
Total Combined, Long Term Debt	\$ 5,439,806	\$ 29,764	\$ (98,336)	\$ (373)		\$ 5,370,862

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.

GLWA computes the debt service coverage ratio using two different methodologies. The Rate Covenant Basis uses a pledged revenue on a cash basis methodology and the GAAP Basis uses a pledged revenue on an accrual basis methodology. Pledged revenue is divided by the debt service requirements of each lien on a rate covenant basis to compute the debt service coverage ratio. The rate covenant basis is defined as the cash available to make the debt service payments on the due dates. The table below details the components of the pledged revenue for each methodology.

Components of Pledged Revenue	Pledged Revenue Calculation	Rate Covenant Basis	GAAP Basis
Revenues	Addition	Cash basis	Accrual basis
GLWA O&M expenses	Subtraction	Cash basis	Accrual basis
GLWA O&M pension	Subtraction	Cash basis	Cash basis
DWSD O&M expenses & O&M pension	Subtraction	Cash transfers to DWSD	Cash transfers to DWSD

Table 9: Debt Service Coverage Ratios - Water provides a summary of the MBO required minimum, historical, and budgeted debt service coverage ratios for the Water fund.

	Debt Service Coverage Water Fund						Adopted Budget
	MBO Required Minimum	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	
Rate Covenant Basis							
Senior Lien Bonds	1.20	2.03	2.07	2.13	1.94	1.99	1.89
Senior and second lien bonds	1.10	1.57	1.55	1.54	1.39	1.40	1.37
All bonds, including SRF junior lien	1.00	1.56	1.53	1.51	1.37	1.38	1.32
GAAP Basis							
Senior Lien Bonds		2.10	2.12	2.04	1.98	1.99	
Senior and second lien bonds		1.63	1.59	1.47	1.43	1.40	
All bonds, including SRF junior lien		1.61	1.57	1.45	1.40	1.38	

Table 10: Debt Service Coverage Ratios - Sewer provides a summary of the MBO required minimum, historical, and budgeted debt service coverage ratios for the Sewer fund.

Debt Service Coverage Sewage Disposal Fund							
	MBO						Adopted
	Required	Actual	Actual	Actual	Actual	Actual	Budget
	Minimum	2017	2018	2019	2020	2021	2022
Rate Covenant Basis							
Senior Lien Bonds	1.20	2.02	2.04	2.11	2.15	2.92	2.42
Senior and second lien bonds	1.10	1.51	1.56	1.62	1.64	1.97	1.74
All bonds, including SRF junior lien	1.00	1.21	1.25	1.29	1.29	1.51	1.35
GAAP Basis							
Senior Lien Bonds		2.49	2.20	2.10	2.16	2.55	
Senior and second lien bonds		1.86	1.68	1.62	1.65	1.97	
All bonds, including SRF junior lien		1.50	1.34	1.28	1.30	1.51	

Refinancing

To reduce the annual water and sewer debt service payments, GLWA monitors its outstanding water and sewer debt portfolios to determine if it can 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.

In May 2020, GLWA completed a \$463.1 million Water Supply System Revenue and Revenue Refunding bond transaction. This included a \$377.5 million taxable bond refinancing transaction with an additional \$85.6 million in tax-exempt new money to support the DWSD local system capital improvements. The refunding transaction resulted in \$66.5 million of present value savings for the water system. In June 2020, GLWA completed a \$687 million Sewage Disposal System Revenue Refunding taxable bond transaction resulting in present value savings of \$123 million for the sewage disposal system.

As part of the May and June 2020 transactions noted, funds from the refunding bonds have been placed in an irrevocable trust with an escrow agent to pay off this debt on the next available call dates. The bonds to be refunded are considered defeased and have been removed from GLWA’s statement of net position.

Table 11: Defeased Debt provides a summary of the debt which has been defeased and the call dates.

Defeased Debt - Sewage Disposal Fund			
Bond Series to be Refunded	Amount	Call Date	Bond Issue Refunded By
Series 2012A	\$ 419,810,000	July 1, 2022	Series 2020A & Series 2020B
Series 2014C-1	\$ 123,200,000	July 1, 2022	Series 2020A & Series 2020B
Series 2014C-2	\$ 27,450,000	July 1, 2022	Series 2020A & Series 2020B
Total Defeased Sewage Disposal Fund Debt	\$ 570,460,000		

The next available refunding opportunity will be for bonds with a call date of July 1, 2024, for both the water fund and sewage disposal fund. Approximately \$390.4 million in water bonds and \$392.5 million in sewer bonds will be callable at that time. GLWA will continue to work with its registered municipal advisor to monitor the potential for refunding these bonds.



Annual Procurement Report
for the Fiscal Year Ending June 30, 2021

Annual Procurement Report for FY 2021 includes the following:

1. Report Highlights
2. Key Terms & Assumptions
3. Fiscal Year Analysis of awarded Purchase Orders executed in FY 2021
4. Fiscal Year Analysis of Invoices processed for payment in FY 2021
5. Detailed Appendices

Pursuant to the Great Lakes Water Authority By-Laws Article XII, Section 4, GLWA Procurement provides an annual report summarizing all awarded Purchase Orders and/or Contracts by the GLWA in the previous fiscal year. In addition, this year's report provides statistics and analysis based on actual Invoice spend for FY 2021.

The GLWA Procurement Team is a strategic cross-functional partner whose goal within the Financial Services Area (FSA) is to provide and manage effective procurement processes and procedures for the acquisition of quality goods and services in support of the Great Lakes Water Authority's mission and goals. GLWA Procurement utilizes the Bonfire Public Procurement application to manage the process of gathering, reviewing, awarding, and monitoring contracts and services with vendors. This system is used in tandem with the GLWA BS&A (the primary source for these reports) financial system to assign requisitions, purchase orders, and to ultimately process vendor payments. The GLWA Procurement team works very closely with other FSA teams throughout the process of the procure to pay cycle.

The information contained in this report is a comprehensive compilation of data from these systems organized in a manner that not only satisfies the base requirement of the GLWA By-Laws but also highlights key insights and trends apparent to the GLWA FSA team upon review. Following review by the GLWA Audit Committee, this information will be available on the GLWA website Vendors page at www.glwater.org where you can also find an entire section dedicated to vendors and communication of GLWA procurement policies, programs, and current solicitations.

Report Highlights

GLWA Procurement Team Objectives (relevant to report)

- ✓ Ensure all purchases (requisitions, purchase orders and contracts) go through the approved procurement processes and meet or exceed the requirements of GLWA's internal customers and goals.
- ✓ Strategically optimize the percentage of awards attributed to a contract.
- ✓ Identify, procure, manage, and maintain strategic suppliers and key contracts.

Contracts/Purchase Order (Awarded by Procurement) Totals

- ✓ Procurement awarded for FY 2021 totaled \$311.5 million.
- ✓ Procurement executed 3,427 purchase orders and 173 Contracts.
- ✓ Procurement processed 4,291 requisitions.
- ✓ Over 90% of all awarded purchase orders are connected to a formal contract.

Invoice (Accounts Payable) Totals

- ✓ Total combined spend by invoice for FY 2021 totaled \$413.1 million.
- ✓ Accounts Payable processed 20,528 Invoices including payments relating to 3,799 purchase orders.
- ✓ Invoice payments directly attributable to a purchase order totaled \$352.5 million.

Key Terms & Assumptions

Following are key terms that will assist the reader in understanding the information presented in this report.

- Capital Improvement Plan (CIP): Spend related to capital projects and equipment purchases.
- Capital Outlay: Spend related to either purchasing a fixed asset or to extent its useful life.
- Contract: A written binding agreement between GLWA and outside vendors predominantly based on GLWA's Terms and Conditions. All contracts are associated with an approved purchase order.
- Fiscal Year: GLWA's one year period used for financial reporting extending from July 1 to June 30 the following year.
- Invoice: Issued by the seller/vendor to acquire payment and includes an itemized list of goods shipped specifying the price, products, and quantities. Invoices are reported by payment (check or EFT) paid date.
- Operation and Maintenance (O&M): Cost associated with continuing daily operations and repairs and part replacements to extend life of assets.
- Purchase Order (PO): A document generated by GLWA that authorizes a purchase transaction. When accepted by the seller/vendor, it becomes a contract binding on both parties. Purchase Orders are reported by post-date. Not all Purchase Orders are tied to a formal Contract.
- Requisitions: A formal request for obtaining a good and/or service including supplies, raw materials, construction projects, and services. It is also used in requesting additional amendments and change orders for current purchase orders and contracts.

In addition to these key terms, certain assumptions were utilized in the presentation of this information. Key assumptions include the following:

- Purchase order data presented is based on the date the approved purchase order transaction was posted to the general ledger for accounting purposes.
- Invoice data presented is also based on the date the invoice is posted to the general ledger for accounting purposes.
- Purchase order amounts do not remain static, unlike Invoice totals.
- Procurement continually processes amendments (including renewals) and change orders that can decrease or more often increase the purchase order total and those changes impact the original fiscal year totals.

Fiscal Year Award Analysis

The following tables and charts highlight GLWA Procurements activity and **purchase orders/contracts awarded and executed in FY 2021**.

Table 1 – GLWA FY 2021 Total Combined Contracts/Purchase Orders Awards. This chart identifies contracts/purchase orders awarded by Procurement. Procurement processed 3,427 purchase orders and 4,291 requisitions totaling \$311.5 million in FY 2021.

Table 1 – GLWA FY 2021 Total Combined Contracts/Purchase Orders Awards

Award Type	Purchase Order Count	Requisition Count (including Amendments)	Awarded Amount (Millions)	Percentage of Total
Contract tied to Purchase Order	260	460	\$281.3	90.31%
Purchase Order	3,168	3,831	\$30.2	9.69%
Grand Total FY 2021	3,427	4,291	\$311.5	100.00%

Chart 1 highlights Awarded Contracts/Purchase Orders as a % of Purchase Orders Issued with an emphasis on awarding under a formal contract. In addition to providing legal safeguards and quality of services protections, contracts restrain costs by reducing the number of PO’s and combining purchases to drive down cost. In FY 2021 Procurement awarded \$281.3 million or 90% of the total awarded spend directly tied to a formal agreement (contract).

Chart 1 – Total Awarded Contracts/Purchase Orders as a % of Total

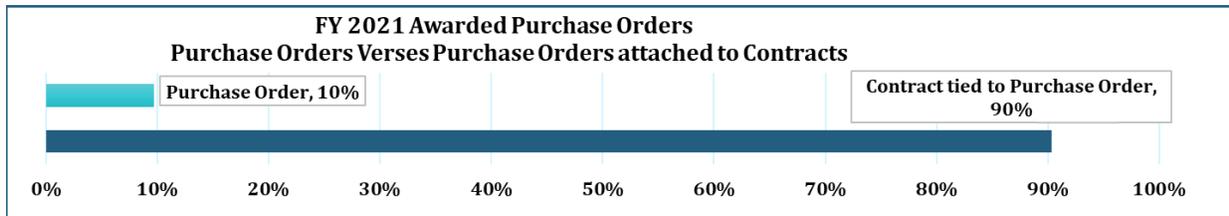


Table 2 – Average Amount of Contracts and Purchase Orders FY 2021. The average Contract awarded by Procurement was just over a million dollars.

Table 2 – Average Amount of Contracts and Purchase Orders FY 2021

Award Type	Purchase Order Count	Awarded Amount (Millions)	Average Amount of PO/Contract
Contract Attached to Purchase Order	260	\$281.3	\$1,081,790
Purchase Order	3,168	\$30.2	\$9,532
Grand Total FY 2021	3,427	\$311.5	\$90,885

Awards by Contract - Large contracts ensure successful timetables are met and projects are completed to the satisfaction all GLWA stakeholders.

Table 3 - FY 2021 Top Ten Largest Contracts awarded by Dollar Value. These top ten contracts represent \$160.4 million or 51% of the total awarded Contracts/Purchase Orders for FY 2021. A complete listing of contracts awarded over a million dollars for fiscal year 2021 can be found in Appendix A.

Table 3 - FY 2021 Top Ten Largest Contracts awarded by Dollar Value

CONTRACT	VENDOR	Contract Description	Awarded Amount (Millions)	Percentage of Total
2000610	Lakeshore Global Corporation	CIP 115001 Piping, Valves & Venturi Meters	\$49.5	16%
1803990	Weiss Construction Co LLC	CIP 111009 LHWTP High Lift Pumps, Flow Meter & Yard	\$30.0	10%
2001488	Pullman SST, Inc.	CIP 122017 7 Mile / Nevada transmission main	\$12.9	4%
1902224	Pullman SST, Inc.	CIP 260614 DB CSO Facilities Structure	\$12.1	4%
2004889	Lakeshore Global Corporation	Specialized Services - Staff Augmentation - 2 Yr. Contract	\$11.4	4%
1904337	Hazen and Sawyer	WRRF PS-2 Bar Racks Replace & Grit Collection System	\$11.3	4%
2002190	Weiss Construction Co LLC	CIP 211008 Ferric Chloride/PS1 & Complex B Sludge Lines	\$9.8	3%
1904254	Dan's Excavating Inc.	CIP 122003 WWP to NEWTP Phase #2	\$8.3	3%
1904197	LimnoTech	GLWA Long Term CSO Control Plan Update.	\$7.7	2%
2003443	FK Engineering Associates	CIP 260206/260510 Design Services Conveyance System	\$7.3	2%
Top Ten Subtotal			\$160.4	51%
Total Combined Executed Contracts			\$281.3	90%
Grand Total			\$311.5	100%

Awards by Vendor - Procurement understands that strategic vendors are integral to the success of GLWA.

Table 4 - FY 2021 Top Ten Vendor Total Awards. These Top Ten vendors represent \$191.8 million or 62% of the total awarded Contracts/Purchase Orders for FY 2021. A complete list of combined awards for all vendor issued in FY 2021 can be found in the Appendix B.

Table 4 - FY 2021 Top Ten Vendor Total Awards

Top Ten Awarded Vendors	Contract Count	Purchase Order Count	Awarded Amount (Millions)	Percentage of Total
Lakeshore Global Corporation	3	3	\$60.7	19%
Weiss Construction Co LLC	2	2	\$39.9	13%
Pullman SST, Inc.	2	2	\$25.0	8%
Commercial Contracting Corporation	4	4	\$13.0	4%
FK Engineering Associates	2	2	\$12.9	4%
Hazen and Sawyer	1	1	\$11.3	4%
Dan's Excavating Inc.	1	1	\$8.3	3%
LimnoTech	1	1	\$7.7	2%
Johnson Controls Inc.	3	5	\$6.6	2%
Motor City Electric Co	4	10	\$6.3	2%
Top Ten Subtotal	22	31	\$191.8	62%
Grand Total	173	3,427	\$311.5	100%

Fiscal Year Spend Analysis

The following tables and charts highlight GLWA Accounts Payable activity and **paid invoice totals for FY 2021**.

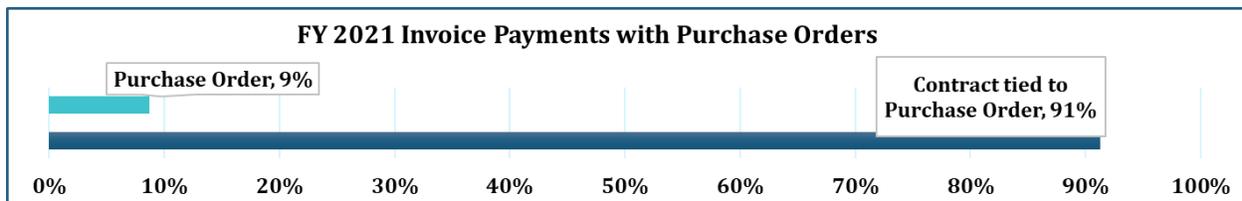
Table 5 - This table identifies GLWA’s total spend by Invoice for FY 2021. The spend is further divided by purchase type. Both contracts and purchase orders have been awarded by Procurement prior to any invoicing by the vendor. Invoices directly related to a purchase order totaled \$352.5 million representing 85% of total spend. Invoices paid without a purchase order are typically for utilities, telecom, employee benefits, state, federal and local governments, and agencies. Invoices without a purchase order totaled \$60.5 million and represent less than 15% of total annual spend.

Table 5 - GLWA’s total spend by Invoice for FY 2021

Invoice Payment Type	Invoice Count	Purchase Order Count	Total Amount (Millions)	Percentage of Total
Contract tied to Purchase Order	6,877	581	\$321.8	77.91%
No Purchase Order	6,970	0	\$60.5	14.65%
Purchase Order	6,712	3218	\$30.7	7.44%
Grand Total	20,528	3799	\$413.1	100%

Chart 2 – Total Spend directly related to a Purchase Order Award (with or without a Contract). This chart emphasizes Procurements focus on identifying opportunities to capturing as much spend as possible under the safeguards of a formal contract. The majority 91% of all purchase orders and 78% of all GLWA spend is directly related to a Contract.

Chart 2 – Total Spend directly related to a Purchase Order Award



Expense Type and Project - Combined invoiced totals by Expense Type and Project.

Chart 3 – Total Spend by Expense Type compares the total type of spend awarded between Operations and Maintenance (P&M), Capital Improvement Plan (CIP), and Capital Outlay.

Chart 3 – Total Spend by Expense Type

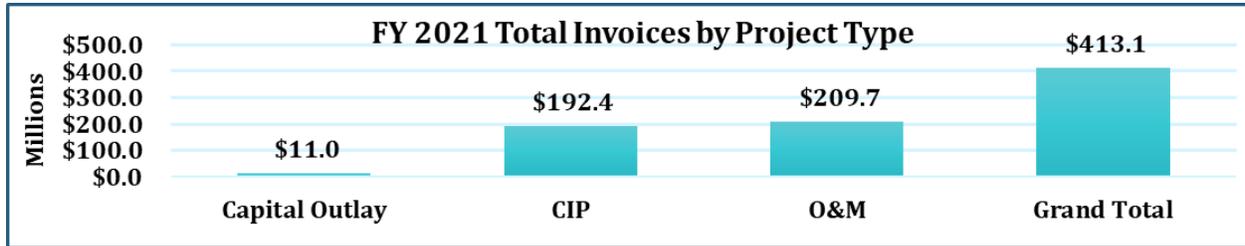


Table 6 - Top 10 Projects under each Expense Type identifies the top projects invoices during the fiscal year. These combined top ten projects represent 67% of the total spend for FY 2021.

Table 6 - Top 10 Projects Invoiced FY 2021

Project Type & Description	Amount (Millions)	Percentage of Total Amount
O&M		
Water Administration and General Expense	\$44.4	16.17%
Sewerage Treatment Operations	\$32.1	11.67%
Water Low Lift Pump Operations	\$17.0	6.19%
Sewer Plant Administration	\$15.1	5.49%
Water Care & Maint Tunnels-Detroit	\$10.9	3.98%
Water Source of Supply Operations	\$10.5	3.82%
Water Pumping Stations Operations	\$9.7	3.55%
CSO - Control Basins Operations	\$7.2	2.61%
Water General Operating & Maintenance	\$6.9	2.52%
Water System Control Center Operations	\$4.2	1.53%
O&M Total	\$158.0	57.52%
CIP		
Fairview Sewage Pumping Station Imprvmts	\$16.0	5.81%
CON-183: DB 223 Inland Waters:	\$14.8	5.39%
WWP to NEWP Transmission Main	\$13.2	4.79%
PA,SW and NE Raw Water Supply Tunnel Imp	\$11.0	4.00%
Transmission Work: Wick Road Parallel	\$10.4	3.80%
CON-149: Inland: DRI Sec Insp,Eval,Des	\$8.6	3.11%
Imlay, WCS,LH,SP,SW Reservoir Inspection	\$7.7	2.81%
Sedimentation Basin Sluice Juice at SWTP	\$7.6	2.78%
Steam,Consentate Return Improvement SWTP	\$7.3	2.66%
96" Main Relocation,Isolation Valve Ins	\$7.3	2.64%
CIP Total	\$103.8	37.79%
Capital Outlay		
Centralized Services I&E	\$4.9	1.77%
Sewer I&E	\$4.1	1.48%
I&E Water Fund	\$2.0	0.74%
Water Administration and General Expense	\$1.5	0.54%
Water General Operating & Maintenance	\$0.2	0.07%
Puritan Fenkell/7 Mile CSO Inst Upgrade	\$0.1	0.03%
Sewer Operations Secondary Sedimentation	\$0.1	0.02%
Sewerage Treatment Operations	\$0.0	0.01%
Sewer Operations Primary Sedimentation	\$0.0	0.01%
CSO - Control Basins Operations	\$0.0	0.01%
Capital Outlay Total	\$12.9	4.69%
Subtotal Top Ten	\$274.7	66.51%
Grand Total	\$413.1	100.00%

Top Ten Contracts – Key Contracts comprising a majority of actual spend FY 2021.

Table 7 – Top 10 Contracts in actual spend for FY 2021 provides a list of the largest contracts that captured FY 2021 spend. These ten contracts account for \$126.4 million or 30% of FY 2021 total spend. A complete listing of contracts with over a million dollars in spend for FY 2021 can be found in Appendix C.

Table 7 – Top 10 Contracts in actual spend for FY 2021

Contract Number	Vendor	Contract Description	Amount (Millions)	Percentage Total
GLWA-CON-149	Inland Waters Pollution Control Inc	Emergency Sewer Repair	\$16.2	4%
GLWA-DB-226	Jay Dee Contractors Inc.	Repair & Rehab (DRI) from Alter Road to WWRF	\$15.6	4%
GLWA-CON-297	Weiss Construction Co LLC	Fairview Sewage Pumping Station Improvements	\$15.2	4%
GLWA-CS-272	AECOM Great Lakes, Inc	Capitol Improvement Program Delivery	\$13.7	3%
GLWA-PC-792	New England Fertilizer Company	Biosolids Dryer Facility	\$13.1	3%
1803258	Walsh Construction Company	CIP 122003 WW Northeast Transmission Project	\$12.7	3%
GLWA-DB-150	Ballard Marine Construction LLC	CIP 1327 DB/ Repair PA, Springwell & NE Tunnels	\$11.3	3%
1803621	Ric-Man Construction Inc	CIP # 122006 Wick Road 48" Water Main	\$10.7	3%
1901658	Lakeshore Global Corporation	Facilities Maintenance Services	\$9.1	2%
GLWA-CON-252	Clark Construction Company	SWTP Steam/Condensate Return, & Compress Air	\$8.7	2%
Top Ten Subtotal			\$126.4	31%
Total Combined Invoiced Contracts			\$321.8	78%
Grand Total			\$413.1	100%

Top Ten Vendors - The top vendors that dominated GLWA’s FY 2021 actual spend.

Table 8 - Top Ten Vendors by Total Spend highlight the vendors receiving a majority of spend for FY 2021. These Top Ten vendors comprise \$198.7 million or 48% of total invoices paid. A complete list of vendors issues invoices in FY 2021 can be found in Appendix D.

Table 8 - Top Ten Vendors Total Spend

Top Ten Vendors Invoiced	Invoice Count	Purchase Order Count	Total Amount (Millions)	Percentage of Total
DTE Energy	4,347	1	\$42.2	10%
Lakeshore Global Corporation	140	15	\$33.5	8%
Weiss Construction Co LLC	145	14	\$27.8	7%
Inland Waters Pollution Control Inc	15	2	\$15.9	4%
Jay Dee Contractors Inc.	20	2	\$14.8	4%
AECOM Great Lakes, Inc	25	3	\$13.9	3%
New England Fertilizer Company	12	2	\$13.0	3%
AT&T	59	3	\$12.8	3%
Walsh Construction Company	25	2	\$12.4	3%
Kokosing Industrial Inc.	43	4	\$12.4	3%
Top Ten Subtotal	4831	48	\$198.7	48%
Grand Total	20529	3799	\$413.1	100%

**DTE and AT&T are utilities*

Detailed Appendices

Appendix A – FY 2021 Combined Contracts Awarded by Procurement

This report identifies all contracts awarded by Procurement during the fiscal year. It includes the Contract Number, the Vendor, and the total amount of the Contract. It is generated using data downloaded from the BS&A accounts payable and procurement modules and includes award activity data generated as part of these processes. Items outside the scope of this report include such things as GLWA employee payroll, debt, and pension obligation payments. Invoice activity is based on the date range July 1, 2020 through June 30, 2021.

Appendix B – FY 2021 Combined Vendors Awarded by Procurement

This report identifies all vendors awarded during the fiscal year. It includes the Contract Number, the Vendor, and the total amount of the Contract. It is generated using data downloaded from the BS&A accounts payable and procurement modules and includes award activity data generated as part of these processes. Items outside the scope of this report include such things as GLWA employee payroll, debt, and pension obligation payments. Invoiced activity is based on the date range July 1, 2020 through June 30, 2021.

Appendix C – FY 2021 Combined Contracts Invoiced

This report identifies all contracts invoiced during the fiscal year. It includes the Contract Number, the Vendor, and the total amount of the Contract. It is generated using data downloaded from the BS&A accounts payable and procurement modules and includes award activity data generated as part of these processes. Items outside the scope of this report include such things as GLWA employee payroll, debt, and pension obligation payments. Invoiced activity is based on the date range July 1, 2020 through June 30, 2021.

Appendix D – FY 2021 Combined Vendors paid by Invoice

This report identifies all vendors invoiced during the fiscal year. It includes the Contract Number, the Vendor, and the total amount of the Contract. It is generated using data downloaded from the BS&A accounts payable and procurement modules and includes award activity data generated as part of these processes. Items outside the scope of this report include such things as GLWA employee payroll, debt, and pension obligation payments. Invoiced activity is based on the date range July 1, 2020 through June 30, 2021.

CONTRACT	VENDOR	Contract Description	Awarded Amount
2000610	Lakeshore Global Corporation	CIP 115001 Piping, Valves & Venturi Meters	\$49,467,913
1803990	Weiss Construction Co LLC	CIP 111009 LHWTP High Lift Pumps, Flow Meter & Yard	\$30,022,637
2001488	Pullman SST, Inc.	CIP 122017 7 Mile / Nevada transmission main	\$12,943,129
1902224	Pullman SST, Inc.	CIP 260614 DB CSO Facilities Structure	\$12,055,334
2004889	Lakeshore Global Corporation	Specialized Services - Staff Augmentation - 2 Yr. Contract	\$11,389,132
1904337	Hazen and Sawyer	WRRF PS-2 Bar Racks Replace & Grit Collection System	\$11,307,129
2002190	Weiss Construction Co LLC	CIP 211008 Ferric Chloride/PS1 & Complex B Sludge Lines	\$9,839,000
1904254	Dan's Excavating Inc.	CIP 122003 WWP to NEWTP Phase #2	\$8,258,592
1904197	LimnoTech	GLWA Long Term CSO Control Plan Update.	\$7,748,507
2003443	FK Engineering Associates	CIP 260206/260510 Design Services Conveyance System	\$7,348,888
1903312	Major Cement Company	CIP 122013 Phase 1 14 Mile Transmission Main Loop	\$6,169,652
1902548	PTS Contracting	HVAC CONTRACT FOR Water & Wastewater (BS&A 1902548) Sourcwell	\$5,790,800
1900995	Motor City Electric Co	Electrical Preventative Maintenance and Repair Contract for GLWA Wastewater Facilities	\$5,717,481
2000292	Hydromax USA LLC	GLWA New Valve Exercising Project for Field Services for a period of 3 years in the amount of \$4.5 mi	\$5,601,663
2002655	FK Engineering Associates	Northwest Interceptor Relief Sewer to Oakwood Facility. Professional Engineering services to provide	\$5,599,456
1903598	The Christman Company	Yard Piping, Construction Management CIP 216006 Chuck Reinhart, 297.0154	\$5,548,501
2003330	Commercial Contracting Corporati	CIP No. 260618 - HVAC Improvements at Oakwood CSO Facility	\$5,492,000
2000917	Commercial Contracting Corporati	RFB - Refractory Inspection and subsequent Refractory Repairs for WRRF Complex II Incineration: 7 thr	\$4,752,640
1902548A	Johnson Controls Inc.	(HVAC) Water Treatment Plants Repair & Preventative Maintenance Services	\$4,620,000
2000970	Noresco LLC	Rehabilitation of Screened Final Effluent (SFE) Pump Station (Specialized Procurement)	\$3,399,730
1904449	Brown and Caldwell Constructors	Solicitation Request: Lake Huron Pilot Plant - Design Build Services (CIP 111011)	\$3,157,387
2100822	Family Associates, LLC	Lease Agreement for Warehouse	\$2,669,082
2003785	Applied Science Inc	RFP for Dye Testing & Engineering Services Previous Contract: DWSD/GLWA CS-1482 and GLWA CS-236	\$2,634,875
2004735	Commercial Contracting Corporati	WRRF Conveyor Fire Recovery Design/Build Contract RFP Dan Alford, Director, 313.300.3521	\$2,587,000
4302	JCI Jones Chemicals Inc	1st renewal year of 90-ton Chlorine	\$2,523,198
1901592	Magnolia River Services Inc.	GIS Strategic Support Services	\$2,308,910
2000284	Johnson Controls Fire Protection L	Specialized Procurement - Professional Services Contract for the preventative maintenance service Sourcwell	\$2,308,897
2002946	NTH Consultants Ltd	Environmental Health and Safety Compliance Service Replacement contract for CS-213	\$2,000,000
1902548B	Johnson Controls Inc.	(HVAC) Pumping Stations Repair and Preventative Maintenance Services	\$1,971,954
2000279	Fishbeck	Springwells Water Treatment Plant Flocculator Drive Replacement	\$1,893,136
2004666	M-K Construction Company Inc.	CIP 260621, Contract for Conner Creek Dike Improvements.	\$1,874,135
1903601	CDM Smith Michigan Inc	Yard Piping Engineering Services, CIP 216006 Chuck Reinhart, 297.0154	\$1,647,815
2000644	DES Electric LLC	POWER MONITORING INSTALLATION PROJECT	\$1,623,606
2002350	Systems Specialties	The requested contract with Rotork Controls, Inc. is needed to provide inspection, repair and prevent Contract has two PO's	\$1,538,174
1904738-5	CEC Controls Company, Inc.	Job Order - Instrumentation and Controls Maintenance Services (WRRF & CSOs)	\$1,524,000
1904738-1	Outbound Technologies, Inc.	Engage up to six instrumentation contractors for task order type services. (4000703)	\$1,524,000
1904738-2	PCI LLC	Job Order - Instrumentation and Controls Maintenance Services (WRRF & CSOs)	\$1,524,000
1904738-3	Verve Industrial	Job Order - Instrumentation and Controls Maintenance Services (WRRF & CSOs)	\$1,524,000
1904738-4	UIS Scada Inc	Engage up to six instrumentation contractors for task order type services. (4000706)	\$1,524,000
2003901	United States Geological Survey	U.S. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, NON-STANDARD JOINT FUNDING AGREEMENT FOR WAT	\$1,365,000
1802499	HDR Michigan, Inc.	WWP WTP Building ventilation improvements	\$1,350,000
2001456	Spence Brothers	Funds Approval Form for SPWTP 1958 Settled Water Conduit and Loading Dock Concrete CIP #114016	\$1,235,000
2002048	Kennedy Industries Inc	Procurement of double disc gate valves for Phase II of the 14-Mile Transmission Main Loop Project	\$1,177,770
2100911	Schreiber Corporation	CIP No. 260620 - Roof Replacement at Baby Creek CSO Facility,	\$999,000
2001433	Fleishman Hilliard Inc	Marketing and Communications Services (3 year contract with two 1 year renewals)	\$980,000

CONTRACT	VENDOR	Contract Description	Awarded Amount
2000757	M.L. Chartier, Inc.	This is a request for bid for LHWTP lagoon sludge removal maintenance contract, named LHWTP Lagoon Ma	\$966,384
1903726	Staples Business Advantage	Ink / Toner MiDeal	\$900,000
1903426	The Osborn Engineering Company	TOES: ARC FLASH STUDY	\$792,050
2002908	David D. Taylor	Oracle WAM System Specialist for a Three (3) Year Period	\$750,000
2001492	Crane Technologies Group Inc	Crane repairs for the WWOG/ Req for Water 2002240 waiting approval	\$642,032
2001434	Regents of the University of Mich.	Assessing the Integration of Real Time Control (RTC) Water Management Systems into GLWA's Long Term C	\$636,702
2100917	City of Livonia	CIP 122005_1804129 Schoolcraft Rd_IGA City of Livonia and GLWA_10"Sanitary Sewer Installation_Tempora	\$603,946
2001831	Plante & Moran PLLC	ERP Implementation Support	\$585,000
GLWA-CS-195	The Foster Group LLC	Financial Management Consulting Services	\$550,000
1902299	Avante Solutions, Inc.	Information Technology Service Management (ITSM) Tool	\$534,694
2001317	Secure Door LLC	Preparing assessment and repair quotes for selected Overhead doors and hardware at various GLWA facil	\$520,000
2004471	Public Sector Consultants	Public Sector Consultants	\$475,000
1904562	Phoenix Environmental Inc	GLWA Fuel Maintenance	\$466,560
1803126	Hach Company	Hach Company Combined Purchases	\$451,768
2101259	Schuster Law PLC	IT Contract Negotiations	\$450,000
2002240	Crane Technologies Group Inc	CRANE INSPECTION AND REPAIRS (WATER)	\$420,000
2000299	SCI Floor Covering Inc.	Flooring replacement for all GLWA sites	\$419,723
1904736	Linko Technology Inc	Linko (PIMS)	\$411,316
2002363	Xerox Corporation	Print Shop Upgrade 36 months Omnia Co-Op	\$404,525
1900455-1	SDG Associates, LLC	Architectural, Engineering, and Design Service	\$400,000
1900455-2	WSP Michigan Inc.	Architectural, Engineering, and Design Service Req 2002495	\$400,000
1904373	Industrial Furnace Co Inc	Incinerator Fuel Train Systems Inspection and Safety Check	\$389,700
1904862	Geotab USA, Inc.	Purchase of GEOTAB Enterprise Fleet Management Modules for Fleet	\$375,000
2002135	Erie Construction LLC	WRRF Seagull Habitat Modification Beena Chackunkal, Engineer, 313.297.9825	\$355,160
2003340	Siemens Industry Inc	THIS REQUISITION IS TO ADD \$ 1,878.00 TO THE FUNDS ON REQ. 2003340	\$313,293
2001082	Preventive Maintenance Technolo	Emergency Standby Generator Preventative Maintenance (Water). Replaces req#2000432	\$309,550
2897583	VWR International	JIT Chemicals/Lab Supplies MiDeal	\$304,800
2004289	Garan Lucow Miller, P.C.	Sean Perham v GLWA, Claim No 189326719	\$300,000
2004482	Motor City Electric Co	MOTOR CITY ELECTRIC - CONTRA 3 MONTHS Ext Contract 50817 PO 19203 and 16131	\$300,000
2004292	Zausmer, P.C.	Daniels Karim - Claim of Appeal - GLWA-LS-2004292	\$300,000
2004507	Miller Canfield Paddock & Stone P	General Employment Matters	\$300,000
2002530	Dickinson Wright PLLC	Midwest Valve v. GLWA	\$300,000
2001721	Littler Mendelson PC	Deanne Williams vs Great Lakes Water Authority	\$300,000
2003057	Fausone Bohn LLP	Water and sewer services to the City of Dearborn	\$300,000
2001694	Public Sector Consultants	WRAP program design advisor services	\$295,001
2002204	Aquasight LLC	APOLLO ADVISER APPLICATION MAINTENANCE & DEVELOPMENT OF NEW DASHBOARDS - (3 year contract with 2 - 1	\$285,000
2001563	Black & Veatch Ltd Of Michigan	Dearborn Master Metering Assistance	\$240,000
2001595	Regents of the University of Mich.	Life Cycle Analysis of the Great Lakes Water Authority	\$234,726
1905154	Clayton Industries	CLAYTON INDUSTRIES (STEAM GENERATOR REPAIR WATER PLANTS)	\$221,851
2001928	Structural Preservation Systems	Kercheval Pipe Renewal Pilot	\$200,760
2004712	Bridgeport Consulting LLC	Bridgeport Consultants Services to assist finance procurement in various area. For two years	\$200,000
2002514	Re-Source Partners	IT ASSET DISPOSAL SERVICES MiDeal	\$200,000
2003851	Bert's Testing & Training Services	Provide training to GLWA team member for CDL class A and B licenses. Over next 3 years with a 1 year	\$199,362
1904710	Wayne State University	The Occurrence and Fate of Microplastics in Wastewater and Drinking Water Treatment Systems	\$195,000
2100850	Williams Acosta PLLC	Melvindale PFAS Appeal	\$175,000
2001498	Commercial Contracting Corporati	Leib Fiberglass Tank Repair	\$171,000
2100779	Plunkett Cooney PC	Re: Highland Park Appeal	\$150,000
2101468	Plante & Moran PLLC	Plante & Moran will assist Logistics & Materials in the relocation of the Mckinstry Warehouse to the	\$150,000
2001308	FastSigns Detroit	Vinyl Graphics Services for GLWA Fleet and Facilities	\$147,000
2001574	Emphasys Software	Sympro Debt Management Software	\$128,182
2002349	Michigan CAT	MI Cat - Blanket PO for construction equipment parts and maintenance services for two (2) years	\$125,000
1703524	TK Elevator Corporation	Elevator Maintenance	\$117,898
2100570	Process Improvement Institute Inc	Consulting Services to Support GLWA's Risk and Process Safety Management Program (RPM/PSM)	\$115,000
2100360A	YSI Incorporated	Service contract for FS3700 -cyanide Indtument from 1/19/2021 to 02/18/2021 as enclosed document.	\$110,355

CONTRACT	VENDOR	Contract Description	Awarded Amount
1904332	GDI Services Inc	Blanket PO for janitorial services at GLWA facilities for one (1) year 04/06/2020 - 04/05/2021	\$109,109
2004190	Jett Pump & Valve LLC	Full chlorine scrubber media replacement for the Purafill scrubber in service at Springwells water pl	\$107,999
2002909	Jett Pump & Valve LLC	Jett pump to replace media in Chlorine scrubber	\$107,999
1904860	Idexx Laboratories	Idexx Bacteriological testing materials for Water Plants and Water Quality Lab Place Holder Requisites	\$101,585
2100757	Butzel Long PC	Negotiation of the I-94 Storm Water Discharge Agreement	\$100,000
2004810	O'Reilly Rancilio P.C.	Stoney Creek Villas Apartments - Pond Maintenance	\$100,000
2100339	Motor City Electric Co	Motor city electric to provide emergency assistance with repair/replacement work with switchgear/cable	\$100,000
2003099	Macomb Mechanical Inc	Macomb Mechanical Renewals on CSF, WBB, and WRRF HVAC systems	\$99,216
2100041	Johnson Controls Fire Protection L	Fire Alarm, Sprinkler & Fire Suppression Systems PM, Service & Repair (Sourcewell)	\$98,882
2002947	Albert Kahn Associates Inc.	200251 Engineering System Services	\$95,025
1803933	Rose Pest Solutions	Pest Control and Extermination Services for Three (3) Years with 2 - 1 Year Renewal Options	\$93,421
2001396	Santoro Incorporated	Blanket contract for light, medium, and heavy duty truck parts and repair	\$90,000
2002722	Siemens Industry Inc	Siemens Quotation Number: Q2075268-R1 for 3 year TSA (27,000.00/YR) SPV	\$81,000
2002492	United Rentals North America Inc	Blanket PO for equipment rentals as needed by GLWA Fleet for one (1) year 7/1/2020 - 6/30/2021	\$80,000
2101260	Lewis & Munday P C	Revere Dock Litigation - 5851 W Jefferson Ave, Detroit, MI	\$75,000
2001596	Sunbelt Rentals, Inc.	Blanket PO for on demand equipment rentals 05/01/2020 - 04/30/2022 MiDeal	\$75,000
2100663	Clark Hill	Employment/Labor Matter	\$75,000
2004445	Lerch Bates, Inc.	Omnia Partners CoOp task #1	\$71,019
2100644	Kennedy Industries Inc	Emergency Repair of Freud Pump 10	\$57,435
2101294	Karen Ann Muglia	Internal control review for the Chief Financial Officer	\$50,000
2003805	Binkelman Corporation	CREATE A TWO YEAR CONVEYOR MAINTENANCE CONTRACT, TO VULCANIZE BELTS AND TO PROVIDE PARTS FOR DEWATERI	\$50,000
2002799	Marsh USA Inc.	Property Insurance Renewal Initiative	\$50,000
2002059	Tredroc Tire Services, LLC	Tredroc Blanket PO for purchase of tires as needed by GLWA Fleet for 1 year 06/01/2020 - 05/31/2021	\$50,000
2002035	Valve Reconditioning Service	Lake Huron to have Valve Reconditioning Services restore 2 valves	\$49,999
2101113	NTH Consultants Ltd	Audit services for the Process Safety Management and Risk Management Plan at the five water treatment	\$49,850
2100373	Zachary Sharp	Analysis of the flocculation basins at the LHWTP and perform CFD (computational fluid dynamics) mode	\$48,675
2101076	Madison Electric Company	Power Meters for Springwells Water Treatment Plant (WTP)	\$45,532
2100712	Digital Science Group LLC	WRRF-CSO Digital Imaging Services	\$44,625
2004251	Bell Equipment Company	Blanket PO for maintenance and repairs on GLWA Fleet street sweepers and other equipment	\$44,000
2002515	Heat Engineering Inc	HEAT Engineering - Blanket PO for small engine parts and repairs as needed by GLWA Fleet for two (2)	\$44,000
2000569	Digital Science Group LLC	Contract for scanning and digitizing documents, blue prints and Operation & Maintenance Manuals that	\$42,847
2100385A	Advance Instrumentation Systems	AISC - QOUTE 1147 INSTALLATION & MAINTENANCE SERVICES:ALUM DAY & BULK TANK PRESSURE TRANSMITTER	\$42,300
2004315	Siemens Industry Inc	SIDRIVE IQ Digital Services	\$40,700
2101055	Logan Glass Company	One year Blanket PO beginning April 1, 2021, window glass, glass,accessories and tools.	\$40,000
2001636	Weingartz Supply Co., Inc.	Blanket PO for for purchase of parts and repairs as needed on GLWA Fleet equipment for 1 year 05/01/2	\$40,000
2100477	ASTI Environmental	Environmental Assessment at 5181 E. Outer Dr., Detroit, MI	\$40,000
2100212	Sav's Welding Services	Blanket PO for welding and steel supply services for GLWA fleet for 1 year 01/27/2021 - 01/26/2022	\$40,000
2004100	Sustema Inc.	Removal and Disposal of existing consoles and installation of new console S	\$39,485
2100149	KnowBe4 Inc.	KnowBe4 (Security Mentor Replacement)	\$39,396
2002102	CDM Smith Michigan Inc	CDM Smith CAD Specialized Contract request	\$38,860
2001395	Michael K. Stenstrom, Ph.D., P.E.	Professional Engineering Services at WRRF	\$37,960
2100156	Plante & Moran PLLC	Vendor Viability Assessment	\$37,500
1900702	Premier Group Associates LC	Grounds Maintenance Services	\$36,710
2003625	Smith's Waterproofing LLC	PURCHASE SMITH'S WATERPROOFING TO CAULK AND TUCKPOINT EXTERIOR PARAPET WALL OF EB -1 BUILDING	\$36,600
2002823	Digital Science Group LLC	WRRF- CSO Digital Records Conversion	\$36,420
2003786	Wade Trim Associates Inc	Pump Station Two Grit Channel /Nautical Drone Pilot Study Jason Williams, Engineer, 313.297.0230	\$33,781

CONTRACT	VENDOR	Contract Description	Awarded Amount
2004597	Teledyne CETAC Technologies Inc	PURCHASE LH560 COMS PREVENTIVE MAINTENANCE AND QA PERFORMANCE BRONZE SUPPORT FOR WRRF COMPLEX II OPAC	\$30,732
2004700	Project Innovations Inc	Executive and Managerial Training for Water Operations	\$29,900
1903753	Modern Water Inc.	Repair of deltatox analyzer, reagents and supplies to run Delta tox analyses for one year at Springwe	\$25,394
2004470	PCI LLC	CSO Instrumentation & Controls Support Services	\$25,000
1903519	TS Systems, Inc.	Filter Transmitter Replacement	\$24,075
2100896	Unconventional Services Inc	Repair and protective paint services with Uncoventional Services for Odor Control Fa	\$20,950
2002796	ConvergeOne Inc	AVST/ConvergeOne Voicemail Maintenance	\$20,316
2002283	Versalift Midwest	Versalift Blanket PO for maintenance and repairs on GLWA Fleet aerial lift for two (2) years	\$20,000
2001969	Troy's Towing Inc.	Blanket PO for towing services for all GLWA vehicles	\$20,000
2001970	L.I.J.B.S. Enterprises, LLC	Blanket PO for towing services for all GLWA vehicles	\$20,000
2100588	Boomer Construction Materials	Blanket purchase order for masonry supplies and masonry tools 04/01/2021 - 03/31/2023	\$18,000
2000261	Phoenix Environmental Inc	Phoenix Environmental Inc. PROPOSAL 23428. Inspection Services Continuation requisition for four mont	\$17,773
2100382	BigTime Software Inc.	BigTime Renewal	\$15,840
2000309	Isle Inc.	Artificial Intelligence for Treatment, Network Optimization Technology Scan and Water Quality Sensors	\$15,000
2101040	Metro Welding Supply Corporation	Two year Blanket PO beginning April 1,2021, cylinder rental, gasses, welding wire, welder PPE and cut	\$12,000
2004002	DLT Solutions LLC	BIM 360 Docs Assistance and Support	\$11,670
1902702	Interior Environments LLC	Furniture and Flooring -planning, coordination, procurement, installation and warranty services.Fur	\$10,275
2003899	International Controls & Equipment	PURCHASE SERVICE AND PARTS TO INSTALL CONTROL BOXES TO ENRTY / EXIT - COPLAND GATE	\$10,175
2002275	Wolverine Power Systems	Blanket PO for generator repairs and maintenance at CSF for three (3) years	\$10,000
2003659	PEA Group	Surveying Services for the property located at 5181 East Outer Drive in the City of Detroit, County o	\$8,810
2100313	Applied Power and Controls Inc.	Schoolcraft Power Metering Design - Electrical Design for Power Metering Installation	\$8,400
1804127	Hach Company	Professional Services Contract for Service Agreement	\$7,274
2004746	Walz & Krenzer Inc.	Hypalon Gasket for watertight hatches per WK-839-45 gasket per WK-936-79	\$5,900
2004618	Giffels Webster	ALTA/NSPS SURVEY ON CONRAIL STRIP BETWEEN WARREN AND TIREMAN	\$4,320
2000876	ShredCorp.	ShredCorp Services Description for REQ 2000876 Shredding Services On-site shredding services to shred	\$3,600
1902536	Waste Management Of Michigan In	Refuse & recycling services various locations 10/15/2019 through 10/14/20 with two (2) one (1) year r	\$471
GLWA-CON-285	Lakeshore Global Corporation	Wholesale Water Meter Pit Rehabilitation and Meter Replacement	-\$122,755
Grand Total			\$281,265,515

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Lakeshore Global Corporation	3	3	\$60,734,290
Weiss Construction Co LLC	2	2	\$39,861,637
Pullman SST, Inc.	2	2	\$24,998,463
Commercial Contracting Corporation	4	4	\$13,002,640
FK Engineering Associates	2	2	\$12,948,344
Hazen and Sawyer	1	1	\$11,307,129
Dan's Excavating Inc.	1	1	\$8,258,592
LimnoTech	1	1	\$7,748,507
Johnson Controls Inc.	3	5	\$6,602,712
Motor City Electric Co	4	10	\$6,290,982
Major Cement Company	1	1	\$6,169,652
PTS Contracting	1	1	\$5,790,800
Hydromax USA LLC	1	1	\$5,601,663
The Christman Company	1	1	\$5,548,501
Noresco LLC	1	1	\$3,399,730
Brown and Caldwell Constructors	1	1	\$3,157,387
Family Associates, LLC	1	1	\$2,669,082
Applied Science Inc	1	1	\$2,634,875
JCI Jones Chemicals Inc	2	2	\$2,523,623
Johnson Controls Fire Protection LP	2	3	\$2,407,779
Magnolia River Services Inc.	1	1	\$2,308,910
NTH Consultants Ltd	2	2	\$2,049,850
Detroit Water and Sewerage	1	3	\$2,040,000
Systems Specialties	2	24	\$1,927,867
Fishbeck	1	1	\$1,893,136
M-K Construction Company Inc.	1	1	\$1,874,135
CDM Smith Michigan Inc	3	3	\$1,715,075
Kennedy Industries Inc	3	15	\$1,681,900
DES Electric LLC	2	2	\$1,643,534
PCI LLC	3	3	\$1,561,130
Outbound Technologies, Inc.	1	1	\$1,524,000
UIS Scada Inc	1	1	\$1,524,000
Verve Industrial	1	1	\$1,524,000
CEC Controls Company, Inc.	1	1	\$1,524,000
United States Geological Survey	1	1	\$1,365,000
HDR Michigan, Inc.	1	1	\$1,350,000
Experis US Inc	1	9	\$1,317,786
Spence Brothers	1	1	\$1,235,000
Crane Technologies Group Inc	3	17	\$1,194,143
PVS Nolwood Chemical Inc	1	5	\$1,117,882
Water Research Foundation	1	9	\$1,105,036
Schreiber Corporation	2	14	\$1,078,710
Fleishman Hilliard Inc	1	1	\$980,000
M.L. Chartier, Inc.	1	1	\$966,384
Staples Business Advantage	1	1	\$900,000
Grainger	1	637	\$891,957
Regents of the University of Mich.	2	2	\$871,429
CDW Computer Centers Inc	1	54	\$857,839
Polydyne Inc	1	5	\$855,889
Crystal Flash, Inc.	1	1	\$800,000
The Osborn Engineering Company	1	1	\$792,050
Plante & Moran PLLC	3	3	\$772,500
Public Sector Consultants	2	2	\$770,001
David D. Taylor	1	1	\$750,000
Oracle America Inc	1	4	\$714,450
Mcnaughton Mckay Electric Company	1	127	\$631,867
Siemens Industry Inc	4	21	\$611,715
City of Livonia	1	1	\$603,946
Homrich	1	3	\$603,046
The Foster Group LLC	2	2	\$590,000
Avante Solutions, Inc.	1	1	\$534,694
Detroit Pump & Mfg Co	1	35	\$532,034
Mokveld Valves BV	1	1	\$528,400
Secure Door LLC	1	1	\$520,000
Cascade Consultants LLC	1	2	\$519,145

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Recycle Waste Services Inc.	1	2	\$514,795
Phoenix Environmental Inc	3	6	\$506,999
Hach Company	2	50	\$459,042
Schuster Law PLC	1	1	\$450,000
SCI Floor Covering Inc.	1	2	\$419,723
Xerox Corporation	2	2	\$417,093
Linko Technology Inc	1	1	\$411,316
Professional Pump Inc	1	1	\$400,000
WSP Michigan Inc.	1	1	\$400,000
SDG Associates, LLC	1	1	\$400,000
Industrial Furnace Co Inc	2	2	\$393,245
RS Technical Services Inc	1	55	\$382,260
Geotab USA, Inc.	1	1	\$375,000
Erie Construction LLC	1	1	\$355,160
Motor City Pipe & Supply Co	1	216	\$344,607
Dell Computer Corporation	1	9	\$341,770
VWR International	2	26	\$341,739
JMK Engineering, Inc	1	1	\$337,920
Epitec Inc	1	1	\$336,600
Preventive Maintenance Technologies	1	3	\$309,550
GALCO Industrial Electronics	1	67	\$304,202
Miller Canfield Paddock & Stone PLC	2	2	\$302,500
Zausmer, P.C.	1	1	\$300,000
Littler Mendelson PC	1	1	\$300,000
Dickinson Wright PLLC	1	1	\$300,000
Garan Lucow Miller, P.C.	1	1	\$300,000
Fausone Bohn LLP	1	1	\$300,000
Evoqua Water Technologies LLC	1	6	\$286,081
Aquasight LLC	1	1	\$285,000
A/C Service & Repair Inc.	1	3	\$253,365
Wayne Health	1	1	\$250,000
Allingham Corporation	1	13	\$243,749
Black & Veatch Ltd Of Michigan	1	1	\$240,000
Jett Pump & Valve LLC	3	5	\$227,769
Electrical Workers Insurance Fund	1	1	\$226,800
Clayton Industries	2	4	\$225,549
Cornell Field Vibration Service Inc	1	2	\$221,380
Vieux & Associates Inc.	1	2	\$212,870
American Gear & Engineering, Inc	1	4	\$212,145
JGM Valve Corporation	1	32	\$204,663
Waterfront Petroleum Terminal Co.	1	1	\$203,533
Structural Preservation Systems	1	1	\$200,760
Re-Source Partners	1	1	\$200,000
Bridgeport Consulting LLC	1	1	\$200,000
Bert's Testing & Training Services	1	1	\$199,362
Robert Half Finance & Accounting	1	1	\$198,000
Wayne State University	1	1	\$195,000
Data Consulting Group Inc	1	1	\$194,040
Atlantic Coast Polymers Inc	1	1	\$190,080
DP Brown Of Detroit Inc	1	14	\$186,539
Fitch Ratings Inc	1	2	\$180,000
Amazon Web Services Inc	1	2	\$176,953
Williams Acosta PLLC	1	1	\$175,000
Santoro Incorporated	2	5	\$174,672
Alfa Laval Inc	1	8	\$172,874
FastSigns Detroit	2	2	\$166,980
Capp USA	1	29	\$165,688
Forberg Scientific Inc	1	4	\$159,527
Yates Industries Inc	1	8	\$156,305
Madison Electric Company	2	34	\$153,444
DLT Solutions LLC	2	6	\$153,361
Premier Safety	1	44	\$150,306
Plunkett Cooney PC	1	1	\$150,000
TK Elevator Corporation	2	11	\$148,478
Ingersoll Rand Company	1	6	\$148,314
Agilent Technologies Inc	1	3	\$145,225

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Herc Rentals Inc.	1	4	\$140,742
Metro Welding Supply Corporation	2	50	\$136,933
Idexx Laboratories	2	17	\$129,350
Emphasys Software	1	1	\$128,182
Michigan CAT	2	5	\$128,122
HESCO Group Inc.	1	14	\$126,270
D/A Central Inc	1	2	\$123,901
Digital Science Group LLC	3	3	\$123,892
MSC Industrial Supply Company	1	106	\$123,029
Metro Detroit EITC	1	1	\$122,000
Lutz Roofing Company Inc.	1	4	\$121,367
Detroit Salt Company LLC	1	11	\$120,503
Macomb Mechanical Inc	2	9	\$117,201
Process Improvement Institute Inc.	1	1	\$115,000
DE-CAL Inc	1	4	\$114,692
YSI Incorporated	2	2	\$113,878
Binkelman Corporation	2	20	\$113,527
GDI Services Inc	2	4	\$109,409
SE Michigan Council of Governments	1	2	\$108,584
EJ USA Inc	1	25	\$105,704
United Rentals North America Inc	2	9	\$104,654
JWC Environmental Inc.	1	6	\$104,548
Trendset Communications Group, LLC	1	5	\$103,659
Advance Instrumentation Systems	2	3	\$102,800
Actuator Specialties	1	11	\$101,591
O'Reilly Rancilio P.C.	1	1	\$100,000
Butzel Long PC	1	1	\$100,000
Commercial Construction Inc.	1	4	\$95,771
Albert Kahn Associates Inc.	1	1	\$95,025
Rose Pest Solutions	2	2	\$94,146
FranklinCovey Client Sales Inc.	1	1	\$90,950
Smartsheet Inc	1	1	\$90,000
EnviroCare International Inc.	1	4	\$87,623
Xylem Dewatering Solutions Inc	1	3	\$86,550
MetalFab Inc	1	29	\$84,025
GEA Mechanical Equipment US Inc	1	1	\$80,768
OSIsoft LLC	1	2	\$80,315
Caniff Electric Supply Co., Inc.	1	15	\$79,609
Veolia Water Technologies Canada	1	2	\$77,393
Smith's Waterproofing LLC	2	6	\$75,671
Sunbelt Rentals, Inc.	1	1	\$75,000
Lewis & Munday P C	1	1	\$75,000
Clark Hill	1	1	\$75,000
Proteus Instruments	1	1	\$74,568
Sherwin Williams Company	1	5	\$72,925
Lerch Bates, Inc.	1	1	\$71,019
Seagull Control Systems LLC	1	3	\$70,412
EMC Corporation	1	2	\$69,925
Dunbar Mechanical, Inc.	1	4	\$69,053
Fred's Key Shop	1	4	\$67,729
Titus Welding Company Inc	1	1	\$67,500
MacAllister Machinery Co Inc	1	13	\$67,437
Howard Commercial Door	1	5	\$66,939
Premier Group Associates LC	2	17	\$66,800
Allie Brothers Inc	1	4	\$66,598
W C Ducomb Company	1	18	\$65,985
R.P. Adams	1	1	\$65,594
Michigan.com	1	2	\$64,344
Galloup,Forberg Smith, Merlo Energy	1	9	\$60,483
The Macomb Group Inc	1	34	\$59,448
Wadsworth Solutions Northwest	1	6	\$58,648
Cosa Xentaur Corporation	1	3	\$57,196
Cintas	1	34	\$56,895
ANSYS, Inc.	1	1	\$56,378
Energy Products Inc	1	8	\$56,230
Tracker	1	1	\$53,030

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Christy Glass Company, Inc.	1	4	\$52,655
US Bank	1	8	\$52,200
Valve Reconditioning Service	2	2	\$51,836
Merit Laboratories Inc	1	11	\$51,564
Solomon Diving Inc.	1	2	\$50,895
Miss Dig System Inc.	1	1	\$50,812
USA Bluebook - Main	1	16	\$50,754
Trimble Inc	1	9	\$50,549
Laird Plastics	1	4	\$50,089
Karen Ann Muglia	1	1	\$50,000
Tredroc Tire Services, LLC	1	1	\$50,000
Marsh USA Inc.	1	1	\$50,000
Gray Matter Systems LLC	1	1	\$49,992
Inlay Casting & Repair	1	1	\$49,500
Zachary Sharp	1	1	\$48,675
Bell Equipment Company	2	2	\$48,350
Qmarkets USA Inc.	1	1	\$47,200
Marshall E. Campbell Company	1	22	\$45,875
Interior Environments LLC	2	7	\$45,388
Focus HOPE	1	1	\$45,000
Ancona Controls Inc.	1	4	\$44,021
Heat Engineering Inc	1	1	\$44,000
Jim Myers & Sons, Inc.	1	2	\$43,656
Sehi Computer Products Inc	1	3	\$42,853
Trace Analytical Laboratories Inc	1	4	\$42,709
Corrosion Fluid Products	1	3	\$42,113
Midwest Municipal Instrumentation	1	6	\$41,431
Aerotek Inc.	1	1	\$41,295
L&W Supply	1	1	\$40,100
Sav's Welding Services	1	1	\$40,000
Logan Glass Company	1	1	\$40,000
Weingartz Supply Co., Inc.	1	1	\$40,000
ASTI Environmental	1	1	\$40,000
J. Dedoes Enterprises Inc.	1	1	\$40,000
Innovyze Inc	1	1	\$39,941
Sustema Inc.	1	1	\$39,485
KnowBe4 Inc.	1	1	\$39,396
Aircentric Corporation	1	6	\$38,947
Excalibur Engineering LLC	1	1	\$38,900
Barta Sales LLC	1	9	\$38,805
Michigan Mechanical Insulation	1	3	\$38,418
Michael K. Stenstrom, Ph.D., P.E.	1	1	\$37,960
SkyNorth Software	1	1	\$37,800
Gutermann Inc.	1	1	\$37,540
Wayne County Community College	1	5	\$37,400
West Shore Fire	1	2	\$37,220
Team Industrial Services Inc	1	2	\$35,954
W.S.I. Industrial Services, Inc.	1	1	\$35,520
Communications Professionals Inc	1	14	\$35,421
Powder Bulk Products Inc	1	3	\$35,269
KSB Dubric Inc	1	3	\$34,491
Wade Trim Associates Inc	1	1	\$33,781
Rosemount Analytical Inc	1	4	\$33,709
Harold Beck & Sons Inc	1	2	\$32,968
Federal Pipe & Supply Co Inc	1	33	\$32,686
Newton Manufacturing Company	1	2	\$32,544
SPX Flow US LLC	1	1	\$31,675
Concentra Medical Centers	1	7	\$31,454
Teledyne CETAC Technologies Inc	1	1	\$30,732
Virtual Graffiti Inc	1	1	\$30,553
Waterworks Systems & Equipment Inc	1	5	\$30,084
Detroit Stoker Company LLC	1	2	\$30,066
Teknicolors Paints Inc	1	1	\$30,000
Sabiston Building Supply	1	1	\$30,000
Isle Inc.	2	2	\$30,000
Project Innovations Inc	1	1	\$29,900

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Best Aire Compressors Services Inc	1	9	\$29,545
Robin Cash Ph.D., LLC	1	1	\$29,200
SDSpro LLC	1	1	\$29,090
ADVISA	1	1	\$29,000
Zones Inc	1	6	\$28,945
Baileigh Industrial	1	2	\$28,183
Ayyeka Inc.	1	1	\$28,045
Carahsoft Technology Group	1	1	\$27,968
Dubois-Cooper Associates Inc	1	2	\$27,054
Rosemount Inc	1	3	\$26,975
Pete's Coin Laundry	1	1	\$26,000
Graybar Electric Company	1	16	\$25,417
Modern Water Inc.	1	1	\$25,394
Space Camp LLC	1	1	\$25,200
Friends of the Rouge	1	1	\$25,000
ZOHO Corporation #4926	1	1	\$24,970
KamarOE	1	29	\$24,519
TS Systems, Inc.	1	1	\$24,075
Eastern Oil Company	1	6	\$23,711
Service Electric Supply Inc	1	29	\$23,531
Shimadzu Scientific Instruments Inc	1	4	\$23,280
Ferguson Waterworks	1	2	\$23,201
NOAR Technologies	1	2	\$22,776
Lubrication Engineers Inc.	1	8	\$22,390
Alro Steel Corporation	1	4	\$22,349
Overhead Door West Commercial Inc	1	18	\$21,680
Wolverine Power Systems	2	2	\$21,461
Unconventional Services Inc	1	1	\$20,950
The Transmitter Shop	1	1	\$20,495
ConvergeOne Inc	1	1	\$20,316
S P Kinney Engineers Inc	1	3	\$20,316
Troy's Towing Inc.	1	1	\$20,000
Tarrant Regional Water District	1	1	\$20,000
Versalift Midwest	1	1	\$20,000
L.I.J.B.S. Enterprises, LLC	1	1	\$20,000
Schneider Electric IT USA, Inc	1	1	\$19,390
Safety Services Inc	1	24	\$19,106
TPC Training	1	1	\$19,080
Cincinnati Babbitt Inc	1	2	\$19,068
Powell Fabrication & Manufacturing	1	4	\$18,942
Emerson Process Management	1	2	\$18,638
Ino-Tek Inc	1	6	\$18,454
Core Electric Company Inc	1	5	\$18,268
Boomer Construction Materials	1	1	\$18,000
Air Dimensions Inc	1	2	\$17,851
SBT Instruments A/S	1	3	\$17,339
Major Brand Oil Company Inc	1	3	\$17,284
Uline, Inc.	1	21	\$17,271
Spina Electric Company	1	3	\$16,899
TestAmerica Laboratories Inc	1	2	\$16,782
Newark Element14	1	1	\$16,482
Environmental Resource Associates	1	21	\$16,051
Scaffold Training Institute	1	1	\$16,050
Anderson Process	1	1	\$16,034
BigTime Software Inc.	1	1	\$15,840
Airgas USA LLC	1	3	\$15,617
Henry Ford College	1	4	\$15,267
AMPS Incorporated	1	1	\$15,052
E2intel	1	2	\$15,000
GHD Services Inc.	1	2	\$14,700
Waste Management Of Michigan Inc	2	9	\$14,591
EH Wachs	1	5	\$14,549
SafetySkills, LLC	1	1	\$14,400
Deep Trekker	1	2	\$14,090
Kaizen Painting LLC	1	1	\$14,073
Central Oil LLC	1	2	\$14,050

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Dwyer Instruments Inc.	1	1	\$14,040
G.E. Distribution Service/ipromoteu	1	5	\$14,022
Bearcom	1	4	\$13,927
Transcat Inc	1	6	\$13,918
Kent Air Products Inc	1	1	\$13,675
Consulting-Portal Inc	1	1	\$13,490
Black Anvil Construction Supplies	1	8	\$13,165
Rotor Electric Co	1	2	\$12,900
Durawear Glove & Safety Co. Inc.	1	9	\$12,711
Harrington Industrial Plastics LLC	1	11	\$12,666
Central Poly-Bag Corp	1	7	\$12,550
Cryogenic Pipe Freezing Solutions	1	1	\$12,373
AT&T	1	2	\$12,296
R.S. Means Company LLC	1	2	\$12,190
International Controls & Equipment	2	4	\$11,651
Wesco Distribution Inc	1	1	\$11,478
Thermo Electron North America LLC	1	3	\$11,422
Spalding DeDecker	1	1	\$11,125
Hi-Lo Industrial Trucks Co. Inc.	1	3	\$10,869
TMI Compressed Air System	1	1	\$10,726
Bearing Service Inc	1	6	\$10,447
KVM Door Systems	1	1	\$10,200
Clark Construction Company	1	1	\$9,966
Northern Machining & Repair, Inc.	1	1	\$9,500
Radwell International Inc.	1	3	\$9,494
T & N Services Inc	1	4	\$9,340
Kiesler Police Supply Inc	1	2	\$9,309
Havener Tech	1	1	\$9,000
Dice Career Solution	1	1	\$8,995
Inland Press	1	1	\$8,977
I & C Sales North Inc	1	2	\$8,926
PEA Group	1	1	\$8,810
Curvature Technologies LLC	1	1	\$8,653
Quality Paving	1	1	\$8,640
Medler Electric Company	1	3	\$8,509
Dynamita	1	1	\$8,400
Applied Power and Controls Inc.	1	1	\$8,400
WPEngine Inc.	1	1	\$8,280
LabStrong Corporation	1	3	\$8,260
Unconventional Solutions Inc	1	1	\$8,250
Specialty Maintenance Products	1	2	\$8,142
MIDCOM Data Technologies Inc.	1	1	\$8,018
Butcher & Butcher Construction Co.	1	1	\$7,995
Fife-Pearce Electric Company	1	1	\$7,948
Fairfield Service Co. of Indiana	1	1	\$7,908
Digital Assurance Certification LLC	1	1	\$7,500
Cornerstone Controls Inc	1	2	\$7,435
Fab Tech Wastewater Solutions LLC	1	1	\$7,300
Torch Associates LLC	1	3	\$7,146
BAVCO	1	8	\$7,065
Hotsy Midwest Cleaning Systems	1	1	\$6,999
Tobys Instrument Shop Inc	1	5	\$6,920
HP INC	1	1	\$6,906
EKUIPTECH, LLC	1	3	\$6,682
Engineered Lifting Technologies	1	1	\$6,655
Applied Industrial Technologies Inc	1	3	\$6,638
Allied-Eagle Supply Company LLC	1	8	\$6,534
PTS Professional Technical Service	1	1	\$6,275
Allstate Industrial Equipment	1	3	\$6,110
Nuair Fluid Power Inc	1	2	\$6,072
Apex Companies, LLC	1	1	\$6,000
Gai-Tronics Corporation	1	1	\$6,000
Walz & Krenzer Inc.	1	1	\$5,900
Jack Doheny Companies Inc	1	5	\$5,825
Public Rubber & Supply Co Inc	1	7	\$5,716
White Oak Environmental & Safety	1	1	\$5,701

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Pruftechnik Inc	1	1	\$5,700
FTP Today Inc.	1	1	\$5,700
Complete Battery Source	1	3	\$5,695
Indian Springs Mfg. Co Inc	1	2	\$5,682
Midwest Air Filter Inc	1	6	\$5,615
Choctaw-Kaul Distribution Company	1	12	\$5,545
Brady Worldwide Inc.	1	1	\$5,541
Motorola Solutions Inc.	1	1	\$5,500
Fibre Industries	1	9	\$5,437
Mazzella Lifting Technologies Inc	1	1	\$5,356
Blue Water Air Compressor	1	1	\$5,342
O I Analytical	1	2	\$5,203
Motion Industries Inc	1	3	\$5,138
Wurth Baer Supply	1	1	\$5,000
Engineer Supply	1	1	\$4,990
Fluid Process Equipment	1	1	\$4,840
Crown Lift Trucks	1	10	\$4,780
Bearing Headquarters Co	1	4	\$4,707
J.J. Supply Company Inc.	1	3	\$4,651
Cech Corporation	1	1	\$4,639
Kinetics Industries, Inc.	1	2	\$4,621
Enterprise Holding Inc.	1	1	\$4,517
De Nora Water Technologies, LLC	1	1	\$4,476
JCL Snowplow Dealer Inc.	1	1	\$4,399
Giffels Webster	1	1	\$4,320
Discovery Solutions Inc	1	2	\$4,290
Hamlett Environmental Technologies	1	3	\$4,284
Michigan Valve & Fitting Inc	1	6	\$4,095
PTSolutions	1	1	\$4,000
AHB Tooling & Machinery LLC	1	2	\$3,954
Kirk's Automotive Inc	1	17	\$3,945
Commerical Group Lifting Products	1	2	\$3,921
Fluke Electronics Corporation	1	3	\$3,868
Cylinder Recyclers LLC	1	1	\$3,867
Exotic Automation & Supply	1	5	\$3,778
Access Inc	1	1	\$3,675
Nelson Liquid Drive LLC	1	1	\$3,642
VESCO Oil Corporation	1	2	\$3,618
Biotage LLC	1	1	\$3,613
ShredCorp.	1	1	\$3,600
City of Highland Park	1	1	\$3,600
American Water Works Association	1	2	\$3,565
Helwig Carbon Products Inc	1	2	\$3,564
Faro Imaging Solutions	1	1	\$3,500
Advanced Technology Services Inc.	1	1	\$3,491
Johnson Plastics Plus	1	1	\$3,476
Thermo Fisher Scientific Asheville	1	2	\$3,419
Andax Industries LLC	1	7	\$3,364
Trescal	1	2	\$3,336
Visual Workplace Inc.	1	2	\$3,210
Davenport Brothers Construction Co.	1	2	\$3,180
Gexpro	1	1	\$3,178
Cadillac Asphalt LLC	1	1	\$3,125
Conti Corporation	1	3	\$3,046
TForce Freight	1	1	\$3,024
Brooks Lumber Company	1	7	\$3,009
HP Electric Motor Inc.	1	1	\$2,900
Tiger Presentations	1	1	\$2,828
Fisher Scientific Company LLC	1	1	\$2,786
Omega Engineering Inc	1	2	\$2,768
K & K Maintenance Supply Inc	1	3	\$2,761
M C Gutherie Lumber Company	1	5	\$2,698
F B Wright Company	1	2	\$2,664
Teletrac Inc	1	3	\$2,650
Canon Solutions America Inc	1	2	\$2,605
Power Plus Engineering Inc	1	2	\$2,580

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
Consolidated Chemical	1	1	\$2,549
Detroit Training Center	1	1	\$2,500
Eastern Michigan University	1	2	\$2,400
City of Detroit	1	2	\$2,390
Swanky Restroom Trailers	1	1	\$2,300
The Crowley Company	1	1	\$2,300
Farnell Equipment Company	1	1	\$2,300
NSI Lab Solutions Inc	1	2	\$2,298
Ligas Enterprises Inc	1	1	\$2,287
Accredited Lock & Door Hardware	1	2	\$2,279
Gold Coin Laundries LLC	1	1	\$2,200
Michigan Pipe & Valve Inc	1	1	\$2,081
Raven Environmental Products Inc	1	1	\$2,061
Association for Talent Development	1	1	\$2,042
Eaton Engineering Services	1	1	\$2,035
Xylem Water Solutions Usa Inc	1	1	\$2,000
Southeast MI Community Alliance	1	2	\$2,000
ZLED Lighting	1	2	\$1,993
Teledyne Leeman Labs	1	1	\$1,958
Global Environmental Consulting LLC	1	2	\$1,950
Bentley Systems Incorporated	1	1	\$1,926
AVE Office Supplies	1	3	\$1,920
Galloup	1	2	\$1,890
Able Label	1	1	\$1,888
National Ladder & Scaffold Company	1	2	\$1,871
Poco Sales Inc	1	2	\$1,846
Progressive Plumbing Supply Co Inc	1	9	\$1,841
Interstate Trucksource Inc	1	1	\$1,827
Spraying Systems Co.	1	1	\$1,817
Industrial Scientific Corporation	1	2	\$1,794
Parts Super Center	1	1	\$1,744
Bell Fork Lift Inc	1	2	\$1,723
C P E Filters Inc	1	1	\$1,719
Flor Dri Supply Company Inc	1	2	\$1,711
Meco Metals Co	1	2	\$1,640
Identification Lamination Products	1	3	\$1,600
Jan-Supply Detroit, LLC	1	1	\$1,505
Advanced Calibration Designs	1	1	\$1,504
Downriver Refrigeration Supply Co	1	1	\$1,496
Balfrey & Johnston Inc	1	1	\$1,462
RealTech Controls	1	1	\$1,437
Lyon LLC	1	2	\$1,403
Chemtrac Inc	1	2	\$1,355
Cincinnati Time Systems	1	3	\$1,345
Aero Filter Inc	1	5	\$1,341
Watson-Marlow, Inc	1	1	\$1,270
Chemical Systems Inc	1	1	\$1,232
Teledyne Isco	1	2	\$1,227
MSA Safety Sales LLC	1	1	\$1,224
Allegra Marketing Print Mail	1	1	\$1,220
Dani's Transport	1	1	\$1,181
SW Controls Inc	1	1	\$1,145
Central Metallizing & Machine	1	1	\$1,145
Downriver Utility Wastewater Auth.	1	4	\$1,142
Spiral Binding Company Inc	1	1	\$985
Thomson Reuters	1	1	\$984
Michigan Municipal League	1	1	\$970
HD Edwards & Company	1	7	\$892
Jade Scientific Inc	1	2	\$864
Powder Buy The Pound	1	1	\$810
York Repair Inc	1	1	\$809
Dani's Aggregate Inc.	1	1	\$807
Cashco Inc.	1	1	\$786
Contractors Connection Inc	1	1	\$769
McMaster-Carr Industrial Supply Co	1	1	\$729
Schad Refractory Construction Co	1	1	\$729

Top Ten Awarded Vendors	Contract Executed Count	Purchase Orders Executed Count	Awarded Amount
IDN Hardware Sales, Inc.	1	1	\$728
Drinkpod LLC	1	2	\$720
Empire Equipment & Supply Inc.	1	2	\$674
B & H Machine Sales, Inc	1	2	\$670
Pollardwater	1	2	\$604
Seton	1	1	\$599
YourMembership.com, Inc.	1	2	\$598
Airtech Controls Co	1	1	\$576
United States Plastic	1	2	\$562
Carleton Equipment Co.	1	1	\$561
Hygiena LLC	1	1	\$554
Compressor Engineering Corporation	1	1	\$552
Sell's Equipment	1	1	\$540
ATI Northbrook Operations	1	1	\$540
Morgan Advanced Materials	1	1	\$528
ISE Metal Inc	1	1	\$524
Global Equipment Company Inc.	1	2	\$514
FedEx	1	1	\$511
Deaf Community Advocacy Network	1	1	\$500
GEO Jobe GIS Consulting	1	1	\$500
South Park Welding Supplies Inc	1	1	\$499
Allied Electronics Inc	1	1	\$496
Michigan Water Environment	1	1	\$487
Chart Pool USA Inc	1	1	\$487
PE Energy - Industrialstop	1	1	\$485
Chem Flowtronics Inc.	1	1	\$466
Radiation Safety Services	1	1	\$445
Tintometer Inc.	1	1	\$430
The Lab Depot Inc	1	1	\$407
Service Specialists of America	1	1	\$345
McGard LLC	1	1	\$274
Detroit Legal News	1	1	\$255
Oden Training	1	1	\$250
Wayne County	1	3	\$228
Society For Human Resource Mgt.	1	1	\$219
Prompter People Inc.	1	1	\$199
Wright Tool Co	1	2	\$187
Tri Star Steel Corporation	1	1	\$180
Bearings and Industrial Supply Co	1	1	\$173
HBARSCI, LLC	1	1	\$172
Public Lumber Company	1	1	\$125
Liberty Plumbing Supply Company	1	1	\$116
A-1 Truck Parts Detroit	1	2	\$111
George Instrument Company	1	1	\$102
State of Michigan	1	1	\$100
Gravotech, Inc.	1	1	\$87
ZVerse Inc.	1	1	\$49
Acme Bolt & Nut Co Inc	1	1	\$37
Baker's Gas & Welding Supplies Inc	1	1	\$37
H&H Metals Company	1	1	\$1
Grand Total	173	3426	\$311,461,322

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CON-149	Inland Waters Pollution Control Inc	Emergency Sewer Repair	\$16,242,525
GLWA-DB-226	Jay Dee Contractors Inc.	Repair & Rehab (DRI) from Alter Road to WRRF	\$15,618,818
GLWA-CON-297	Weiss Construction Co LLC	Fairview Sewage Pumping Station Improvements	\$15,229,344
GLWA-CS-272	AECOM Great Lakes, Inc	Capitol Improvement Program Delivery	\$13,684,050
GLWA-PC-792	New England Fertilizer Company	Biosolids Dryer Facility	\$13,058,667
1803258	Walsh Construction Company	CIP 122003 WW Northeast Transmission Project	\$12,687,757
GLWA-DB-150	Ballard Marine Construction LLC	CIP 1327 DB/ Repair PA, Springwell & NE Tunnels	\$11,281,444
1803621	Ric-Man Construction Inc	CIP # 122006 Wick Road 48" Water Main	\$10,703,910
1901658	Lakeshore Global Corporation	Facilities Maintenance Services	\$9,120,725
GLWA-CON-252	Clark Construction Company	SWTP Steam/Condensate Return, & Compress Air	\$8,749,040
1802774	Kokosing Industrial Inc.	Design Build Improvement project of Sedimentation Basin Sluice Gates, Guides & Hoists	\$8,055,989
1900744	Pullman SST, Inc.	Reservoir Rehab (Construction Phase)	\$7,269,564
1900741	Jacobs Consultants, Inc.	CIP 122004 Engineering Services for 2.5 Miles of 96 Inch Transmission Main	\$7,261,215
GLWA-SOQ-135A	Rotor Electric Co	Security Infrastructure Improvements	\$6,185,196
1803776	Commercial Contracting Corporation	Relocation of the Analytical Lab Operations to WRRF	\$5,885,130
1803312	Kokosing Industrial Inc.	West Service Center Reservoir, Pump House and Division Valve Replacement	\$5,274,753
GLWA-CON-158	Lakeshore Global Corporation	Specialized Services Contract	\$5,150,369
GLWA-CON-268	Salenbien Trucking & Excavating Inc	Park - Merriman 24" Watermain	\$4,590,708
GLWA-CON-285	Lakeshore Global Corporation	Wholesale Water Meter Pit Rehabilitation and Meter Replacement	\$4,442,041
GLWA-CON-170	Mobile Dredging & Video Pipe Inc	Percent Complete: CON-170: Sludge Removal & Disposal Services @ NE, SW and Springwells WTP	\$4,441,180
1900134	Barton Malow Company	CIP #14002 Springwells WTP Low Lift Suction Isolation Gate Replacement	\$4,405,523
1804129	Lakeshore Global Corporation	Schoolcraft Raod 48" Water Transmission Main	\$3,901,063
1902658	Marra Services Inc	New Capital Project Rehabilitation of GLWA Outfalls-Phase IV.	\$3,618,440
1802170	Enterprise Fleet Management	Fleet Management Services	\$3,485,650
1900796	Lakeshore Global Corporation	Rehabilitation of Outfalls - Phase II	\$3,376,532
1903312	Major Cement Company	CIP 122013 Phase 1 14 Mile Transmission Main Loop	\$3,274,580
1803025-2	Commercial Contracting Corporation	Job Order Contracting Services (WRRF & CSOs, Water Plants)	\$2,969,110
GLWA-CON-197	Weiss Construction Co LLC	Modification to Incinerator Sludge Feed Systems in Complex II at WRRF	\$2,940,845
GLWA-CS-103	CDM Smith Michigan Inc	Complete: GLWA-CS-10: Pro Engr Svcs for SPWTP Low & High Lift Pumping Station Imp. (\$9,935,926.00)	\$2,705,409
GLWA-CON-238	Weiss Construction Co LLC	Chlorination & Dechlorination Process Equipment Improvements	\$2,704,412
GLWA-CS-299	Jacobs Consultants, Inc.	Complete: CS-299: CSO Facilities Needs Assessment Project	\$2,635,128
2920576	Linde Inc.	Gaseous Oxygen	\$2,082,565
	Praxair Inc	Gaseous Oxygen	\$480,750
GLWA-CON-089A	Lakeshore Global Corporation	Job Order Contract - Low Voltage Wiring Services	\$2,538,643
1802448	Brown and Caldwell LLC	Complete: CS-1802448: 14 Mile Transmission Main Loop CIP# 122013	\$2,337,256
1803823	Weiss Construction Co LLC	CIP # 111007 Lake Huron Clarifier and Sludge Improvement	\$2,182,378
GLWA-CS-119(a)	DXC Technology Services LLC	T&M: CS-119: WAM Support and Enhancement Services (\$ 7,000,000.00)	\$2,114,936
2000610	Lakeshore Global Corporation	CIP 115001- Piping, Valves and Venturi Meters Replace	\$2,010,248
1803025-6	Weiss Construction Co LLC	CCD #1 - LED Lighting Replacement JOC See Req #1903664	\$1,960,444
9172	Kemira Water Solutions	Ferric Chloride	\$1,908,966
GLWA-PC-757	Tooles Contracting Group LLC	Rehab. Rectangular Primary Clarifiers Nos. 15 & 16 @ WWTP CIP 291 (\$51,905,000.00)	\$1,903,405
GLWA-CS-120	Arcadis of Michigan LLC	Complete: CS-120: Freud & Conner Creek Pump Station Improvements Study & Design CIP 1315	\$1,851,370
GLWA-CS-102	Wade Trim Associates Inc	Rehabilitation of Pump Station No. 1 Improvements	\$1,782,711
1902224	Pullman SST, Inc.	CIP 260614, DB Contract for CSO Facilities Structural Improvements	\$1,687,067
1904332	GDI Services Inc	Blanket PO for janitorial services at GLWA facilities for one (1) year 04/06/2020 - 04/05/2021	\$1,633,562
GLWA-CS-166	PMA Consultants LLC	As Needed: Capital Improvement Program Implementation Asst. & Related Services CIP 380401	\$1,620,006
1134	Emerson Process Management	Emerson Projects at WWP and WRRF - Contract #1134 am	\$1,588,994
1803538	Weiss Construction Co LLC	CIP#132006 Ford Road Booster Station Improvements - Discharge Pressure Control	\$1,569,542
GLWA-CON-181	Lakeshore Global Corporation	Water Transmission Main Repair	\$1,470,722
1803769	Arcadis of Michigan LLC	Lake Huron Low Lift /High Lift and Wash Water Pumping Improvements	\$1,467,047
1803942	OHM and WSP, A Joint Venture	CIP 122016 Transmission Loop to the Downriver System	\$1,408,098
GLWA-CS-1747	Brown and Caldwell LLC	Complete: Prof Engineering Svcs for Fairview Sewage Pumping Station Improvements CIP1241	\$1,396,090

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CS-090A	PCI LLC	Complete: Professional Engineering Svcs for Instrumentation & SCADA Sys Svcs CIP 1264 (\$5,663,694	\$1,388,520
GLWA-CON-179	PCI LLC	T&M: CON-179 Professional and Technical Services for Sewer Meter Support	\$1,364,905
1802575	Brown and Caldwell LLC	Complete: CS-1802575: Conveyance System Engineering Services	\$1,312,844
1802745	Ric-Man Construction Inc	Repair of Water Transmission Mains, Valves, Etc.	\$1,312,777
1803705	Arcadis of Michigan LLC	Comprehensive Corrosion Control Optimization Study O&M	\$1,232,057
2000302	Dunbar Mechanical, Inc.	HVAC SERVICE PROVIDED TO WASTEWATER OPERATIONS & CSO STATIONS	\$1,145,962
1904337	Hazen and Sawyer	WRRF PS-2 Bar Racks Replace & Grit Collection System Improvements	\$1,041,975
50817	Motor City Electric Co	Labor, Material and Maintenance for Electrical Switchgear and Power Transformers	\$1,013,622
8901	PVS Nolwood Chemical Inc	Sodium Hypochlorite for CSO Basins kr	\$951,201
1900702	Premier Group Associates LC	Grounds Maintenance Services	\$920,785
GLWA-CS-168	FK Engineering Associates	Complete: CS-168: Rehab of Conveyance System Interceptors and Trunk Sewers CIP 1263	\$901,699
1802179	Polydyne Inc	Flocculant, Organic Polymer	\$897,966
1803709	Applied Science Inc	CIP #222004 Conveyance System Infrastructure Improvements	\$894,796
2000292	Hydromax USA LLC	GLWA New Valve Exercising Project for Field Services for a period of 3 years in the amount of \$4.5 mi	\$887,983
1803025-3	DE-CAL Inc	Job Order Contracting Services (WRRF & CSOs, Water Plants)	\$857,683
GLWA-CON-281	Weiss Construction Co LLC	SWWTP High Lift Pump Discharge Valve Actuators Replacement and HLP System Modification	\$848,858
GLWA-CS-259	Somat Engineering Inc	As-Needed Engineering Services for Concrete Testing, Geotechnical Soil Borings & other Testing Svcs.	\$848,795
1904197	LimnoTech	GLWA Long Term CSO Control Plan Update.	\$832,329
1901569	Dell Computer Corporation	Dell MiDeal Agreement	\$823,646
2001488	Pullman SST, Inc.	CIP 122017 7 Mile / Nevada transmission main	\$807,871
GLWA-CON-109	Lakeshore Global Corporation	Emergency Refurbish of Storm Pump 5 & 7	\$804,194
GLWA-CS-152	CH2M Hill Engineers Inc	Complete: CS-152: Analysis for Transmission Main from WWP TP to NEWTP CIP 122003 (\$2,813,216.63)	\$791,447
1802410	Commercial Contracting Corporation	Rehabilitation of various sampling sites and PS2 Ferric Chloride System	\$749,161
GLWA-CS-151A	Hazen and Sawyer	complete: CIP 170801 Reservoir Inspection, Design and Rehabilattation at Various GLWA Sites	\$747,880
1904254	Dan's Excavating Inc.	CIP 122003 WWP to NEWTP Phase #2	\$714,932
1803483	Schreiber Corporation	CIP# 171501 - Roof Replacements at Various Water Facilities	\$700,786
1905101	J F Cavanaugh Company	Emergency replacement of High Pressure Water Tank	\$692,921
GLWA-CS-198	CH2M Hill Engineers Inc	Complete: GLWA-CS-198: Asset Management Planning	\$677,660
GLWA-CON-234	Weiss Construction Co LLC	Conner Creek CSO Basin Rehabilitation	\$654,527
2000092	Wade Trim Associates Inc	Systems Planning	\$636,976
GLWA-CON-253	Ric-Man Construction Inc	Springwells Water Treatment Plant Reservoir Fill Line Improvements	\$615,216
1901036	LaSalle Construction Services	CIP # 112005 Northeast Water Treatment Plant Replacement of Covers for Process Water Conduits	\$610,082
1900318-6	Wade Trim Associates Inc	Task Order Engineering Services for GLWA	\$589,375
1900456	Atlas Bleachers	Bleacher Design, Installation and Inspections at Water Works Park	\$569,960
1803508	JCI Jones Chemicals Inc	Liquid Chlorine - Springwells am	\$569,772
GLWA-CS-216	Bridgeport Consulting LLC	T&M: Third Party Facilitators - Customer Outreach Programs	\$556,039
GLWA-LS-295	Dickinson Wright PLLC	T&M: Legal Representation subsequent to Lease Agreement with the CofD & Regional Water & Wastewater	\$550,113
2001082	Preventive Maintenance Technologies	Emergency Standby Generator Preventative Maintenance (Water). Replaces req#2000432	\$545,509
4000701 (1900516)	Commercial Contracting Corporation	CIP132007 Imlay Pumping Station - Energy Management Freeze Protection Pump Installation	\$538,881
GLWA-CS-300	CCH Tagetik	CS-300: Implementation Plan am	\$538,738
GLWA-CS-239	CDM Michigan, Inc	T&M: CS-239: Good Sewer Metering Analysis & Support Services	\$533,910
1803594	HESCO Group Inc	Maintenance Service contract for Accusonic Flow Meters at all CSOs (7)	\$47,610
	HESCO Group Inc.	Maintenance Service contract for Accusonic Flow Meters at all CSOs (7)	\$483,480
1903098	Truck & Trailer Specialties Inc.	Blanket PO for Vehicle Up-Fitting 09/01/2019 - 01/12/2021	\$529,394
1803126	Hach Company	Hach Company Combined Purchases	\$520,069
1901995	Conti Corporation	HVAC CONTRACT SERVICES for all GLWA Facilities	\$501,482
GLWA-CS-195	The Foster Group LLC	Financial Management Consulting Services	\$500,000
RFB 1900744	Pullman SST, Inc.	Reservoir Rehab (Construction Phase)	\$469,072
GLWA-PC-795	Tooles Contracting Group LLC	Pumping Station No. 2 Pumping Improvements CIP 961 (\$3,275,000.00)	\$444,697
1703524	Thyssenkrupp Elevator Corp	Elevator Maintenance	\$439,800

Contract Number	Vendor	Contract Description	Amount (Millions)
1901555	Premier Group Associates LC	Snow Removal & De-Icing Svcs for Two (2) Yrs with two - One (1) Year Renewal Opts Begins 11/19/19	\$436,583
2100917	City of Livonia	CIP 122005_1804129 Schoolcraft Rd_IGA City of Livonia and GLWA_10"Sanitary Sewer Installation_Tempora	\$433,955
1803978	Ceridian HCM Inc	Ceridian Human Resources Information Systems (HRIS)	\$428,301
1803025-1	Barton Malow Company	Job Order Contracting Services (WRRF & CSOs, Water Plants)	\$427,006
1901609A	PTS Contracting	CIP No. 260613 - HVAC Improvements at Baby Creek CSO Facility	\$425,125
1903601	CDM Smith Michigan Inc	Yard Piping Engineering Services, CIP 216006 Chuck Reinhart, 297.0154	\$424,143
1802499	HDR Michigan, Inc.	WWP WTP Building ventilation improvements	\$410,815
1903426	The Osborn Engineering Company	TOES: ARC FLASH STUDY	\$408,764
9173	PVS Technologies Inc	Sulfur Dioxide	\$401,074
GLWA-CS-171	Brown and Caldwell LLC	Complete: CS-171: Raw Sludge Clarifiers and Raw Sludge Pumping Station Improvements (\$939,440.00)	\$397,686
4302	JCI Jones Chemicals Inc	1st renewal year of 90-ton Chlorine	\$397,273
1900949	Aquasight LLC	AURA 5.2 Subscription	\$378,567
GLWA-CS-213	NTH Consultants Ltd	T&M: CS-213 Environmental Health and Safety Compliance Services *note added	\$369,622
1801840-1	Carlette Construction & Consulting	Concrete Repairs at WRRF	\$367,469
sw-548	Colasanti Construction Services	Southwest Water Treatment Plant Sludge Treatment and Waste Washwater Treatment Facilities	\$326,172
1803718	Lakeshore Global Corporation	CIP No. 260611 - Construction Work for HVAC Improvements at Leib CSO Facility	\$321,203
1902040	DMC Consultants, Inc.	CIP 260615 - Site Improvements at Leib and Puritan Fenkell CSO Facilities	\$299,298
1902721	PFM Asset Management LLC	Investment Advisor Services	\$293,947
1905077	PCI LLC	Level and flow instrumentation upgrade (Puritan Fenkell & 7 Mile CSOs)	\$266,627
2905129	Waste Management Of Michigan Inc	Disposal, Biosolids Invoice # wsd 02012016	\$256,636
GLWA-LS-140	Dykema Gossett PLLC	T&M: Legal Rep. Consultation & Advice for Highland Park v USEPA	\$250,103
GLWA-CS-006	Broadspire Services Inc	As-Needed: Loss Fund Reimbursement	\$249,903
GLWA-CS-071	Data Consulting Group Inc	T&M: Professional Services Contract (\$4,114,800.00)	\$241,616
1904736	Linko Technology Inc	Linko (PIMS)	\$240,435
1804112	LaSalle Construction Services	7 Mile CSO RTB - Site Improvements	\$239,221
1803025-4	J F Cavanaugh Company	Job Order Contracting Services (WRRF & CSOs, Water Plants)	\$235,018
2850143	Waterfront Petroleum Terminal Co.	Furnish Fuel and Diesel Fuel	\$233,427
LA-1519	New Technology Development	Lease: Analytical Lab at Michigan Center for High Technology	\$229,775
1900318-3	Hazen and Sawyer	Task Order Engineering Services for GLWA	\$229,343
1900902	Regents of the University of Mich.	Asset Management of the Drinking Water Transmission System	\$218,513
2001434	Regents of the University of Mich.	Assessing the Integration of Real Time Control (RTC) Water Management Systems into GLWA's Long Term C	\$216,285
1904860	Idexx Laboratories	Idexx Bacteriological testing materials for Water Plants and Water Quality Lab Place Holder Requisiti	\$206,366
1803456	Rickman Enterprise Group LLC	Scum Disposal and Hauling Contract - 3 Year Contract	\$202,255
GLWA-CS-1671	METCO Services Inc	Complete: CS:1671 Steam, Condensate Return and Compressed Air Piping Imp.@ SPWTP	\$200,828
2001928	Structural Preservation Systems	Kercheval Pipe Renewal Pilot	\$200,760
GLWA-CS-282	WSP Michigan Inc.	GLWA-CS-282: Design and Construction Assistance Services for the Springwell's Administrative Building	\$200,429
1902299	Avante Solutions, Inc.	Information Technology Service Management (ITSM) Tool	\$200,099
GLWA-CS-235	Marsh USA Inc.	Property and Casualty Insurance Brokerage and Ancillary Services	\$200,000
GLWA-CS-201	Professional Service Industries Inc	As Needed: JOC for Const., Environmental, Special Testing, Inspection, & other technical services	\$198,339
2001456	Spence Brothers	Funds Approval Form for SPWTP 1958 Settled Water Conduit and Loading Dock Concrete CIP #114016	\$190,676
1900933	Baker Tilly Virchow Krause, LLP	External Auditor Services	\$189,596
GLWA-CS-055	AECOM Great Lakes, Inc	Complete: Replacement of Yard Piping, Valves, & Venturi Meters at Waterworks Park (\$3,738,149.00)	\$180,963
2001686	Schreiber Corporation	Emergency repair of roof on EB 1 at WRRF	\$179,000
4773	American Gear & Engineering, Inc	Lightning gearbox rehabilitation program	\$176,730
SCO-1015	HORIZON Lab Systems	Laboratory Information Management System (LIMS)	\$176,496
1803821	Trimble Inc	Trimble Unity Implementation and Contract Amendment No. 2	\$174,065
2001498	Commercial Contracting Corporation	Leib Fiberglass Tank Repair	\$171,000
2000284	Johnson Controls Fire Protection LP	Specialized Procurement - Professional Services Contract for the preventative maintenance service Sourcewell	\$169,967
2000382	Plante & Moran PLLC	Management Consulting Services for Fleet Implementation Support	\$169,435
1902084	Plante & Moran PLLC	To extend services for an additional 520 hours for Plante & Moran	\$165,048

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CS-039	Black & Veatch Ltd Of Michigan	Complete: CS-039: Units of Service for Non-Master Metered Customers of GLWA and System Water Audit	\$162,326
1902063 (GLWA-CS-1802146)	Brown and Caldwell LLC	CIP 132012 Ypsilanti Pump Station Improvements	\$159,331
1802146	FM Sylvan, Inc.	Renovation and Upgrade of Suction and Discharge Valves	\$158,001
1904562	Phoenix Environmental Inc	GLWA Fuel Maintenance	\$157,636
GLWA-CS-002(a)	PFM Financial Advisors LLC	Financial Advisory Services	\$157,323
1803025-5	Lakeshore Global Corporation	Job Order Contracting Services (WRRF & CSOs, Water Plants)	\$157,040
2001236	Eastern Oil Company	Warehouse Inventory Items - Industrial Lubricants (PO is now #17099 for WAM blanket)	\$154,233
1903921	Veolia Water Technologies Canada	Baby Creek CSO : Spare Parts Fine Screen Brushes kr	\$150,025
GLWA-CS-036	CDM Smith Michigan Inc	T&M: CS-036: Professional services contract to provide GLWA with this master plan	\$147,863
2001563	Black & Veatch Ltd Of Michigan	Dearborn Master Metering Assistance	\$145,410
GLWA-CS-1749	Alfred Benesch & Associates	Complete: Professional Eng. Svcs for Ford Road Booster Station Improvements CIP 1293 (\$499,579.00)	\$145,206
1905154	Clayton Industries	CLAYTON INDUSTRIES (STEAM GENERATOR REPAIR WATER PLANTS)	\$144,365
2000279	Fishbeck	Springwells Water Treatment Plant Flocculator Drive Replacement	\$112,009
	Fishbeck, Thompson, Carr & Huber	Springwells Water Treatment Plant Flocculator Drive Replacement	\$24,197
GLWA-CS-301	Sigma Associates Inc	Complete: As Needed: General Engineering Services	\$135,043
1164	D/A Central Inc	Intrusion Alarm Maintenance Contract - Security - Contract #1164	\$132,094
1802144	Dykema Gossett PLLC	Contract Title: Government Relations and Legislative Representation Services	\$132,012
GLWA-LS-2001549	Zausmer, P.C.	Legal Representation	\$130,660
2003901	United States Geological Survey	U.S. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, NON-STANDARD JOINT FUNDING AGREEMENT FOR WAT	\$128,500
2001235	Lubrication Engineers Inc.	Warehouse Inventory Items - Lubricants (PO is now #17100 for WAM blanket)	\$126,427
GLWA-CON-254	Weiss Construction Co LLC	Oakwood CSO Control Facility Drain Valve Improvements	\$124,193
2001433	Fleishman Hilliard Inc	Marketing and Communications Services (3 year contract with two 1 year renewals)	\$120,845
1901767	Brown and Caldwell LLC	Complete: CS-1901767: Newburgh BPS Pumping system & Building Upgrades	\$118,258
1900217	Future Fence Company	Blanket po for fence and fence repair, gates, and parking control devices	\$117,611
1900646	Unifirst Corporation	Uniform Rental and Laundering for Water Supply Operations	\$117,095
GLWA-CS-273	Bonfire Interactive Ltd	Bonfire public pro - Renewal Option 2	\$117,000
GLWA-CS-302	Fleishman Hilliard Inc	T&M: Communication and Marketing Services	\$112,909
1902505	Process Wastewater Technologies LLC	Repair service for existing horizontal COPA screens (total 8) at Leib CSO Facility	\$110,900
2001694	Public Sector Consultants	WRAP program design advisor services	\$109,972
GLWA-CS-083	West Coast Labour Systems Corp	Service-Link (Work Force Management System) Maintenance Agreement (\$ 507,400.30)	\$108,497
1901836	Marra Services Inc	Baby Creek CSO Anchor and Wedge Improvement to West End Sewer	\$108,267
2002909	Jett Pump & Valve LLC	Jett pump to replace media in Chlorine scrubber	\$107,999
GLWA-CON-223	Lakeshore Global Corporation	Facilities Maintenance Services	\$106,398
1903598	The Christman Company	Yard Piping, Construction Management CIP 216006 Chuck Reinhart, 297.0154	\$104,375
1900356	Grainger	Warehouse Inventory Items - Safety	\$100,364
LS-2002530	Dickinson Wright PLLC	Midwest Valve v. GLWA	\$99,806
2001402	Michigan State University	COVID-19 / SARS-CoV-2 in Detroit: Surveillance and Prediction	\$99,161
1803810	360water, Inc.	Training Services	\$99,123
1903355	PCI LLC	UPS Replacement	\$96,515
GLWA-CON-250	Weiss Construction Co LLC	Pumping Station 1 Rack & Grit & MP-1 & Jeff Sampling Stating Improvements	\$96,478
1803641	Power Process Piping, Inc.	Remove and Replace 6 Inch Underground Air Blower Line	\$95,264
1803933	Rose Pest Solutions	Pest Control and Extermination Services for Three (3) Years with 2 - 1 Year Renewal Options	\$94,667
1803447	Integrated Power Services LLC	Motor Repair for the Five Water Plants (10/7/19 - 10/6/22)	\$94,533
1900318-4	Hubbell, Roth & Clark, Inc.	Task Order Engineering Services for GLWA	\$92,710
1902702	Interior Environments LLC	Furniture and Flooring -planning, coordination, procurement, installation and warranty services.Fur	\$91,571
2001317	Secure Door LLC	Preparing assessment and repair quotes for selected Overhead doors and hardware at various GLWA facil	\$91,076
1902548B	Johnson Controls Inc.	(HVAC) Pumping Stations Repair and Preventative Maintenance Services	\$89,311
1903258A	Aerotek Inc.	Organizational Development Benefits Team Member am	\$89,123
2002204	Aquasight LLC	APOLLO ADVISER APPLICATION MAINTENANCE & DEVELOPMENT OF NEW DASHBOARDS - (3 year contract with 2 - 1	\$85,900

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CS-160	METCO Services Inc	T&M: CS-160: General Engineering Services (\$479,049.75)	\$84,441
1802543	Hazen and Sawyer	Complete: CS-1802543 Rehabilitation of Ferric Chloride Feed System PS-1 & Complex B Sludge Liines	\$83,988
1076	Cintas	Service - Uniforms	\$81,822
2001831	Plante & Moran PLLC	ERP Implementation Support	\$81,506
GLWA-CS-034	Tetra Tech of Michigan PC	Complete: High Lift Pump Discharge Valve Actuators Replacement at SWTP	\$80,348
2002908	David D. Taylor	Oracle WAM System Specialist for a Three (3) Year Period	\$79,433
1900318-1	Arcadis of Michigan LLC	Task Order Engineering Services for GLWA	\$77,129
3979	Linde Inc.	Lease, Operate, and Maintain the Oxygen Vaporizer	\$4,920
	Praxair Inc	Lease, Operate, and Maintain the Oxygen Vaporizer	\$71,317
2000644	DES Electric LLC	POWER MONITORING INSTALLATION PROJECT	\$75,940
1803448	Birclar Electric & Electronics LLC	Parts and Repair Services for Various Motors	\$75,412
GLWA-PS-074	Hugh Connolly	T&M: PS-074: Oversight of Construction Contractors for Water & Wastewater Treatment (\$300,000)	\$75,270
GLWA-LS-1902591	Zausmer, P.C.	Legal Representation Re: PC-789 and CON-250, Pumping Station #1 & Grit and MPI & Jefferson Sampling	\$74,778
2001574	Emphasys Software	Sympro Debt Management Software	\$74,000
3258	Polydyne Inc	Flocculant, Organic Polymer - Waste Water Treatment Plant	\$73,740
GLWA-PS-246	Robert M Kowal	T&M: PS-246: PSAdministrative Consent Order for the WWTPt (\$178,200.00)	\$73,225
1900318-5	HDR Michigan, Inc.	Task Order Engineering Services for GLWA	\$72,218
1900995	Motor City Electric Co	Electrical Preventative Maintenance and Repair Contract for GLWA Wastewater Facilities	\$71,585
1902548A	Johnson Controls Inc.	(HVAC) Water Treatment Plants Repair & Preventative Maintenance Services	\$71,146
GLWA-CS-257	Lockton Companies LLC	Employee Benefits Broker/Consultant	\$71,069
1803437-1	Kennedy Industries Inc	Pump Repair for the Five Water Plants	\$71,064
1900318-2	Black & Veatch Ltd Of Michigan	Task Order Engineering Services for GLWA	\$71,018
1902059	Michigan State University	Transport and Fate of Nutrients in Biosolids for a Two (2) Year Period	\$70,895
GLWA-CON-133	Lakeshore Global Corporation	Water Plant Production Flow Measurement and Related Facility Improvements	\$70,539
1904862	Geotab USA, Inc.	Purchase of GEOTAB Enterprise Fleet Management Modules for Fleet	\$68,809
1903179	Plante & Moran PLLC	Tagetik Software Implementation	\$68,385
1902536	Waste Management Of Michigan Inc	Refuse & recycling services various locations 10/15/2019 through 10/14/20 with two (2) one (1) year r	\$65,958
2001077	Systems Specialties	Conner Creek CSO : Rotork Repairs / SHCRV-6 Quote: MVRO200226-7	\$63,473
1902151	Wayne State University	PFAS Health and Ecological Impacts: Investigation of PFAS health impacts on humans and wildlife	\$62,357
1803077	CK Environmental, Inc.	Air Emissions Stack Testing Services for Complex 2 Incinerators	\$61,428
GLWA-LS-193	Williams Acosta PLLC	T&M: Provide Legal Representation to GLWA for Highland Park Collection Matters (\$220,000.00)	\$60,859
GLWA-LS-296	Barris Sott Denn & Driker	T&M: National Industrial Maintenance Ins. v City of Detroit Case No. 18004530-CK	\$60,684
GLWA-CS-077	Henry Ford Health System	CS-077: Occupational Health Services - CO#4 (\$120,000.00) - As Needed Services	\$60,312
1904681	Re-Source Partners	IT Asset Disposal Services	\$59,050
1904820	Isle Inc.	Innovation Consultant - Innovation services and technical facilitation	\$57,500
2001326	Madison Electric Company	Wick Road Power Metering - Installation of Power Quality / Power Meter	\$57,070
1802911	PCI LLC	UPS Maintenance Services -- See PO 13503	\$56,959
2003089	Vieux & Associates Inc.	Real-time System Optimization Project (Rain Gauges)	\$56,200
2000261	Phoenix Environmental Inc	Phoenix Environmental Inc. PROPOSAL 23428. Inspection Services Continuation requisition for four mont	\$53,319
GLWA-CS-262	Sigma Associates Inc	Complete: General Engineering Services	\$52,241
1097	Carmeuse Lime & Stone	High Calcium Lime	\$52,156
GLWA-CS-200	CDM Smith Michigan Inc	T&M: GLWA-CS-200: Resident Project Representative and O & M Services CIP 170100 (\$889,785.00)	\$51,434
1803876	Info-Tech Research Group Inc	InfoTech Subscription	\$50,646
2003340	Siemens Industry Inc	THIS REQUISITION IS TO ADD \$ 1,878.00 TO THE FUNDS ON REQ. 2003340	\$50,313
2002035	Valve Reconditioning Service	Lake Huron to have Valve Reconditioning Services restore 2 valves	\$49,999
1901636	Siemens Industry Inc	Robicon 40 & 60 HP 454GT Drive Upgrade	\$48,745
1900624	Industrysafe Inc.	IndustrySafe Proposal	\$48,570
1901904	GHD Services Inc.	Above Ground Storage Tank Inspection for CSO Facilities	\$45,806
Senior and/or Second	The Foster Group LLC	GLWA Portion	\$45,000

Contract Number	Vendor	Contract Description	Amount (Millions)
2000779	Nearmap US Inc.	Nearmap Imagery Subscription	\$45,000
1803350	Hupp Consulting LLC	Consulting Services- Initial term 3 years beginning May 1, 2019	\$44,906
1803013	Emerson Process Management	Optimization of Dissolved Oxygen (DO) Control Process - Offer # WAM17050096 Rev. 7	\$44,426
2002799	Marsh USA Inc.	Property Insurance Renewal Initiative	\$44,262
4000679	Applied Science Inc	Complete: CS-4000679 Services for Water Plant Production Flow Measurement & Related Facility Imp.	\$44,077
2000569	Digital Science Group LLC	Contract for scanning and digitizing documents, blue prints and Operation & Maintenance Manuals that	\$42,847
GLWA-CS-056	Cornerstone onDemand Inc.	Learning Management System with Statement of Work No. 3	\$42,723
1904373	Industrial Furnace Co Inc	Incinerator Fuel Train Systems Inspection and Safety Check	\$42,042
1904449	Brown and Caldwell Constructors	Solicitation Request: Lake Huron Pilot Plant - Design Build Services (CIP 111011)	\$41,520
GLWA-LS-1903589	Littler Mendelson PC	Littler Mendelson, P.C. to assist GLWA in an Employment Matter	\$41,205
1903548	Granicus LLC	Granicus Renewal	\$41,018
1067-1	Kennedy Industries Inc	Service - Pumps & Grinders	\$40,870
1903808	Calls Plus	Ethics and Compliance Hotline Services	\$40,288
1901592	Magnolia River Services Inc.	GIS Strategic Support Services	\$40,280
1802474	Wade Trim Associates Inc	Professional Engineering Services	\$40,172
2004100	Sustema Inc.	Removal and Disposal of existing consoles and installation of new console S	\$39,485
2100149	KnowBe4 Inc.	KnowBe4 (Security Mentor Replacement)	\$39,396
2001492	Crane Technologies Group Inc	Crane repairs for the WWOG/ Req for Water 2002240 waiting approval	\$38,753
1903284	Lakeshore Global Corporation	Springwells Pipe Replacement	\$38,606
1067	Detroit Pump & Mfg Co	Pumps	\$38,223
GLWA-CS-187 (former	FK Engineering Associates	T&M: Inspection, Condition Assessment & Engineering Evaluation of Raw Water Intakes (\$356,078.90)	\$37,870
2002102	CDM Smith Michigan Inc	CDM Smith CAD Specialized Contract request	\$37,847
1803310	Nemeth Law PC	Corey Thomas v. GLWA and Other Related Matters	\$37,810
GLWA-LS-066	Allen Brothers, PLLC	T&M: Legal Rep, Consultation & advice in connection with General Labor Matters	\$37,570
1903597	HDR Michigan, Inc.	Supplemental staffing for WRRF	\$37,361
1903704	Wade Trim Associates Inc	Interim Wet Weather Operation Plan Implementation Assistance	\$37,220
GLWA-LS-2004507	Miller Canfield Paddock & Stone PLC	Legal Representation - General Employment Matters	\$37,030
1901982	Plante & Moran PLLC	Inventory Warehouse Consulting Services	\$36,895
2003625	Smith's Waterproofing LLC	PURCHASE SMITH'S WATERPROOFING TO CAULK AND TUCKPOINT EXTERIOR PARAPET WALL OF EB -1 BUILDING	\$36,600
2000153	Cisco Systems Inc	WebEx Support	\$36,360
1905107	Wade Trim Associates Inc	EVALUATION OF MAXIMIZING CONVEYANCE CAPACITY AT B064 AND B063	\$35,875
LS-2001721	Littler Mendelson PC	Deanne Williams vs Great Lakes Water Authority	\$35,690
GLWA-CS-1732	Tetra Tech of Michigan PC	Complete:Professional Engineering Srvcs for Misc. Mechancial Improvements @ LHWTP	\$35,597
2002180	Siemens Industry Inc	Maintenance of VFD'S for the Dewatering Pumps at WRRF	\$34,306
1903099	HESCO Group Inc	Sewer Flowmeter Installation and Maintenance and Alternative Flowmeter Installation	\$34,047
1900169	Regents of the University of Mich.	Biological Phosphorus Removal Pilot	\$34,016
1900357	Grainger	Warehouse - Cancelled	\$33,870
1900371	Linkedin Corporation	Recruiting/Job Posting (3 Years)	\$33,345
GLWA-LS-221	Attorney Eric V Smith PLC	T&M: Legal Representation, Consultation & advice to GLWA related to Security Matters	\$33,325
2001308	FastSigns Detroit	Vinyl Graphics Services for GLWA Fleet and Facilities	\$33,219
GLWA-LS-031.1	Zausmer, P.C.	Legal Representation, Consultation and Advice - Final Renewal Third Electrical Feed; and EJCDC am	\$33,121
1903529	SkyNorth Software	Trusted Advisor	\$33,075
1802804	OHM Advisors	Capital Improvement Plan Assistance	\$32,890
1802970	Fausone Bohn LLP	General Mill Supply Co., v GLWA and City of Detroit, by and through its Water & Sewerage Department	\$32,706
2001523	Engineering Systems Inc.	Specialized Engineering Analysis for Main Lift Motor #11 (WRRF) & Other Investigations As-Needed	\$32,163
2100156	Plante & Moran PLLC	Vendor Viability Assessment	\$31,513
1803499	GHD Services Inc.	Rehabilitation of Ash Handling Systems at WRRF	\$31,212
1903798	Aero Filter Inc	Warehouse Inventory Items - Filters PO is now #17075 for WAM blanket	\$30,917
2000299	SCI Floor Covering Inc.	Flooring replacement for all GLWA sites	\$30,256
GLWA-LS-1905087	Zausmer, P.C.	Re: Patton Park Easements with Detroit and Dearborn	\$30,220
Senior and/or Second	The Foster Group LLC	GLWA Portion	\$30,000
1903902	RMF Nooter Inc	INCINERATOR SEAL REPLACEMENT FOR #7 & #8	\$29,800
1905080	TWN Consulting LLC	Facilitation and Project Management Services Contract	\$29,551
1602855	Mcnaughton Mckay Electric Company	Tech Connect	\$29,236

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CS-018	BS&A Software	Utility Billing and Cash Receipt Software	\$28,566
1904716	Project Innovations Inc	Continuation of facilitation of project work teams as requested to support Member Oureach	\$27,830
1802858	Collins Einhorn Farrell PC	Legal Representation	\$27,653
1803884	Johnson Controls Fire Protection LP	Service - Remove and Replace Fire Panel	\$27,053
1902433	Michigan CAT	Standby Generator Preventative Maintenance and Repair Services	\$26,587
2002947	Albert Kahn Associates Inc.	200251 Engineering System Services	\$26,310
GLWA-CS-292	METCO Services Inc	Replacement/Rehabilitation of Ferric Chloride System at Pump Station No. 2	\$26,205
GLWA-CS-141	FMLASource Incorporated	Family and Medical Leave Act Administration and Information Services	\$26,079
1903695	Rosemount Analytical Inc	EVALUATION, REPAIR AND COST FOR PGA PROCESS ANALYZERS	\$25,868
1802314	Arcadis of Michigan LLC	Consulting engineering services for HVAC improvements at the Leib CSO Facility.	\$25,532
1904725	Process Improvement Institute Inc.	PHA of Cl2 and SO2 and MOC Training am	\$24,260
1804054	ONYX Engineering Ltd.	St. Aubin CSO Facility Outfall CP-2 (Control Panel 2) Replacement and Relocation	\$24,000
GLWA-SCP-CS-038	AECOM Great Lakes, Inc	Complete: GLWA-SCP-CS-038:Professional Eng. Srvc. for SPWTP Reservoir Fill Line Imp. CIP 1256	\$24,000
GLWA-CON-270	Weiss Construction Co LLC	Isolation Gate Valves for Line Pumps at the West Service Center Pumping Station	\$23,515
2905948	Polydyne Inc	Polydyne Inc filter polymer - Merge with 3289 (renewal two of three)	\$23,460
GLWA-LS-211	Dykema Gossett PLLC	General Environmental Matters and related Litigation	\$23,451
1133	Capturis	Capturis: Utility Billing Management Services - Contract #SCO-1133	\$23,264
1800646	County Fire Protection Inc	Fire systems maintenance & inspection Services (06/15/18- 06/14/20) all locations	\$22,600
1903833	Systems Specialties	Rotork Pakscan Troubleshooting / Addressing / Report	\$22,200
1803604	ESRI Inc.	ESRI Software Maintenance Renewal - Quotations #25869728 & 25924728	\$21,593
GLWA-LS-2100779	Plunkett Cooney PC	Re: Highland Park Appeal	\$21,520
GLWA-LS-2100757	Butzel Long PC	Negotiation of the I-94 Storm Water Discharge Agreement	\$21,338
1803809	Hubbell, Roth & Clark, Inc.	Lieb & Puritan Fenkell: Engineering Services for Existing Site Drainage Issues	\$21,165
2000014	Quinn Evans	Assessment, Recommendations, and Development to Repair Damage to Hurlbut Memorial Gate	\$21,000
2100896	Unconventional Services Inc	Repair and protective paint services with Uncoventional Services for Odor Control Fa	\$20,950
GLWA-LS-050	Dykema Gossett PLLC	T&M: Legal Representation to GLWA with National Pollutant Discharge Elimination System (\$625,000.00)	\$20,626
1904710	Wayne State University	The Occurrence and Fate of Microplastics in Wastewater and Drinking Water Treatment Systems	\$20,599
2001654	Wade Trim Associates Inc	Service: Seawall Inspection and Structural Engineer Report	\$20,500
2002796	ConvergeOne Inc	AVST/ConvergeOne Voicemail Maintenance	\$20,316
1901566	Incinerator Rx Corporation	GLWA Incinerator MACT MMM Emission Testing Assistance	\$20,085
1801844	Kaleidico LLC	Kaleidico - Website Redesign and Maintenance	\$20,000
2004471	Public Sector Consultants	Public Sector Consultants	\$19,920
1900526	Wade Trim Associates Inc	Instrumentation Improvements - Engineering Services during Construction	\$19,503
1902860	Pluralsight	IT Training (Pluralsight) - Sales Order No. Q-275297	\$19,475
GLWA-LS-1900420	Starr Butler, PLLC	Nicole Massey v Great Lakes Water Authority (GLWA)	\$19,331
2002823	Digital Science Group LLC	WRRF- CSO Digital Records Conversion	\$19,032
1904960	PVS Nolwood Chemical Inc	Sodium Hydroxide	\$18,502
2100339	Motor City Electric Co	Motor city electric to provide emergency assistance with repair/repalcement work with switchgear/cable	\$18,449
1903753	Modern Water Inc.	Repair of deltax analyzer, reagents and supplies to run Delta tox analyses for one year at Springwe	\$18,358
2000322	Rose Moving & Storage Co. Inc.	Furniture and Equipment Moving Services	\$18,070
2000343	Eagle Industrial Contracting Inc	Incinerator Damper Door - Maintenance & Repair	\$17,926
2913918	Detroit Salt Company LLC	Salt Rock	\$17,563
2001636	Weingartz Supply Co., Inc.	Blanket PO for for purchase of parts and repairs as needed on GLWA Fleet equipment for 1 year 05/01/2	\$17,056
2003786	Wade Trim Associates Inc	Pump Station Two Grit Channel /Nautical Drone Pilot Study Jason Williams, Engineer, 313.297.0230	\$16,425
1802659	Jackson Lewis P.C.	Attorney shall provide legal representation, consultation and advice	\$16,208
2100382	BigTime Software Inc.	BigTime Renewal	\$15,840
1901340	Gallup Inc	Access Employee Engagement Platform Subscription for Three Years	\$15,750
1904718	Digital Science Group LLC	Digital Imaging Services	\$15,716

Contract Number	Vendor	Contract Description	Amount (Millions)
2002492	United Rentals North America Inc	Blanket PO for equipment rentals as needed by GLWA Fleet for one (1) year 7/1/2020 - 6/30/2021	\$15,218
1905037	PCI LLC	PLC STSTEM UPGRADE	\$15,190
2001396	Santoro Incorporated	Blanket contract for light, medium, and heavy duty truck parts and repair	\$15,183
2000309	Isle Inc.	Artificial Intelligence for Treatment, Network Optimization Technology Scan and Water Quality Sensors	\$15,000
1802860	Plunkett Cooney PC	Legal Representation	\$14,814
2001941	Systems Specialties	Conner Creek Rotork Replacement For SCG - 9 & Puritan Fenkell CSO Trouble Shooting	\$14,794
2002240	Crane Technologies Group Inc	CRANE INSPECTION AND REPAIRS (WATER)	\$14,037
1900227	MSC Industrial Supply Company	Warehouse Inventory Items - Electrical (PO is now #17089 for WAM blanket)	\$13,700
1802878	Hubbell, Roth & Clark, Inc.	Complete: Seven Mile Road Combined Sewer Overflow Basin Renovations	\$13,692
GLWA-LS-2004292	Zausmer, P.C.	Daniels Karim - Claim of Appeal	\$13,343
GLWA-CS-217	Michigan State University	T&M: CS-217 Energy Recovery Assessment (\$355,800.00)	\$12,991
1905014	Linkedin Corporation	LinkedIn Learning Subscription	\$12,500
2000758	Havener Tech	Oakwood CSO : Furnish and Install Geotechnical Polymer/ Water stoppage # 20004	\$12,000
1803542	Pace Analytical	Regulatory Analyses	\$11,920
1030 Battery Mainte	Power Plus Engineering Inc	1031 Battery Maintenance & Testing	\$11,800
2000527	Preferred Contracting Group	Troubleshoot North Hydraulic skid at PS-1	\$11,500
1901453	RJ Stacey LTD	Scheduled and Emergency Repair of Various items at WRRF	\$11,250
1901525	Advance Instrumentation Systems	Service, Supplemental Instrumentation Staff	\$10,800
2004712	Bridgeport Consulting LLC	Bridgeport Consultants Services to assist finance procurment in various area. For two years	\$10,638
GLWA-CS-277	Pure Technologies US Inc	Complete: Fourteen Mile Road PCCP Water Mian Condition Assessment and Pilot Study Evaluation	\$10,500
2000509	Cryogenic Pipe Freezing Solutions	Service - Freezing and replacement of broken valves	\$10,407
2000068	Waste Management Of Michigan Inc	Landfill Service For Lime Stabilized Dewatered Sludge	\$10,393
SCO-1023	ImageSoft Inc	ImageSoft: Amendment No. 1 (SOW #s 1 - 9): Various Subscriptions ESRI/WAM/Web Server Integration	\$10,296
2004700	Project Innovations Inc	Executive and Managerial Training for Water Operations	\$10,235
2003899	International Controls & Equipment	PURCHASE SERVICE AND PARTS TO INSTALL CONTROL BOXES TO ENRTY / EXIT - COPLAND GATE	\$10,175
1901968	Action Mat & Towel Rental	Mat rental services at WRRF for 2 years from 10/1/2019 - 09/30/2021 with two - 1 yr renewal optons	\$10,067
1901155	Environmental Consulting	Drinking Water Monitoring Network Equipment Maintenance & Data Management Services	\$10,000
1904707	Wade Trim Associates Inc	Design and Construction Engineering Services - Oakwood CSO	\$9,902
GLWA-LS-297	Dykema Gossett PLLC	Legal Representation, Consultation & Advise of Boler vs State of Michigan	\$9,744
GLWA-SCP-CS-1721	CDM Michigan, Inc	Complete: GLWA-SCP-CS-1721: Consulting Eng. Srvc @ Leib Screening & Disinfection Facility	\$9,563
1903126	Digital Science Group LLC	New contract to digitally scan documents pertaining to the Springwells plant that are currently store	\$9,520
1903684	Hazen and Sawyer	Grit Removal Optimization - Grit Sampling and Characterization Study	\$9,443
2002946	NTH Consultants Ltd	Environmental Health and Safety Compliance Service Replacement contract for CS-213	\$9,281
GLWA-LS-2003057	Fausone Bohn LLP	Water and sewer services to the City of Dearborn	\$9,102
2003659	PEA Group	Surveying Services for the property located at 5181 East Outer Drive in the City of Detroit, County o	\$8,810
1903303	Wade Trim Associates Inc	Upper Main Rouge River Outfalls Survey Summary	\$8,739
GLWA-LS-1903626	Starr Butler, PLLC	Provide legal representation to GLWA for General Employment Matters	\$8,706
2100477	ASTI Environmental	Environmental Assessment at 5181 E. Outer Dr., Detroit, MI	\$8,480
1153	Cintas	Service - Uniforms	\$8,467
1147	Siemens Industry Inc	Blanket for Siemens - repair/maint. Lake Huron VFD drives -	\$8,328
cs-1771	Tetra Tech of Michigan PC	Complete: Condition Assessment, Design of Filter and Flow Instrumentation	\$7,920
2000388	The Allen Law Group PC	General Employment/ Labor Matters	\$7,890
1700774	Plante & Moran PLLC	Professional Services	\$7,848
1903542	Commerce Controls Inc	Provde supplemental programming staff to configure PLC and SCADA s	\$7,825
LS-1905017	Plunkett Cooney PC	General Organizational Development Matters	\$7,591
GLWA-LS-294	Dickinson Wright PLLC	T&M: Legal Representation, Consultation and Advice in connection with ERISA issues	\$7,510
GLWA-LS-100	Zausmer August & Caldwell PC	T&M: Legal Rep. with vendor performance issues in Construction -CS-1443,CS-1305,CS-1499 (\$200,000.00)	\$7,398
1903456	Amazon Web Services Inc	CS-1903456: 06/2020: Web Services	\$7,355

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-LS-139	Williams Acosta PLLC	T&M:Highland Park v USEPA United States District Court Case No. 2: 16-cv-13840-SJM-DRG (\$300,000.00)	\$7,303
GLWA-CS-116	Hubbell, Roth & Clark, Inc.	Complete: CS-116: Conner Creek RTB Emergency Work CIP 1384 (\$ 310,029.80)	\$7,291
1900107	Kopka Pinkus & Dolin PC	General Mill Supply Co v. Great Lakes Water Authority and City of Detroit	\$7,290
1903258	Aston Carter Inc.	NTE Contract for placement fees and recruiting service for Aston Carter & Aerotek, Inc.	\$7,179
GLWA-LS-202	Williams Acosta PLLC	T&M: Property Matters including Sales, Easements, Encroachments, Condemnations & Purchase of Property	\$7,113
GLWA-LS-2000330	Summerville Law Firm PLLC	In re: 5851 W. Jefferson Avenue, Detroit, MI	\$6,943
1904955	Alpha Psychological Services PC	Psychological Assessment & Evaluation	\$6,735
1140	Cintas	Service - Uniforms	\$6,480
GLWA-LS-044	Allen Brothers, PLLC	T&M: Legal Rep, consultation & advice regarding the City of Flint Health Concerns	\$6,303
GLWA-SCP-CS-062	Hubbell, Roth & Clark, Inc.	Complete: CS-062: Line Pump Discharge Design Service	\$6,300
2002275	Wolverine Power Systems	Blanket PO for generator repairs and maintenance at CSF for three (3) years	\$6,050
1802833	Treadwell & Associates Inc	Professional Services Contract	\$6,000
4000700	Dunbar Mechanical, Inc.	04/30/2020: Cooling Unit	\$5,783
1901621	Hennessey Engineers Inc.	Registered Licensed Surveyor	\$5,700
1904795	Kokosing Industrial Inc.	Excavation required to determine what large object is underground and in the path of installation of	\$5,484
1903976	Systems Specialties	7 Mile CSO : Rotork Factory Startup	\$5,280
GLWA-CS-163	Plante & Moran PLLC	Project Management Services	\$5,250
1904037	Echologics LLC	PCCP Transmission Main Non-Destructive Testing	\$4,999
1900230	Black Anvil Construction Supplies	Warehouse Inventory Items - Hardware (PO is now #17082 for WAM blanket)	\$4,898
1902110	Rehmann Robson	Technical Consulting Services	\$4,800
1900251	Binkelman Corporation	Warehouse Inventory Items - Mechanical (PO is now #17101 for WAM blanket)	\$4,763
3082	Polydyne Inc	Polymer	\$4,692
1036 DETROIT LEGA	Detroit Legal News	Detroit Legal News	\$4,657
2001596	Sunbelt Rentals, Inc.	Blanket PO for on demand equipment rentals 05/01/2020 - 04/30/2022 MiDeal	\$4,519
2002514	Re-Source Partners	IT ASSET DISPOSAL SERVICES MiDeal	\$4,500
2002722	Siemens Industry Inc	Siemens Quotation Number: Q2075268-R1 for 3 year TSA (27,000.00/YR) SPV	\$4,500
1901083	Sellinger Associates Inc	Design services for HVAC Controls project for Lab relocation	\$4,200
LA-2001482	Hantz Farms LLC	This Lease is entered into on May 1, 2020, between the Hantz Farm, LLC, located at 26200 American Dr,	\$4,000
2001606	Paragon Laboratories Inc	Sampling	\$3,987
2002349	Michigan CAT	MI Cat - Blanket PO for construction equipment parts and maintenance services for two (2) years	\$3,982
1802235	Heritage Vision Plans	Safety Glasses	\$3,911
1904095	Action Impact - Eastpointe	Firearm Certification Training	\$3,864
GLWA-LS-175	Steven H Schwartz & Associates PLC	Labor Law Matters (\$700,000.00)	\$3,614
GLWA-LS-203	Kitch Drutchas Wagner Valitutti	T&M: Basement Flooding Legislation, Risk Management and Regulatory Matters (\$120,000.00)	\$3,240
2000536	Edward Malindzak	Consulting Services for Compensation Analysis	\$3,225
1802312	Evoqua Water Technologies LLC	PM Services for 4 DI Units twice per year	\$3,187
2003851	Bert's Testing & Training Services	Provide training to GLWA team member for CDL class A and B licenses. Over next 3 years with a 1 year	\$3,006
1902309	Digital Science Group LLC	Digital Scans of Sorted Contract Books, CS Reports, Photos and Shop Drawings Filed in WRRF Document C	\$3,000
GLWA-CS-233	LexisNexis	T&M: Lexisnexis Subscription Agreement (\$20,000.00)	\$2,952
1803422	Iron Mountain	Iron Mountain Storage for FR&A and Treasury Documents 5 Year Contract	\$2,750
GLWA-LS-2004810	O'Reilly Rancilio P.C.	Stoney Creek Villas Apartments - Pond Maintenance	\$2,750
GLWA-LS-043	Ossian Law PC	T&M: Legal Representation to GLWA for Information Techology Contracts (\$750,000.00)	\$2,725
2001970	L.I.J.B.S. Enterprises, LLC	Blanket PO for towing services for all GLWA vehicles	\$2,703
2000876	ShredCorp.	ShredCorp Services Description for REQ 2000876 Shredding Services On-site shredding services to shred	\$2,600
1902806	Process Control Services Inc	Trained Field Service Engineer for Actuator Services	\$2,596
GLWA-LS-131	Neville-Ewell PLLC	T&M:Legal Rep. Consultation & Advice to GLWA with Municipal Matters etc. (\$225,000.00)	\$2,100
1900250	MSC Industrial Supply Company	Warehouse Inventory Items - Industrial Lubricants (PO is now #17086 for WAM blanket)	\$2,079
CS-115	HireRight, LLC	Provide Assistance to GLWA for Background Screening Services (\$ 35,000.00)	\$2,067

Contract Number	Vendor	Contract Description	Amount (Millions)
GLWA-CS-115	HireRight, LLC	Provide Assistance to GLWA for Background Screening Services (\$ 35,000.00)	\$2,062
2001645	Plante & Moran PLLC	Compensation Strategy & Communication for Organizational Development	\$1,881
1803675	Arcadis of Michigan LLC	Complete: Baby Creek: Engineering Services for HVAC Improvements	\$1,871
GLWA-LS-2100663	Clark Hill	Employment/Labor Matter	\$1,776
GLWA-CS-501	Jones Lang Lasalle Michigan LLC	Real Estate Brokerage Services	\$1,700
2864398	RS Technical Services Inc	Various Parts: valves, diaphragms, o-rings, kits, etc.	\$1,607
2001969	Troy's Towing Inc.	Blanket PO for towing services for all GLWA vehicles	\$1,595
GLWA-CS-298	PES Group Inc	Emergency Overhead Installation of 120 kV overhead lines to the 3rd incoming Transformer C	\$1,440
1903931	Discovery Solutions Inc	Faxcore Support	\$1,269
1904515	Towlift Inc	Preventative Maintenance - TRACKMOBILE FOR CHLOR/DECHLOR	\$1,250
GLWA-CS-291	Alfred Benesch & Associates	Complete: General Engineering Services	\$1,057
1903449	Alfred Benesch & Associates	Relocation of Existing Fire Suppression System (design)	\$1,029
2004002	DLT Solutions LLC	BIM 360 Docs Assistance and Support	\$899
2002059	Tredroc Tire Services, LLC	Tredroc Blanket PO for purchase of tires as needed by GLWA Fleet for 1 year 06/01/2020 - 05/31/2021	\$835
2897583	VWR International	JIT Chemicals/Lab Supplies MiDeal	\$789
1804095	Hazen and Sawyer	Expert Opinion Services for Value Engineering of Large Scale Sanitary and Storm Water Facilities	\$720
RFB 1122	Merit Laboratories Inc	Reagent Water Testing for Bacteriological Suitability and Metals	\$670
2002363	Xerox Corporation	Print Shop Upgrade 36 months Omnia Co-Op	\$534
2003099	Macomb Mechanical Inc	Macomb Mechanical Renewals on CSF, WBB, and WRRF HVAC systems	\$529
1903797	MSC Industrial Supply Company	Warehouse Inventory Items - Belts (PO is now #17068 for WAM blanket)	\$495
2101055	Logan Glass Company	One year Blanket PO beginning April 1, 2021, window glass, glass,accessories and tools.	\$463
6898	GDI Services Inc	Blanket PO for janitorial services at GLWA facilities for one (1) year 04/06/2019 - 04/05/2020 am	\$360
2861580	TestAmerica Laboratories Inc	Payment	\$350
GLWA-LS-188	Williams Acosta PLLC	T&M: Legal Rep. to GLWA for Abraham Greer v City of Detroit Case No. 16-012832-CZ (\$300,000.00)	\$222
1900355	Grainger	Warehouse **Cancelled**	\$192
1904458	Clark Hill	Make-up Benefits for a One Year Period - November 8, 2019 - November 8, 2020	\$150
1804145	Schreiber Corporation	7 Mile CSO: Faciliy Roof Repair/Preventative Maintenance	\$0
GLWA-CON-208	Detroit Contracting Inc	WWP WTP Chlorine Disinfection System Replacement and Improvements	-\$31,522
Grand Total			\$321,802,820

Top Ten Vendors Invoiced	Invoice Count	Purchase Order Count	Total Amount (Millions)
DTE Energy	4347	1	\$42,191,257.6
Lakeshore Global Corporation	140	15	\$33,489,508.2
Weiss Construction Co LLC	145	14	\$27,768,272.5
Inland Waters Pollution Control Inc	15	2	\$15,905,946.9
Jay Dee Contractors Inc.	20	2	\$14,804,905.1
AECOM Great Lakes, Inc	25	3	\$13,889,012.6
New England Fertilizer Company	12	2	\$13,018,152.4
AT&T	59	3	\$12,817,343.4
Walsh Construction Company	25	2	\$12,411,855.0
Kokosing Industrial Inc.	43	4	\$12,386,832.7
Ric-Man Construction Inc	39	4	\$11,847,680.8
Ballard Marine Construction LLC	20	2	\$10,967,907.9
Commercial Contracting Corporation	68	6	\$10,488,223.9
Jacobs Consultants, Inc.	23	2	\$9,896,343.2
Pullman SST, Inc.	35	4	\$9,291,002.8
Clark Construction Company	18	2	\$7,505,938.1
Rotor Electric Co	25	4	\$6,031,233.5
Brown and Caldwell LLC	68	6	\$5,721,464.2
State of Michigan - Natural Gas	16	1	\$5,551,291.0
Salenbien Trucking & Excavating Inc	15	2	\$4,786,652.2
Arcadis of Michigan LLC	52	6	\$4,655,005.9
Board of Water Commissioners	70	1	\$4,489,156.5
Mobile Dredging & Video Pipe Inc	5	1	\$4,441,180.2
Barton Malow Company	29	3	\$4,391,977.2
Marra Services Inc	20	3	\$3,587,509.0
Enterprise Fleet Management	11	1	\$3,485,650.4
CDM Smith Michigan Inc	29	6	\$3,384,046.1
PCI LLC	53	9	\$3,221,247.0
Wade Trim Associates Inc	94	11	\$3,197,397.1
Major Cement Company	7	2	\$2,975,680.4
Chemtrade Chemicals US LLC	465	5	\$2,866,334.1
PVS Nolwood Chemical Inc	409	15	\$2,698,226.3
Tooles Contracting Group LLC	9	3	\$2,533,571.3
Linde Inc.	63	4	\$2,258,216.3
DXC Technology Services LLC	13	1	\$2,114,936.0
Hazen and Sawyer	43	6	\$2,113,347.6
Kemira Water Solutions	394	1	\$1,908,966.0
Emerson Process Management	13	5	\$1,647,109.7
PMA Consultants LLC	12	1	\$1,620,006.2
Dunbar Mechanical, Inc.	36	8	\$1,614,099.5
GDI Services Inc	193	6	\$1,587,302.6
Detroit Water and Sewerage	25	3	\$1,524,000.0
CH2M Hill Engineers Inc	22	2	\$1,469,107.1
OHM and WSP, A Joint Venture	12	1	\$1,408,097.6
Premier Group Associates LC	259	14	\$1,367,219.4
Polydyne Inc	157	8	\$1,192,761.4
Motor City Electric Co	36	6	\$1,146,386.4
Water Research Foundation	11	11	\$1,145,036.0
Jack Doheny Companies Inc	8	6	\$1,141,536.6
Dell Computer Corporation	19	10	\$1,086,927.1
Schreiber Corporation	22	16	\$1,047,946.4
JCI Jones Chemicals Inc	145	9	\$971,832.8
Grainger	1074	640	\$959,820.5
FK Engineering Associates	25	2	\$939,568.9
Applied Science Inc	10	2	\$938,872.8
Flowserve US Inc	2	1	\$927,438.6
Marsh USA Inc.	11	3	\$901,321.5
Hydromax USA LLC	8	1	\$887,982.7
DE-CAL Inc	16	2	\$870,814.6

J F Cavanaugh Company	34	3	\$858,646.3
Somat Engineering Inc	14	1	\$848,794.5
LaSalle Construction Services	28	3	\$832,907.4
LimnoTech	3	1	\$832,329.3
Waste Management Of Michigan Inc	426	16	\$816,428.0
HESCO Group Inc.	21	14	\$799,997.5
CDW Computer Centers Inc	106	50	\$759,939.9
Dan's Excavating Inc.	4	1	\$714,931.9
Experis US Inc	144	11	\$629,104.7
Mcnaughton Mckay Electric Company	173	120	\$597,713.0
Praxair Inc	16	4	\$590,106.4
Atlas Bleachers	8	1	\$569,960.0
Plante & Moran PLLC	40	9	\$567,760.0
Bridgeport Consulting LLC	13	2	\$566,676.4
Verizon	5	1	\$555,684.0
Preventive Maintenance Technologies	228	2	\$545,509.3
CDM Michigan, Inc	12	2	\$543,473.6
CCH Tagetik	22	2	\$538,737.8
Truck & Trailer Specialties Inc.	55	1	\$529,393.7
Systems Specialties	50	29	\$521,604.2
HDR Michigan, Inc.	26	3	\$520,393.7
Hach Company	167	54	\$520,069.4
Hart EMS Medical Services PLLC	50	2	\$510,025.0
Thyssenkrupp Elevator Corp	29	12	\$503,778.8
Conti Corporation	45	4	\$503,442.5
The Foster Group LLC	19	5	\$490,000.0
Epitec Inc	149	4	\$485,014.3
Regents of the University of Mich.	30	3	\$468,812.8
Aquasight LLC	7	2	\$464,467.0
RS Technical Services Inc	71	63	\$463,221.1
Dykema Gossett PLLC	70	5	\$435,937.1
City of Livonia	1	1	\$433,954.9
Access Interactive	4	1	\$429,052.0
Ceridian HCM Inc	24	1	\$428,301.1
The Osborn Engineering Company	7	1	\$408,764.0
PVS Technologies Inc	10	1	\$401,074.1
PTS Contracting	12	2	\$400,154.2
Waterfront Petroleum Terminal Co.	104	2	\$395,316.8
NTH Consultants Ltd	22	2	\$378,903.6
Black & Veatch Ltd Of Michigan	9	3	\$378,754.0
GALCO Industrial Electronics	83	64	\$376,707.4
Kennedy Industries Inc	25	14	\$356,287.1
Siemens Industry Inc	31	22	\$355,536.2
Carlette Construction & Consulting	5	2	\$354,969.2
Storage Operations LLC	2	1	\$346,278.0
Colasanti Construction Services	2	2	\$334,882.3
Motor City Pipe & Supply Co	251	214	\$327,930.2
JGM Valve Corporation	49	43	\$323,219.0
HESCO Group Inc	9	9	\$323,177.3
Data Consulting Group Inc	14	2	\$322,400.0
Custom Ecology of Ohio Inc	83	3	\$321,791.3
W C Ducomb Company	26	26	\$312,293.0
METCO Services Inc	21	3	\$311,474.9
Oakland County WRC	1	1	\$300,000.0
PFM Asset Management LLC	13	2	\$293,947.2
Zausmer, P.C.	44	5	\$282,121.3
America's Green Line	1	1	\$270,850.0
DMC Consultants, Inc.	14	2	\$269,368.0
Detroit Pump & Mfg Co	38	31	\$269,051.1
VWR International	880	29	\$268,160.2
Broadspire Services Inc	37	1	\$249,903.3
Idexx Laboratories	64	22	\$243,653.6

Enterprise Holding Inc.	61	2	\$241,336.4
Linko Technology Inc	3	1	\$240,435.0
Fleishman Hilliard Inc	12	2	\$233,754.4
New Technology Development	6	1	\$229,774.8
State of Michigan	8	2	\$219,786.9
Phoenix Environmental Inc	19	6	\$219,220.6
Alfa Laval Inc	11	10	\$210,295.3
Trimble Inc	19	8	\$208,318.3
FM Sylvan, Inc.	2	2	\$206,275.9
Interstate Trucksources Inc	2	2	\$206,155.9
Rickman Enterprise Group LLC	12	1	\$202,254.6
Structural Preservation Systems	2	1	\$200,760.0
WSP Michigan Inc.	12	1	\$200,429.4
Avante Solutions, Inc.	9	1	\$200,098.7
Professional Service Industries Inc	6	1	\$198,338.7
Johnson Controls Fire Protection LP	31	5	\$195,990.4
Baker Tilly Virchow Krause, LLP	6	1	\$189,596.0
SE Michigan Council of Governments	3	3	\$187,168.0
Johnson Controls Inc.	91	7	\$187,127.8
Michigan State University	14	3	\$183,047.5
American Gear & Engineering, Inc	9	3	\$181,845.0
Cintas	723	38	\$181,493.1
Eastern Oil Company	36	8	\$175,685.0
HORIZON Lab Systems	8	2	\$173,136.0
Spence Brothers	4	2	\$171,608.4
Allingham Corporation	39	13	\$167,014.0
Sigma Associates Inc	25	3	\$165,927.1
Madison Electric Company	37	32	\$164,702.9
Walsh College of Accountancy & B.A.	1	1	\$160,000.0
Experis Finance US LLC	17	3	\$155,807.0
Premier Safety	63	39	\$150,432.1
Capp USA	33	27	\$150,128.0
Veolia Water Technologies Canada	2	2	\$150,025.4
Metro Welding Supply Corporation	224	51	\$149,093.0
Heco Industrial Service Group, Inc.	1	1	\$148,241.0
Clayton Industries	12	5	\$148,053.6
Alfred Benesch & Associates	13	3	\$147,292.0
Crane Technologies Group Inc	56	18	\$146,628.5
MSC Industrial Supply Company	218	114	\$145,255.6
Agilent Technologies Inc	4	3	\$145,224.9
Hubbell, Roth & Clark, Inc.	13	5	\$141,158.1
SEMCO Energy	12	1	\$138,797.8
Rose Pest Solutions	45	3	\$137,592.0
Actuator Specialties	13	13	\$137,329.1
KamarOE	575	30	\$137,268.6
D/A Central Inc	98	2	\$135,480.8
Lubrication Engineers Inc.	21	7	\$131,747.2
Public Sector Consultants	14	2	\$129,892.3
Great Lakes Pump & Supply Co	1	1	\$129,712.3
United States Geological Survey	1	1	\$128,500.0
W.S.I. Industrial Services, Inc.	24	1	\$126,822.5
City of Dearborn	26	1	\$126,716.1
JMK Engineering, Inc	19	1	\$125,312.0
Tetra Tech of Michigan PC	16	3	\$123,864.9
Jett Pump & Valve LLC	5	5	\$122,572.1
Aerotek Inc.	74	2	\$121,018.8
Interior Environments LLC	20	11	\$120,466.0
The Creative Group	51	1	\$119,478.3
Future Fence Company	30	1	\$117,611.0
CDM Constructors Inc	1	1	\$117,508.4
Unifirst Corporation	411	1	\$117,094.6
EJ USA Inc	2	23	\$117,039.2

Bonfire Interactive Ltd	1	1	\$117,000.0
Steinhardt Pesick & Cohen, P.C	1	1	\$114,203.3
Forberg Scientific Inc	4	4	\$112,944.0
Fishbeck	4	1	\$112,008.7
Process Wastewater Technologies LLC	1	1	\$110,900.0
Merrick Industries Inc.	1	1	\$110,292.0
West Coast Labour Systems Corp	2	1	\$108,497.2
Zones Inc	3	3	\$107,517.5
JWC Environmental Inc.	5	5	\$105,344.2
The Christman Company	2	1	\$104,374.5
Trendset Communications Group, LLC	6	5	\$103,658.8
Carahsoft Technology Group	3	2	\$103,117.3
GHD Services Inc.	15	4	\$101,572.8
Birclar Electric & Electronics LLC	6	3	\$99,955.0
Sulco Chemicals Limited	19	1	\$99,252.7
360water, Inc.	3	1	\$99,123.0
Commercial Construction Inc.	5	4	\$95,771.3
Power Process Piping, Inc.	1	1	\$95,264.0
Advance Instrumentation Systems	6	4	\$94,940.0
Integrated Power Services LLC	2	1	\$94,533.0
Detroit Salt Company LLC	12	10	\$93,305.6
Howard Commercial Door	7	7	\$92,079.0
Secure Door LLC	75	1	\$91,076.3
FranklinCovey Client Sales Inc.	1	1	\$90,950.0
Digital Science Group LLC	8	5	\$90,114.7
Isle Inc.	4	3	\$87,500.0
Amazon Web Services Inc	12	3	\$86,934.2
Smartsheet Inc	1	1	\$85,000.0
Merit Laboratories Inc	81	15	\$83,078.0
Wayne State University	9	2	\$82,955.3
Xylem Dewatering Solutions Inc	1	1	\$82,688.5
Rosemount Analytical Inc	10	7	\$82,625.1
Vieux & Associates Inc.	19	3	\$80,210.0
David D. Taylor	25	1	\$79,432.8
Nelson Liquid Drive LLC	1	1	\$79,200.0
Wayne Health	1	1	\$79,182.0
National Association of Clean Water	1	1	\$78,955.0
Robert Half Finance & Accounting	10	1	\$78,925.0
Herc Rentals Inc.	65	7	\$78,633.3
Unemployment Insurance Agency	3	1	\$78,320.7
Townsend Search Group, LLC	17	1	\$77,825.0
Littler Mendelson PC	14	2	\$76,894.0
State of Michigan - EGLE	35	1	\$76,864.7
Elvira P. Jenkins	1	1	\$76,662.4
Williams Acosta PLLC	47	4	\$75,497.1
Hugh Connolly	12	1	\$75,270.0
Emphasys Software	2	1	\$74,000.0
Titus Welding Company Inc	4	2	\$73,899.6
Robert M Kowal	12	1	\$73,225.0
Energy Products Inc	10	9	\$73,052.2
Cartridge Savers Inc	130	1	\$73,011.6
Lockton Companies LLC	12	1	\$71,069.4
Ingersoll Rand Company	7	4	\$70,584.4
Seagull Control Systems LLC	3	3	\$70,412.0
Caniff Electric Supply Co., Inc.	31	15	\$70,393.1
Geotab USA, Inc.	17	1	\$68,809.2
DES Electric LLC	4	2	\$68,346.0
Fort Gratiot Charter Township	4	1	\$68,281.6
Yates Industries Inc	14	11	\$67,838.8
OSIsoft LLC	1	1	\$67,815.0
Smith's Waterproofing LLC	7	6	\$67,171.0
Tom Holzer Ford Inc.	1	1	\$66,858.6

Arie Farmington LLC	1	1	\$66,600.0
R.P. Adams	1	1	\$65,594.0
A/C Service & Repair Inc.	2	2	\$65,555.0
Santoro Incorporated	9	3	\$65,490.1
Michigan.com	3	3	\$65,472.1
Re-Source Partners	2	2	\$63,550.0
Wayne County Community College	6	6	\$62,935.0
Park Rite Inc	12	1	\$62,400.0
CK Environmental, Inc.	7	1	\$61,428.0
Barris Sott Denn & Driker	11	1	\$60,684.5
Henry Ford Health System	12	1	\$60,312.0
Binkelman Corporation	29	19	\$59,029.8
MetalFab Inc	26	26	\$57,861.0
ANSYS, Inc.	1	1	\$56,377.6
US Bank	15	11	\$55,200.0
39050 Grand River LLC	1	1	\$54,545.6
Kerr Pump and Supply, Inc.	4	2	\$53,961.0
Suburban Haggerty Property, LLC	1	1	\$52,878.4
Miss Dig System Inc.	2	2	\$52,611.7
Carmeuse Lime & Stone	8	1	\$52,156.5
MacAllister Machinery Co Inc	30	14	\$51,889.7
Valve Reconditioning Service	2	2	\$51,835.0
City Of Allen Park	3	1	\$51,694.6
Jim Myers & Sons, Inc.	7	5	\$51,520.0
Info-Tech Research Group Inc	1	1	\$50,646.4
USA Bluebook - Main	18	16	\$50,185.3
Allie Brothers Inc	188	2	\$50,056.5
Gray Matter Systems LLC	1	1	\$49,991.9
DP Brown Of Detroit Inc	18	12	\$49,938.9
Alfonsi Railroad Construction Co	1	1	\$49,786.0
SkyNorth Software	12	2	\$48,825.0
Electrical Workers Insurance Fund	68	1	\$48,578.0
Industrysafe Inc.	2	1	\$48,570.0
Fred's Key Shop	11	5	\$47,195.8
Baileigh Industrial	3	3	\$47,080.3
Detroit Boiler Company	1	1	\$46,895.0
Central Oil LLC	3	3	\$46,718.5
Wadsworth Solutions Northwest	6	6	\$46,718.0
The Macomb Group Inc	66	32	\$46,024.6
Linkedin Corporation	2	2	\$45,845.0
Industrial Furnace Co Inc	2	2	\$45,587.0
Professional Pump Inc	1	1	\$45,514.0
Consumers Energy	92	1	\$45,152.1
Nearmap US Inc.	1	1	\$45,000.0
Hupp Consulting LLC	9	1	\$44,906.0
Univar USA Inc	10	4	\$44,311.0
Plunkett Cooney PC	25	3	\$43,924.4
Marshall E. Campbell Company	34	22	\$43,880.8
Allen Brothers, PLLC	21	2	\$43,873.8
Sehi Computer Products Inc	5	3	\$42,852.8
Cornerstone onDemand Inc.	1	1	\$42,723.0
Fausone Bohn LLP	14	2	\$41,807.1
Granicus LLC	1	1	\$41,018.2
Aircentric Corporation	7	7	\$40,827.0
Calls Plus	2	1	\$40,287.5
Magnolia River Services Inc.	4	1	\$40,280.0
Edwards & Jennings, PC	1	1	\$40,000.0
Innovyze Inc	1	1	\$39,941.3
Graybar Electric Company	46	32	\$39,925.2
Laird Plastics	3	3	\$39,648.8
Sustema Inc.	1	1	\$39,484.9
Vitalsmarts LC	9	1	\$39,455.0

Access Inc	2	2	\$39,447.8
KnowBe4 Inc.	1	1	\$39,396.0
Barta Sales LLC	11	10	\$39,380.9
Excalibur Engineering LLC	1	1	\$38,900.0
Newton Manufacturing Company	4	4	\$38,332.0
Project Innovations Inc	16	2	\$38,065.0
Nemeth Law PC	13	1	\$37,809.8
Alexander Chemical Corporation	6	2	\$37,723.9
United Rentals North America Inc	16	8	\$37,582.9
Gutermann Inc.	1	1	\$37,540.0
Brown and Caldwell Constructors	2	2	\$37,367.6
DLT Solutions LLC	4	4	\$37,079.7
Midwest Municipal Instrumentation	4	4	\$36,690.1
Cisco Systems Inc	12	1	\$36,360.0
Powder Bulk Products Inc	3	3	\$35,269.0
Christy Glass Company, Inc.	2	2	\$35,251.8
Miller Canfield Paddock & Stone PLC	7	2	\$34,530.0
Gexpro	3	3	\$34,206.3
Stephanie M. Stevenson	2	1	\$33,667.4
Macomb Mechanical Inc	14	11	\$33,531.0
Attorney Eric V Smith PLC	11	1	\$33,325.0
FastSigns Detroit	7	1	\$33,218.9
OHM Advisors	12	1	\$32,890.0
Ancona Controls Inc.	4	3	\$32,667.1
Harold Beck & Sons Inc	3	3	\$32,613.4
HP INC	18	2	\$32,608.3
Cosa Xentaur Corporation	2	2	\$32,445.7
Rosemount Inc	4	4	\$32,442.5
Dubois-Cooper Associates Inc	1	1	\$32,334.0
City of Detroit	36	1	\$32,278.7
The Lab Depot Inc	4	2	\$32,273.4
Engineering Systems Inc.	2	1	\$32,163.4
Michigan CAT	28	5	\$32,122.1
iPROMOTEu.com Inc	1	1	\$32,074.4
Aero Filter Inc	40	3	\$31,797.0
Choctaw-Kaul Distribution Company	35	21	\$31,276.6
Virtual Graffiti Inc	1	1	\$30,553.2
SCI Floor Covering Inc.	1	1	\$30,256.0
RMF Nooter Inc	1	1	\$29,800.0
Cornell Field Vibration Service Inc	27	3	\$29,750.0
ProPac Inc.	1	1	\$29,611.4
TWN Consulting LLC	10	1	\$29,550.5
EnviroCare International Inc.	4	3	\$29,516.5
Communications Professionals Inc	15	14	\$29,420.6
SDSpro LLC	1	1	\$29,090.0
ADVISA	1	1	\$29,000.0
SBT Instruments A/S	4	4	\$28,675.5
BS&A Software	2	1	\$28,566.0
Oracle America Inc	2	2	\$28,125.0
Ayyeka Inc.	1	1	\$28,045.0
Starr Butler, PLLC	25	2	\$28,037.0
Collins Einhorn Farrell PC	8	1	\$27,653.0
Corey Thomas	1	1	\$26,608.2
Albert Kahn Associates Inc.	2	1	\$26,310.0
FMLASource Incorporated	5	1	\$26,079.5
NOAR Technologies	3	3	\$25,976.1
Best Aire Compressors Services Inc	15	7	\$25,975.5
SW Controls Inc	5	5	\$25,413.5
Friends of the Rouge	1	1	\$25,000.0
ZOHO Corporation #4926	1	1	\$24,970.0
Carlson-Dimond & Wright Inc	1	1	\$24,906.0
Federal Pipe & Supply Co Inc	47	35	\$24,529.4

Association of Metropolitan Water	1	1	\$24,415.0
Process Improvement Institute Inc.	2	1	\$24,260.0
Fishbeck, Thompson, Carr & Huber	1	1	\$24,197.0
ONYX Engineering Ltd.	1	1	\$24,000.0
Capturis	12	1	\$23,264.0
Ferguson Waterworks	2	2	\$23,201.4
Tracker	14	2	\$23,150.0
Waterworks Systems & Equipment Inc	3	3	\$23,115.0
County Fire Protection Inc	1	1	\$22,600.0
Alro Steel Corporation	4	4	\$22,349.3
S P Kinney Engineers Inc	3	3	\$21,885.5
AVE Office Supplies	95	4	\$21,782.0
ESRI Inc.	3	1	\$21,593.2
Safety Services Inc	28	23	\$21,458.4
Durawear Glove & Safety Co. Inc.	9	9	\$21,438.4
Butzel Long PC	2	1	\$21,337.5
Mount Holly Ski Resort Inc	1	1	\$21,101.0
Quinn Evans	5	1	\$21,000.0
Havener Tech	2	2	\$21,000.0
Unconventional Services Inc	1	1	\$20,950.0
Pace Analytical	13	2	\$20,772.0
CL, LLC	1	1	\$20,521.6
The Transmitter Shop	1	1	\$20,495.0
Akeel & Valentine PLC	1	1	\$20,417.0
ConvergeOne Inc	2	1	\$20,315.6
Incinerator Rx Corporation	2	1	\$20,085.0
Kaleidico LLC	16	1	\$20,000.0
Schneider Electric IT USA, Inc	3	2	\$19,867.0
American Tower Management LLC	14	1	\$19,822.4
Henry Ford College	3	3	\$19,493.9
Pluralsight	1	1	\$19,475.0
TPC Training	1	1	\$19,080.0
Cincinnati Babbitt Inc	2	2	\$19,068.0
Modern Water Inc.	14	5	\$18,357.9
Frontier Communications	9	1	\$18,231.3
Rose Moving & Storage Co. Inc.	1	1	\$18,070.0
Wolverine Power Systems	9	3	\$17,927.2
Eagle Industrial Contracting Inc	1	1	\$17,926.0
Overhead Door West Commercial Inc	18	17	\$17,910.5
Air Dimensions Inc	2	2	\$17,850.6
Qmarkets USA Inc.	1	1	\$17,400.0
Teri J Gorman PLLC	1	1	\$17,317.8
Major Brand Oil Company Inc	3	3	\$17,283.6
Preferred Contracting Group	2	2	\$17,250.0
Weingartz Supply Co., Inc.	6	1	\$17,055.9
Environmental Resource Associates	24	21	\$16,953.1
Newark Element14	1	1	\$16,481.6
Jackson Lewis P.C.	11	1	\$16,207.9
Scaffold Training Institute	1	1	\$16,050.0
Anderson Process	1	1	\$16,034.0
Service Electric Supply Inc	32	26	\$15,899.8
BigTime Software Inc.	1	1	\$15,840.0
Core Electric Company Inc	4	4	\$15,783.1
Gallup Inc	1	1	\$15,750.0
Canfield Equipment Service Inc	2	2	\$15,698.6
Ritter US LLC	1	1	\$15,375.0
Enerco Corporation	4	1	\$15,188.0
Solomon Diving Inc.	3	2	\$15,160.0
E2intel	2	2	\$15,000.0
Powell Fabrication & Manufacturing	3	3	\$14,972.4
Xerox Corporation	14	3	\$14,905.7
Evoqua Water Technologies LLC	9	7	\$14,829.3

Paragon Laboratories Inc	21	5	\$14,639.0
Recycle Waste Services Inc.	3	1	\$14,479.1
SafetySkills, LLC	1	1	\$14,400.0
Scientific Methods Inc	13	1	\$14,245.0
Power Plus Engineering Inc	2	2	\$14,100.0
CSX Transportation	9	1	\$13,916.6
SD Myers Inc.	2	2	\$13,797.0
Uline, Inc.	32	20	\$13,664.7
Kent Air Products Inc	2	1	\$13,629.0
Trace Analytical Laboratories Inc	18	5	\$13,600.5
Consulting-Portal Inc	1	1	\$13,490.0
Black Anvil Construction Supplies	30	7	\$13,377.2
TestAmerica Laboratories Inc	16	4	\$13,322.5
G.E. Distribution Service/ipromoteu	5	5	\$13,303.8
KSB Dubric Inc	1	1	\$13,208.0
EH Wachs	4	4	\$12,909.4
MSC Filtration Technologies	1	1	\$12,769.3
Perkinelmer Health Sciences, Inc	2	1	\$12,452.0
Transcat Inc	4	4	\$12,358.4
R.S. Means Company LLC	2	2	\$12,190.0
Spina Electric Company	2	2	\$12,111.0
DTE Energy - Primary	1	1	\$12,000.0
International Controls & Equipment	5	5	\$11,846.0
Wesco Distribution Inc	6	1	\$11,478.0
Harrington Industrial Plastics LLC	15	11	\$11,409.4
RJ Stacey LTD	3	1	\$11,250.0
O I Analytical	3	3	\$11,229.5
Thermo Electron North America LLC	2	2	\$10,810.8
TMI Compressed Air System	1	1	\$10,659.4
HM Environmental Services Inc.	1	1	\$10,525.0
Pure Technologies US Inc	1	1	\$10,500.0
Bearing Service Inc	6	6	\$10,446.1
Boomer Construction Materials	60	1	\$10,412.9
Cryogenic Pipe Freezing Solutions	1	1	\$10,407.0
Sunbelt Rentals, Inc.	6	2	\$10,303.5
ImageSoft Inc	8	1	\$10,295.6
KVM Door Systems	1	1	\$10,200.0
Bell Equipment Company	2	2	\$10,150.0
Ino-Tek Inc	4	4	\$10,092.0
Action Mat & Towel Rental	28	1	\$10,067.0
Environmental Consulting	10	1	\$10,000.0
Federal Railroad Administration	1	1	\$9,625.0
West Shore Fire	1	1	\$9,542.5
Michigan Mechanical Services Inc	1	1	\$9,500.0
Northern Machining & Repair, Inc.	1	1	\$9,500.0
Ram Meter Inc.	2	1	\$9,451.8
T & N Services Inc	4	4	\$9,339.5
Kirk's Automotive Inc	22	17	\$9,212.7
Dice Career Solution	1	1	\$8,995.0
Inland Press	1	1	\$8,977.0
Marsh Power Tools, Inc	23	1	\$8,926.0
I & C Sales North Inc	2	2	\$8,920.7
PEA Group	2	1	\$8,810.0
Consolidated Chemical	2	2	\$8,781.5
Quality Paving	1	1	\$8,640.0
Crown Lift Trucks	19	12	\$8,529.6
McLaren Port Huron Industrial	6	1	\$8,494.0
Bearcom	3	3	\$8,486.0
ASTI Environmental	1	1	\$8,480.0
Dynamita	1	1	\$8,400.0
Robin Cash Ph.D., LLC	6	1	\$8,352.0
WPEngine Inc.	1	1	\$8,280.0

Unconventional Solutions Inc	1	1	\$8,246.6
Specialty Maintenance Products	2	2	\$8,141.6
Visual Workplace Inc.	6	5	\$8,056.8
MIDCOM Data Technologies Inc.	1	1	\$8,017.6
Fife-Pearce Electric Company	1	1	\$7,948.0
Fairfield Service Co. of Indiana	1	1	\$7,908.5
The Allen Law Group PC	3	1	\$7,890.0
Commerce Controls Inc	1	1	\$7,825.0
Bearing Headquarters Co	7	6	\$7,509.4
Zausmer August & Caldwell PC	7	1	\$7,397.5
Canon Solutions America Inc	19	3	\$7,331.1
Fab Tech Wastewater Solutions LLC	1	1	\$7,300.0
Kopka Pinkus & Dolin PC	11	1	\$7,290.2
Allied-Eagle Supply Company LLC	11	10	\$7,248.5
Advanced Technology Services Inc.	4	2	\$7,232.6
Aston Carter Inc.	3	1	\$7,179.2
Galloup,Forberg Smith, Merlo Energy	7	5	\$7,061.5
Corrosion Fluid Products	2	2	\$7,060.4
BAVCO	9	9	\$7,059.3
Space Camp LLC	1	1	\$7,000.0
Hotsy Midwest Cleaning Systems	1	1	\$6,990.0
Summerville Law Firm PLLC	10	1	\$6,943.0
Gold Coin Laundries LLC	20	2	\$6,915.4
Applied Industrial Technologies Inc	4	4	\$6,774.4
Alpha Psychological Services PC	9	1	\$6,735.0
Engineered Lifting Technologies	1	1	\$6,655.0
Compass Minerals America Inc.	1	1	\$6,633.9
American Fence Supply Co Inc	1	1	\$6,619.5
Sentinel Technologies, Inc.	9	1	\$6,600.0
Continental Carbon Group Inc	4	1	\$6,460.0
Curvature Technologies LLC	3	1	\$6,350.1
PTS Professional Technical Service	1	1	\$6,275.0
Midwest Air Filter Inc	6	6	\$6,246.9
Digital Assurance Certification LLC	3	1	\$6,200.0
Allstate Industrial Equipment	3	3	\$6,110.1
Wright Tool Co	4	3	\$6,081.6
Sherwin Williams Company	32	5	\$6,054.9
Central Poly-Bag Corp	6	6	\$6,050.0
Treadwell & Associates Inc	3	1	\$6,000.0
Gai-Tronics Corporation	1	1	\$6,000.0
Michigan Mechanical Insulation	2	2	\$5,729.1
White Oak Environmental & Safety	1	1	\$5,701.0
FTP Today Inc.	1	1	\$5,700.0
Hennessey Engineers Inc.	1	1	\$5,700.0
Complete Battery Source	3	3	\$5,694.8
EMP Industries Inc	1	1	\$5,630.6
M&E Sales LLP	1	1	\$5,523.0
Michigan Valve & Fitting Inc	5	5	\$5,319.3
Fibre Industries	8	8	\$5,259.5
Detroit Legal News	7	3	\$5,236.8
Cech Corporation	2	2	\$5,017.0
Echologics LLC	1	1	\$4,999.0
Engineer Supply	1	1	\$4,990.0
DTN LLC	12	2	\$4,944.0
EKUIPTECH, LLC	2	2	\$4,897.0
Fluid Process Equipment	1	1	\$4,839.9
Rehmann Robson	1	1	\$4,800.0
JCL Snowplow Dealer Inc.	1	1	\$4,399.0
The Crowley Company	2	2	\$4,298.0
United Parcel Service	140	1	\$4,288.8
Hamlett Environmental Technologies	3	3	\$4,257.0
Pruftechnik Inc	1	1	\$4,231.5

Sellinger Associates Inc	3	1	\$4,200.0
Quadient Inc.	13	2	\$4,191.1
Torch Associates LLC	2	2	\$4,178.0
HireRight, LLC	9	1	\$4,129.8
Port Huron Glass Inc	1	1	\$4,127.0
EMC Corporation	1	1	\$4,014.0
Hantz Farms LLC	10	1	\$4,000.0
JEM Industries, Inc.	7	4	\$3,915.1
Heritage Vision Plans	11	1	\$3,911.0
Action Impact - Eastpointe	6	1	\$3,863.5
American Water Works Association	3	3	\$3,859.2
Tobys Instrument Shop Inc	8	7	\$3,846.0
Shimadzu Scientific Instruments Inc	2	2	\$3,824.0
Indian Springs Mfg. Co Inc	1	1	\$3,705.0
VESCO Oil Corporation	3	2	\$3,618.2
Steven H Schwartz & Associates PLC	5	1	\$3,613.8
Biotage LLC	3	1	\$3,612.9
United States Treasury	1	1	\$3,574.2
Sabiston Building Supply	29	2	\$3,539.5
Spalding DeDecker	1	1	\$3,525.0
Faro Imaging Solutions	1	1	\$3,500.0
Public Rubber & Supply Co Inc	7	7	\$3,496.2
Johnson Plastics Plus	2	1	\$3,475.6
YSI Incorporated	2	1	\$3,445.1
Graybar Electric	3	2	\$3,260.0
Kitch Drutchas Wagner Valitutti	3	1	\$3,240.0
Edward Malindzak	1	1	\$3,225.0
Scaffolding Incorporated	1	1	\$3,187.8
Davenport Brothers Construction Co.	2	2	\$3,180.0
National Ladder & Scaffold Company	1	1	\$3,099.9
Bert's Testing & Training Services	1	1	\$3,006.3
Detroit-Wayne Joint Building Auth	1	1	\$3,000.0
UPS Freight	14	1	\$2,969.7
LexisNexis	12	1	\$2,952.0
B&H Photo-Video	1	1	\$2,946.9
AHB Tooling & Machinery LLC	1	1	\$2,926.8
Marine Pollution Control Corp	2	1	\$2,902.0
HP Electric Motor Inc.	1	1	\$2,900.0
J. Dedoes Enterprises Inc.	8	1	\$2,884.6
Brooks Lumber Company	7	7	\$2,853.9
Quadient Leasing USA Inc.	5	1	\$2,827.5
Renee Walker & Associates LLC	1	1	\$2,800.0
Identification Lamination Products	4	4	\$2,784.5
Cadillac Asphalt LLC	1	1	\$2,768.6
Iron Mountain	36	1	\$2,750.4
O'Reilly Rancilio P.C.	1	1	\$2,750.0
Ossian Law PC	5	1	\$2,725.0
Discovery Solutions Inc	14	2	\$2,718.9
L.I.J.B.S. Enterprises, LLC	4	1	\$2,703.3
Medcor Inc	11	1	\$2,688.0
F B Wright Company	3	2	\$2,663.6
Andax Industries LLC	6	6	\$2,616.6
ShredCorp.	1	1	\$2,600.0
Process Control Services Inc	2	1	\$2,596.0
Detroit Training Center	1	1	\$2,500.0
LabStrong Corporation	2	2	\$2,449.3
Michfab Machinery Inc.	2	1	\$2,400.9
Jones Equipment Rental	1	1	\$2,400.0
Eastern Michigan University	2	2	\$2,400.0
Omega Engineering Inc	1	1	\$2,397.7
Swanky Restroom Trailers	2	1	\$2,300.0
Farnell Equipment Company	1	1	\$2,300.0

Ligas Enterprises Inc	1	1	\$2,287.0
Accredited Lock & Door Hardware	4	3	\$2,278.5
American Red Cross	10	1	\$2,269.5
JJ Curran Crane Company	1	1	\$2,230.0
HH Barnum Company	2	1	\$2,159.7
Concentra Medical Centers	10	7	\$2,158.5
Neville-Ewell PLLC	2	1	\$2,100.0
Michigan Pipe & Valve Inc	1	1	\$2,080.6
Analytical Technology Inc	1	1	\$2,064.1
Raven Environmental Products Inc	1	1	\$2,060.5
Wolverine Rental & Supply Inc	1	1	\$2,059.3
Thermo Fisher Scientific Asheville	4	1	\$2,047.9
Teknicolors Paints Inc	18	2	\$2,040.8
Eaton Engineering Services	1	1	\$2,035.0
Pure Data Services, LLC	7	2	\$2,013.6
Southeast MI Community Alliance	2	2	\$2,000.0
ZLED Lighting	2	2	\$1,985.2
Global Environmental Consulting LLC	5	3	\$1,950.0
Truckntow.com	1	1	\$1,947.9
Clark Hill	3	2	\$1,926.0
Bentley Systems Incorporated	1	1	\$1,926.0
Galloup	2	2	\$1,889.6
NSI Lab Solutions Inc	1	1	\$1,873.0
Able Label	1	1	\$1,858.5
Action Automation	1	1	\$1,831.0
Spraying Systems Co.	1	1	\$1,816.8
Chavond-Barry Engineering Corp.	1	1	\$1,800.0
City of Highland Park	1	1	\$1,800.0
Teletrac Inc	14	5	\$1,797.6
J.J. Supply Company Inc.	3	2	\$1,754.4
Flor Dri Supply Company Inc	2	2	\$1,711.1
Cashco Inc.	3	2	\$1,704.9
Jones Lang Lasalle Michigan LLC	1	1	\$1,700.0
Team Industrial Services Inc	2	2	\$1,662.2
City of Troy	2	1	\$1,650.3
Meco Metals Co	2	2	\$1,640.0
Metro Detroit EITC	1	1	\$1,600.0
Troy's Towing Inc.	10	1	\$1,595.0
C P E Filters Inc	1	1	\$1,581.3
Poco Sales Inc	2	2	\$1,576.5
L&W Supply	7	1	\$1,573.4
IDN Hardware Sales, Inc.	2	2	\$1,568.8
Envirosolids, LLC	1	1	\$1,545.0
Contractors Connection Inc	2	2	\$1,538.0
Medler Electric Company	3	3	\$1,506.4
Jan-Supply Detroit, LLC	1	1	\$1,505.0
Downriver Refrigeration Supply Co	1	1	\$1,496.1
K & K Maintenance Supply Inc	2	2	\$1,482.3
Progressive Plumbing Supply Co Inc	11	10	\$1,469.1
Balfrey & Johnston Inc	1	1	\$1,461.6
PES Group Inc	1	1	\$1,440.0
RealTech Controls	1	1	\$1,437.0
Lyon LLC	2	2	\$1,402.5
Chemtrac Inc	2	2	\$1,340.0
Watson-Marlow, Inc	1	1	\$1,270.1
Michigan Municipal League	2	2	\$1,269.8
Towlift Inc	1	1	\$1,250.0
Xylem Water Solutions Usa Inc	1	1	\$1,244.1
Trescal	2	1	\$1,224.0
M C Gutherie Lumber Company	3	3	\$1,221.3
Commerical Group Lifting Products	3	2	\$1,221.3
MSA Safety Sales LLC	1	1	\$1,220.8

Central Metallizing & Machine	1	1	\$1,145.0
Powder Buy The Pound	2	2	\$1,084.9
Bell Fork Lift Inc	1	1	\$1,070.1
Comcast Business Communication, LLC	1	1	\$1,061.3
Kinetics Industries, Inc.	1	1	\$1,009.9
EnviroScience, Inc.	1	1	\$1,000.0
GEO Jobe GIS Consulting	2	2	\$1,000.0
Detroit Stoker Company LLC	1	1	\$987.6
Thomson Reuters	1	1	\$984.0
Fluke Electronics Corporation	1	1	\$950.0
Cornerstone Controls Inc	1	1	\$926.2
Lutz Roofing Company Inc.	2	2	\$904.3
Detroit Contracting Inc	3	2	\$897.4
HD Edwards & Company	8	7	\$891.8
Jade Scientific Inc	3	2	\$864.0
Downriver Utility Wastewater Auth.	3	3	\$848.0
Tredroc Tire Services, LLC	2	1	\$835.5
York Repair Inc	1	1	\$808.7
Dani's Aggregate Inc.	1	1	\$807.0
Wex Bank	8	1	\$755.8
Schad Refractory Construction Co	1	1	\$728.6
FedEx	9	2	\$725.5
Drinkpod LLC	2	2	\$719.6
Advance Plumbing & Heating Supply	1	1	\$691.6
Empire Equipment & Supply Inc.	2	2	\$674.3
B & H Machine Sales, Inc	2	2	\$669.7
City of Novi	4	1	\$637.4
Bulldog Records Management Inc	12	1	\$633.0
Teledyne Isco	1	1	\$604.0
Pollardwater	2	2	\$603.6
Seton	4	1	\$599.4
North Channel Graphics	1	1	\$588.0
Hygiena LLC	1	1	\$554.0
Compressor Engineering Corporation	1	1	\$552.0
Airgas USA LLC	2	2	\$547.4
Sell's Equipment	1	1	\$540.2
ATI Northbrook Operations	1	1	\$540.0
Exotic Automation & Supply	4	3	\$539.0
Morgan Advanced Materials	1	1	\$528.0
ISE Metal Inc	1	1	\$524.0
Deaf Community Advocacy Network	1	1	\$500.0
South Park Welding Supplies Inc	2	1	\$499.0
Allied Electronics Inc	1	1	\$496.2
Chart Pool USA Inc	1	1	\$487.0
Helwig Carbon Products Inc	1	1	\$470.5
Chem Flowtronics Inc.	1	1	\$466.3
Logan Glass Company	1	1	\$463.2
Mail Delivery Service	2	1	\$456.5
United States Plastic	1	1	\$455.1
Macomb County Department of Roads	1	1	\$450.0
Hi-Lo Industrial Trucks Co. Inc.	1	1	\$448.9
ANL Spring Manufacturing Company	1	1	\$446.0
Carleton Equipment Co.	1	1	\$445.6
Radiation Safety Services	1	1	\$445.0
Tintometer Inc.	2	1	\$430.5
State of Michigan - WRD	1	1	\$400.0
State of Michigan - MIOSHA	1	1	\$400.0
City of Romulus	7	1	\$386.3
Charter Township of Plymouth	11	1	\$372.1
Fastsigns	1	1	\$370.5
Michigan Water Environment	2	1	\$337.0
Cincinnati Time Systems	2	2	\$335.0

Dal-Tile Distribution	2	1	\$324.9
Eurofins Eaton Analytical Inc	3	1	\$315.0
City of Wayne - Water Department	6	1	\$309.9
Wayne County Treasurer	2	1	\$309.6
Shelby Township DPW	4	1	\$307.4
Monroe County Road Commission	1	1	\$300.0
McGard LLC	1	1	\$274.4
Dani's Transport	1	1	\$260.4
State of Michigan - LARA	2	1	\$240.0
Society For Human Resource Mgt.	1	1	\$219.0
Tri Star Steel Corporation	1	1	\$180.0
Radwell International Inc.	1	1	\$159.2
Josie Pranter	1	1	\$156.3
City of Roseville Water Department	4	1	\$127.8
Signs & More	1	1	\$126.0
Liberty Plumbing Supply Company	1	1	\$115.9
A-1 Truck Parts Detroit	2	2	\$110.9
Treasurer, City of Detroit	1	1	\$107.0
George Instrument Company	1	1	\$102.2
Airtech Controls Co	1	1	\$73.6
LARA	1	1	\$60.0
Wayne County	1	1	\$59.2
ZVerse Inc.	1	1	\$49.5
SmartSign	1	1	\$38.4
Baker's Gas & Welding Supplies Inc	4	1	\$36.7
Gravotech, Inc.	1	1	\$33.9
City of Southfield	13	1	\$33.0
City of Rochester Hills	6	1	\$14.5
(blank)	1	1	
Maple Press LLC	1	1	-\$70.0
McMaster-Carr Industrial Supply Co	2	2	-\$3,405.1
Robert Thomas CPA, LLC	1	1	-\$3,500.0
Imagemaster, LLC	2	1	-\$5,897.3
Glassdoor, Inc.	1	1	-\$12,100.0
BondLink	1	1	-\$23,749.1
PFM Financial Advisors LLC	11	2	-\$43,077.5
S&P Global Ratings	1	1	-\$93,150.0
Moody's Investors Service Inc	1	1	-\$114,500.0
Fitch Ratings Inc	2	2	-\$120,000.0
Dickinson Wright PLLC	35	5	-\$257,665.8
Grand Total	20529	3799	\$413,052,933.5



Welcome to the March edition of *The Procurement Pipeline*, a monthly newsletter designed to provide updates on doing business with the Great Lakes Water Authority (GLWA).

New! Coronavirus Update #156: Visitor COVID-19 Quarantine and Isolation Requirements

On March 11, 2022 GLWA released [Coronavirus Update #156](#) to the Vendor Community. This Coronavirus Update, which is available on the [GLWA Vendor Webpage](#), outlines requirements for how Visitors can safely return to work at GLWA facilities or project worksites after a COVID-19 exposure or confirmed COVID-19 infection based on the Visitor's vaccination status.

Quarantine Requirements (COVID-19 Exposure)

- ✓ **Not fully vaccinated Visitors** (those who are unvaccinated or who have received only **one** dose of the Pfizer or Moderna COVID-19 vaccine) must quarantine for five days from last contact with COVID-19 positive person;
- ✓ **Fully vaccinated Visitors** (those who have received two doses of the Pfizer or Moderna vaccine or one dose of the Johnson & Johnson vaccine) do not need to quarantine;
- ✓ Fully and not fully vaccinated visitors must notify designated GLWA Project Manager of COVID-19 exposure and provide names for all GLWA close contacts;
- ✓ On or after day five, fully and not fully vaccinated visitors must receive a new COVID-19 test; and
- ✓ If negative, test result must be submitted with the [Visitor COVID-19 Questionnaire](#).

Isolation Requirements (COVID-19 Infection)

- ✓ Fully and not fully vaccinated Visitors must quarantine for five days;
- ✓ Notify designated GLWA Project Manager of COVID-19 exposure and provide names for all GLWA close contacts;
- ✓ On or after day five of quarantine, get a COVID-19 test. If negative, test result must be submitted with the [Visitor COVID-19 Questionnaire](#).

We appreciate the Vendor Community's cooperation with GLWA's Visitor COVID-19 Quarantine and Isolation Requirements as we strive to maintain workplace safety. Additional questions regarding these matters should be directed to [Michael Lasley](#) and [Megan Savage](#).

Virtual Vendor Introduction Meetings

If you are interested in learning more about doing business with GLWA, contact us at GLWAVendorOutreach@glwater.org to schedule a virtual vendor introduction meeting. Topics include information on submitting a competitive bid or proposal to a GLWA solicitation, as well as the requirements for GLWA's Business Inclusion and Diversity (B.I.D.) Program.

Where to Meet GLWA

GLWA attends vendor outreach events throughout Southeastern Michigan. We welcome you to visit us at the following upcoming events.

- *Virtual event.* Michigan Department of Transportation (MDOT) 41st Annual Disadvantaged Business Enterprise (DBE) Small Business Development Conference on March 22, 2022 from 8:30am-3:00pm. Registration details [here](#).
- *In-person event.* Michigan Public Purchasing Officers Association (MPPOA) Reverse Trade Fair on April 29, 2022. This event will be held in Grand Rapids, Michigan from 10:30-3pm. Registration details [here](#).

What's Coming Down the Pipe?

Current Solicitations: Register in GLWA's [Bonfire Procurement Portal](#) for new solicitations and contract award information.

Upcoming Procurements: Next Three to Nine Months—See newsletter page 2.

Visit GLWA online!

To see the GLWA Vendor homepage, please visit www.glwater.org or contact us via email at procurement@glwater.org.

Upcoming Solicitations March 2022

Category	CIP #	Description/Project Title	Budget Estimate
Water System (next four to nine months)			
Materials & Equipment	114002E-G	Springwells WTP Pumping Unit Procurement Package (Contracts E thru G)	\$50,000,000
Materials & Equipment	114002H-J	Springwells WTP Process Valve Procurement Package (Contracts H thru J)	\$13,000,000
Wastewater Systems (next four to nine months)			
Construction	211006	Pump Station #1 Screenings Building HVAC Improvements	\$1,000,000
Construction	260800	WRRF Roofing Improvements	\$1,600,000
Design	273001	Hubbell Southfield Flushing and Facility Improvements (CSO)	\$5,500,000
Construction	232002	Freud Pump Station Improvements	\$75,000,000
Water System (next three months)			
Construction	114002B	Springwell's WTP Medium Voltage Electrical System Replacement	\$50,000,000
Wastewater (next three months)			
Construction	260901	HAZMAT (Hazardous Material) Building Renovation	\$1,300,000
Construction	211006	WRRF Pump Station #1 Improvements	\$73,400,000
Construction	260903	WRRF Front Entrance Rehabilitation	\$3,300,000
Engineering Services	260208	Rehabilitation of GLWA Sewers; Ashland Relief, Linwood, Lonyo, Second Avenue, and Shiawassee	\$6,000,000
Projects moved to Procurement Team (Preparing for solicitation on Bonfire)			
Design	260617, 270005, 270006	CSO Facility Control Improvements #2	\$3,002,500
Request for Proposals	O&M	2023 Task Order Engineering Services	\$10,000,000
Professional Services	O&M	SCADA System Professional Services	\$5,500,000
Design Build	216011	WRRF Structural Improvements	\$12,000,000
Professional Services	O&M	Elevator Preventative Maintenance	\$1,645,728

Vendors should continue to monitor [Bonfire](#) for solicitation updates.

Acronyms		
WRRF: Water Resource Recovery Facility	CSO: Combined Sewer Overflow	WTP: Water Treatment Plant



Financial Services Audit Committee Communication

Date: March 25, 2022

To: Great Lakes Water Authority Audit Committee

From: Kim Garland, CPA, Financial Services Area Chief of Staff

Re: Correction of FY 2023 Approved Pollutant Surcharge Charge Support

Background: GLWA staff would like to make the Audit Committee aware of an incorrect schedule attached to the February 23, 2022 Board agenda item related to proposed FY 2023 charges. The Pollutant Surcharge schedule included as support in the Board agenda item 2022-072 attachment 'C5 2023 Industrial Charge Schedule 2.23.2022' still reflected a 2.5% increase when in fact only 1.25% was ultimately recommended and approved. This issue impacted only the support schedule.

Update: This was corrected in the final, published schedule. Copies of the schedule from the Board agenda item and the approved schedule on the GLWA website follow for reference and confirmation of that change.

Erroneous schedule included as support in the February 23, 2022 Board of Directors agenda item 2022-072 attachment C5 reflecting the originally proposed 2.5% increase from FY 2022:

Pollutant Surcharges	
Pollutant	Charge \$/lb
BIOCHEMICAL OXYGEN DEMAND (BOD) for concentrations > 275 mg/l	0.356
TOTAL SUSPENDED SOLIDS (TSS) for concentrations > 350 mg/l	0.488
PHOSPHORUS (P) for concentrations > 12 mg/l	6.527
FATS, OIL AND GREASE (FOG) for concentrations > 100 mg/l	0.114
SEPTAGE DISPOSAL FEE Per 500 gallons of disposal	37.00

2/23/2022

PROPOSED FY 2023 CHARGES

Actual, approved and published FY 2023 charges: [GLWA Website Link to FY 2023 Charges](#) reflecting the appropriate 1.25% increase implemented.

Pollutant Surcharges	
<u>Pollutant</u>	<u>Charge</u> <i>\$/lb</i>
BIOCHEMICAL OXYGEN DEMAND (BOD) for concentrations > 275 mg/l	0.351
TOTAL SUSPENDED SOLIDS (TSS) for concentrations > 350 mg/l	0.482
PHOSPHORUS (P) for concentrations > 12 mg/l	6.448
FATS, OIL AND GREASE (FOG) for concentrations > 100 mg/l	0.112
SEPTAGE DISPOSAL FEE Per 500 gallons of disposal	36.00

APPROVED FY 2023 CHARGES

2/23/2022

Financial Services Area staff is working with the Office of the Chief Administrative Officer to amend the original February 23, 2022 agenda item 2022-072, attachment C5 2023 Industrial Charge Schedule 2.23.2022 to reflect the actual, recommended and approved Pollutant Surcharge charges for FY 2023.

CREDIT OPINION

23 March 2022

✓ Rate this Research

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Great Lakes Wtr Auth, MI

Update to credit analysis

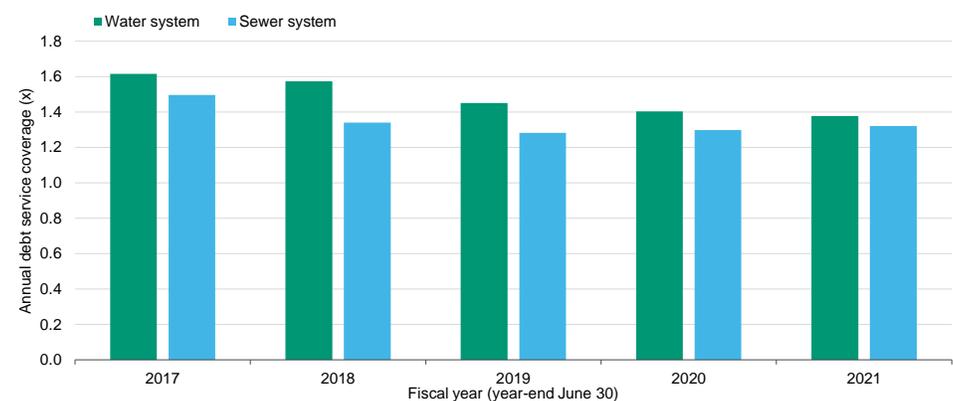
Summary

The [Great Lakes Water Authority's](#) (GLWA) [water](#) and [sewer](#) enterprises (both senior liens rated A1 stable; both subordinate liens rated A2 stable) have solid credit profiles, bolstered by very large service areas and a sizable scale of operations. GLWA has effectively balanced its hefty capital needs with an affordable rate structure, stable operating performance, consistent debt service coverage and good liquidity for both systems since its inception in 2016. The systems have above-average leverage, however, and the [City of Detroit](#) (Ba2 positive) makes up a significant portion of their service area.

The Detroit metropolitan statistical area (MSA) had extreme rainfall and flooding in the summer of 2021, which resulted in numerous claims and lawsuits for GLWA. While the total financial exposure of these claims is unknown at this time, the authority maintains general liability coverage up to \$10 million. As with other [Midwestern flooding events](#), federal assistance has been critical in preventing material credit deterioration for impacted issuers. GLWA reports that FEMA has paid roughly \$173 million to impacted residents so far. Building greater resilience to extreme wet-weather events will be an ongoing challenge, however.

Exhibit 1

Annual debt service coverage for all debt has remained relatively stable for both systems since the authority's inception



Source: Moody's Investors Service

Credit strengths

- » Very large utility systems, providing essential water and wastewater services to a substantial portion of the state's population
- » Commitment to annual revenue enhancements to support sound debt service coverage and healthy liquidity
- » Track record of strong budget management and good transparency

Credit challenges

- » Declining water usage trends
- » High leverage will moderate slowly given outstanding capital needs and plans to issue additional debt
- » Increasing occurrence of extreme wet weather events placing strain on stormwater and sewer treatment capacity in certain segments of the system

Rating outlook

The outlook is stable because each system will sustain sound financial metrics given GLWA's track record of strong budget management and ability to raise rates. These strengths will continue to mitigate the challenges associated with high leverage and capital needs.

Factors that could lead to an upgrade

- » Sustained expansion and diversification of the service area's economic base
- » Growth in revenue that continues to outpace borrowing so as to moderate leverage of pledged resources

Factors that could lead to a downgrade

- » Renewed economic stress that pressures consumption and revenue trends
- » Material reduction to the water or sewer system's liquidity or debt service coverage ratios
- » Growth in leverage of the water or sewer system's net revenue

Exhibit 2

Great Lakes Water Authority, MI Water Ent.					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	17 years				
System Size - O&M (in \$000s)	\$164,995				
Service Area Wealth: MFI % of US median	96.8%				
Legal Provisions					
Rate Covenant (x)	1.20				
Debt Service Reserve Requirement	DSRF funded at lesser of standard 3-prong test (Aa)				
Management					
Rate Management	Aa				
Regulatory Compliance and Capital Planning	A				
Financial Strength					
	2017	2018	2019	2020	2021
Operating Revenue (\$000)	\$428,044	\$425,245	\$407,231	\$419,479	\$411,583
System Size - O&M (\$000)	\$145,499	\$153,930	\$163,519	\$176,822	\$164,995
Net Revenues (\$000)	\$282,545	\$271,315	\$243,712	\$242,657	\$246,588
Outstanding Revenue Debt (\$000)	\$2,358,137	\$2,310,261	\$2,250,181	\$2,301,253	\$2,263,770
Annual Debt Service (\$000)	\$175,010	\$172,550	\$167,966	\$172,869	\$179,214
Annual Debt Service Coverage (x)	1.6x	1.6x	1.5x	1.4x	1.4x
Cash on Hand	676 days	912 days	937 days	956 days	920 days
Debt to Operating Revenues (x)	5.5x	5.4x	5.5x	5.5x	5.5x

Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.

Source: Moody's Investors Service

Exhibit 3

Great Lakes Water Authority, MI Sewer Enterprise					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	19 years				
System Size - O&M (in \$000s)	\$255,908				
Service Area Wealth: MFI % of US median	96.8%				
Legal Provisions					
Rate Covenant (x)	1.20				
Debt Service Reserve Requirement	DSRF funded at lesser of standard 3-prong test (Aa)				
Management					
Rate Management	Aa				
Regulatory Compliance and Capital Planning	A				
Financial Strength					
	2017	2018	2019	2020	2021
Operating Revenue (\$000)	\$557,396	\$561,784	\$550,959	\$562,231	\$559,812
System Size - O&M (\$000)	\$206,540	\$250,551	\$244,468	\$243,438	\$255,908
Net Revenues (\$000)	\$350,856	\$311,233	\$306,491	\$318,793	\$303,904
Net Funded Debt (\$000)	\$3,144,592	\$3,076,993	\$3,093,347	\$3,039,222	\$2,937,898
Annual Debt Service (\$000)	\$234,555	\$232,281	\$239,112	\$245,783	\$230,163
Annual Debt Service Coverage (x)	1.5x	1.3x	1.3x	1.2x	1.3x
Cash on Hand	455 days	460 days	440 days	496 days	512 days
Debt to Operating Revenues (x)	5.6x	5.5x	5.6x	5.4x	5.2x

Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.

Source: Moody's Investors Service

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Profile

The Great Lakes Water Authority (GLWA) is the regional wholesale provider of water and sewer services to southeast [Michigan](#) (Aa1 stable). The water enterprise treats water from Lake Huron, Lake St. Clair and the Detroit River and distributes treated water to a service area population of about 3.8 million. The sewer enterprise collects, treats and disposes of wastewater produced by a service area population of about 2.8 million. GLWA is an incorporated municipal authority, established in 2016, operating under the guidance of a six-member board, consisting of one appointee each of the counties of [Macomb](#) (Aa1 stable), [Oakland](#) (Aaa stable), and [Wayne](#) (A3 positive), two appointees of the Mayor of Detroit and one of the Governor of Michigan.

Detailed credit considerations

Service area and system characteristics: very large service area in southeast Michigan

The systems will continue to benefit from large service areas with broad and diverse customer bases. The regional water supply system covers 1,698 square miles in southeast Michigan, providing treated water to 112 communities and roughly 40% of the state's population. The sewer system is a little smaller; covering 944 square miles, providing wastewater services to about a third of the state's population across 79 communities.

The bulk of water and sewer revenue comes from wholesale contracts with suburban communities. Wholesale contracts generate roughly three quarters of water revenue and a little over half of sewer revenue. Detroit residents and businesses are retail customers of the Detroit Water and Sewerage Department (DWSD), which manages the system assets within the city as an agent of GLWA.

Water usage rates have fallen somewhat over the past five years. While that trend will likely stabilize, it is unlikely to materially reverse without an expansion of the system because of conservation efforts and the region's stagnant population.

Debt service coverage and liquidity: financial metrics likely to remain healthy

Both systems will likely continue to maintain solid annual debt service coverage and ample liquidity because of management's close monitoring of revenue targets and its ability to set rates. The authority recently approved a 3.7% water rate increase and a 2.4% sewer rate increase for fiscal 2023. A portion of the increase is to recover bad debt accrued by the City of Highland Park (unrated), which [has historically had financial challenges](#) and has not been fully paying its water and sewer bill. Consequently, some member communities have protested the increases, asking the state to intervene and to be held-harmless from the bad debt. It is unclear what role the state might play, if any, in arbitrating this dispute. In either event, the annual revenue impact for GLWA is pretty low: Highland Park's estimated bad debt expense for fiscal 2023 is about \$1.3 million for the water system and \$5.4 million for the sewer.

The authority limits the annual growth in its water and sewer system revenue requirements to 4% to maintain a more affordable rate structure and it assumes 3% growth in its forecasts. Most revenue in both systems comes from fixed monthly wholesale charges (roughly 60% in the water system and 100% in the sewer), which enhances revenue reliability and dependability.

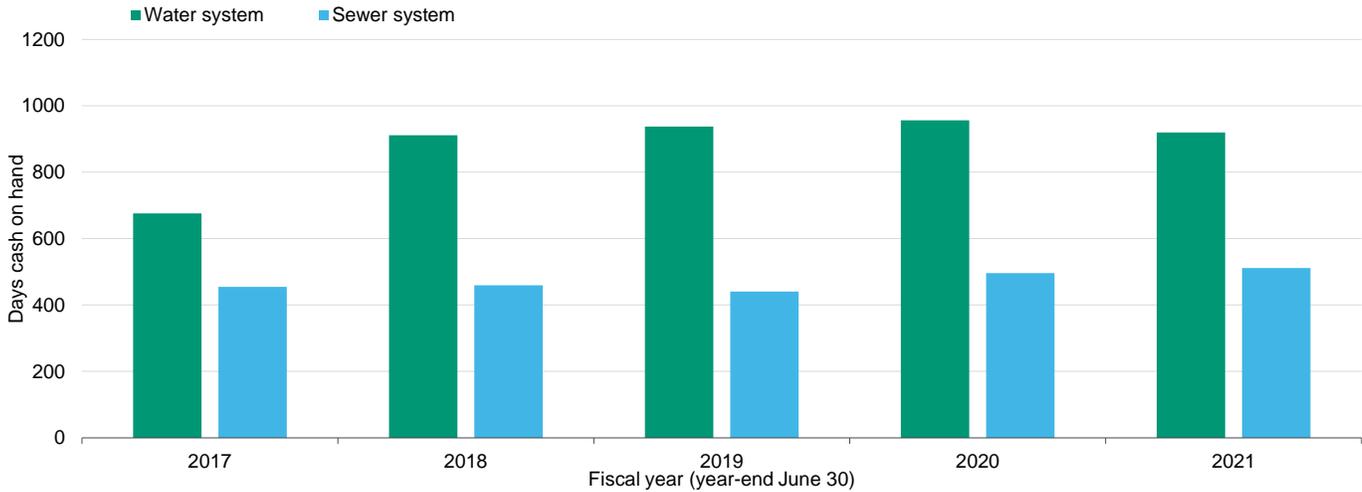
GLWA has maintained solid annual coverage of total senior lien, second lien and junior lien revenue debt service since its inception (Exhibit 1).

Liquidity

Liquidity is strong for both systems and will remain so despite planned spending for capital investments. Each system plans to finance the bulk of its annual capital improvement plan (CIP) with cash reserves over the next five years.

Unrestricted cash and investments in the water system were roughly \$415 million and about \$358 million in the sewer system at the close of fiscal 2021 (Exhibit 4). The two funds also have significant restricted cash assets held for budget stabilization, debt service and capital.

Exhibit 4
Days cash on hand is strong for both systems, particularly the water enterprise



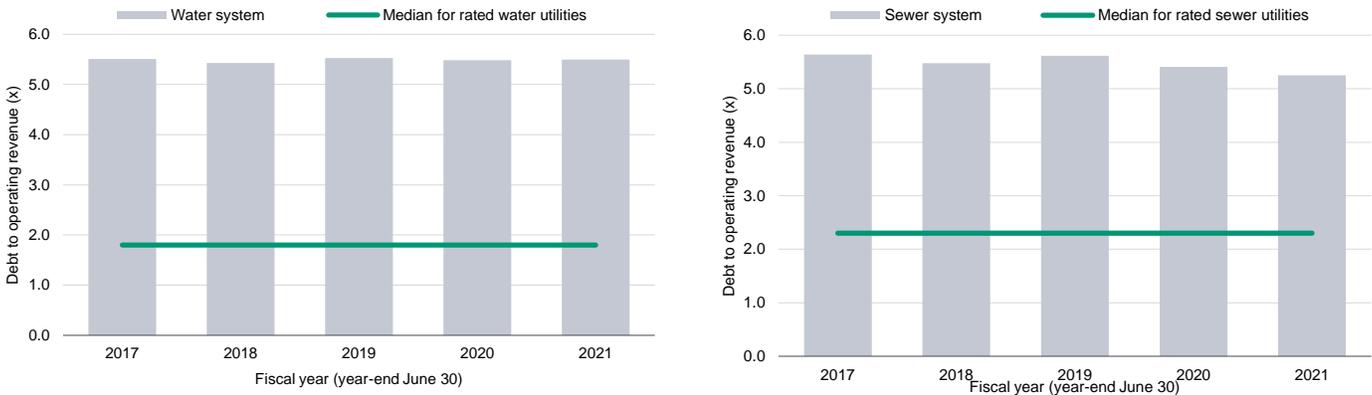
Source: Moody's Investors Service

Debt and legal covenants: high debt burden could moderate with sustained revenue growth

Each system has a very high debt burden that will remain elevated because of high capital needs. Leverage metrics will likely remain stable because GLWA has control over its rates and it plans to cash fund most of its CIP. The CIP for fiscal 2023 through 2027 includes about \$966 million of water projects and \$762 million of sewer projects. The systems have a variety of capital needs, including reducing combined sewer overflow (CSO) and enhancing transmission and storage. The system will also likely need to build greater resilience to extreme wet-weather events over the long-term. The authority has historically had high nonrevenue water volume because of pipe leaks and breaks. Over the past five years, the authority has materially improved its percentage of water loss and other nonrevenue water down to 10.6% in fiscal 2021 from 19.3% in 2017.

The water and sewer systems' long-term debt leverage across all liens is materially higher than [sector medians](#) (Exhibit 5). GLWA had about \$5.2 billion of combined total revenue debt outstanding at the end of fiscal 2021, about \$2.3 billion for the water system and \$2.9 billion for the sewer.

Exhibit 5
Leverage metrics are much higher than US medians for both the water and sewer systems



Latest medians are for fiscal 2019
Source: Moody's Investors Service

Legal security

Water and sewer revenue bonds are backed by the net revenue of the respective systems. Legal provisions are solid and are the same for both systems. The rate covenant requires projected net revenue coverage of debt service equal to 120% for senior lien bonds, 110% for second lien bonds and 100% for any subordinate lien debt. Per the master bond ordinance, projected net revenue includes the revenue of the respective systems plus any estimated revenue increase from approved rate increases.

The money collected from regional wholesale and local retail customer payments are deposited to a lockbox, which is administered by a third-party trustee. Operations and maintenance (O&M) expenses are defined as cash transfers made to GLWA's and DWSD's respective O&M funds. The revenue and O&M expenses related to GLWA is reported in its segregated business funds while the revenue and expenses of DWSD are accounted for in Detroit's water and sewer funds, respectively. The bifurcated accounting requires adjustments from reported figures to assess rate covenant coverage under the master bond ordinance.

Senior and second lien bonds benefit from debt service reserve funds (DSRF) sized at the lesser of the standard three-prong test.

Debt structure

All of GLWA's water revenue debt and most of its sewer bonds are fixed rate. The sewer system has one series of variable rate debt: its Series 2006D bonds. The bonds are floating rate notes, are fully callable and make up a little less than 10% of sewer debt.

The water system holds about 44% of total GLWA debt, with roughly \$1.5 billion of senior lien bonds, \$653 million of second lien water revenue bonds and \$71 million of junior lien state revolving fund (SRF) loans. The remainder is held by the sewer system, inclusive of \$1.8 billion of senior lien bonds, \$736 million of second lien sewer revenue bonds and \$411 million junior lien state revolving fund (SRF) loans. The water debt will be fully retired by 2051 and sewer debt matures by 2049.

The authority helps to finance capital projects undertaken in the local systems by issuing bonds on behalf of the DWSD. The DWSD-owed debt is accounted for as a contractual obligation receivable owed to the GLWA. Proportional allocation of debt was agreed upon and settled by the memorandum of understanding (MOU) dated June 27, 2018.

Debt-related derivatives

The GLWA is not party to any derivative agreements.

Pensions and OPEB

GLWA employees are participants in a defined contribution benefit plan, though many are scheduled to receive accrued pension benefits from the City of Detroit's frozen defined benefit General Retirement System (GRS). Pursuant to the City of Detroit's bankruptcy plan of adjustment, GLWA will contribute annually to GRS through fiscal 2023 to accelerate amortization of the GRS unfunded liability associated with the GLWA employees. A little less than half of the annual GRS payment is considered O&M, making it effectively senior to debt service. GLWA's allocated contribution was roughly \$31.9 million in fiscal 2021.

Beyond 2023, the GLWA's payments to GRS will be based on the actuarial needs of the plan and sized to amortize any unfunded liability associated with the GLWA employees. GLWA makes no payments toward accrued retiree healthcare liabilities because the City of Detroit's bankruptcy settlement eliminated those benefits. The GLWA established a new defined contribution retiree healthcare savings plan, resulting in no potential unfunded liability.

ESG considerations

Environmental

[Environmental considerations](#) are a material credit consideration for the systems. Climate change and extreme weather may have operational impacts, particularly on the sewer system. Major wet weather events, like those that occurred during the summer of 2021, can overwhelm the system's ability to store and process infiltration, causing detrimental impacts such as sewer backups and discharges because of CSOs.

The water system benefits from access to a vast amount of relatively easily treatable fresh water. The sewer system includes one of the largest single-site wastewater treatment plants in the world and treated water discharged from the plant is often cleaner than the surrounding water in the receiving body. Both systems are subject to extensive regulation pursuant to the federal Clean Water Act, the Clean Air Act, the Michigan Natural Resources and Environmental Protection Act and various administrative rules and regulations. The authority is in material compliance with all existing permits relating to the operation of the regional water and sewer systems.

Social

[Social considerations](#) such as population, labor force, income and education are material and can impact each system's underlying economy, customer base, financial and leverage metrics. Population in the Detroit MSA grew a little over 2% between 2010 and 2020. The system's sizable service area and customer base provides a high level of diversity, balancing social challenges in portions of the customer base, such as high poverty areas in the City of Detroit. GLWA provides payment and conservation assistance to low-income retail customers through its Water Residential Assistance Program, which helps to avoid delinquencies and support revenue stability.

Governance

[Governance considerations](#) are an important factor in GLWA's credit profile. GLWA was created in the aftermath of the Detroit bankruptcy. It obtained possession and control of the city's water supply and sewage disposal systems via regional system leases (effective January 1, 2016) for an initial 40-year term and replaced the city as the obligor on all outstanding debt obligations related to the systems, pursuant to bondholder consent. Pursuant to the lease, the City of Detroit has irrevocably assigned its right, title and interest in all revenue of the sewer and water enterprises to GLWA. The lease will automatically extend to correspond with scheduled repayment of newly issued revenue debt. All revenues of both systems were assigned to GLWA. Payments from retail customers within the City of Detroit are deposited directly with the bond trustee.

GLWA is governed by a six-member board. The board has full authority to set service charges on municipal customers. Rates charged to retail customers in the City of Detroit are established by the city's Board of Water Commissioners pursuant to an agency agreement with GLWA. The lease agreement grants the GLWA board the ability to override the city's authority of retail rates and collections should the city not make adjustments sufficient to meet annual revenue requirements. All wholesale customers retain responsibility for levying local charges sufficient to cover costs charged by GLWA. Pursuant to the memorandum of understanding between GLWA and DWSD, GLWA assumes an annual increase of not more than 4% in the revenue requirements through fiscal 2025.

GLWA has demonstrated strong budget management since its inception, enhancing operational efficiencies and regional cooperation. GLWA dramatically reduced its workforce since its separation from DWSD. Each year GLWA conducts an extensive study of both its wholesale service charges and allocated annual revenue requirement to retail customers, with the purpose of adjusting revenue to reflect the cost of operations, depreciation expense and return on the rate base. Additionally, since system capacity exceeds demand, management is de-rating parts of its water treatment plants. This allows the water system to reduce capital costs while preserving flexibility to put the facilities back to use.

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