



Audit Committee Meeting
Friday, March 22, 2024 at 8:00 a.m.
www.glwater.org

[Join Zoom Meeting](#)

Meeting ID: **898 1367 1678** Passcode: **534777**

US Toll-free: **877 853 5247 or 888 788 0099**

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
 - A. February 26, 2024 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
7. NEW BUSINESS
 - A. *Action Item:* Resolution to Adopt the Detroit Water and Sewerage (Page 6) Department Sewer System Rehabilitations – Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Project Plan
 - B. *Action Item:* Resolution to Adopt GLWA Project Plans – Fiscal Year (Page 26) (FY) 2025 Clean Water State Revolving Fund (CWSRF) Project Plan
 - C. *Action Item:* Resolution Regarding Approval of Series Ordinance (Page 44) Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02)
 - D. *Action Item:* Resolution Regarding Approval of Series Ordinance (Page 68) Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-03)
 - E. *Action Item:* Water Residential Assistance Program Delivery (Page 92) Service Partner Funding Authorization for FY 2025
 - F. *Presentation:* 2024 Municipal Market Outlook and GLWA Debt (Page 94) Management Considerations
 - G. *Presentation:* Debt Service Reserve Fund Background and (Page 136) Considerations
8. REPORTS
 - A. CFO Report (Page 146)
 - B. Monthly Financial Report for December 2023 (Page 156)
 - C. Annual Procurement Report for the year ending June 30, 2023 (Page 157)

- D. Affordability & Assistance Update (Page 198)
 - E. Gifts, Grants & Other Resources Report (Page 199)
 - F. Quarterly Investment Report (Page 207)
 - G. Quarterly Construction Work in Progress Report through (Page 234)
December 31, 2023
9. COMMUNICATIONS
- A. The Procurement Pipeline for March 2024 (Page 257)
 - B. Pollutant Surcharge Management Portal Launch (Page 259)
10. LOOK AHEAD
- A. Next Audit Committee Meeting: April 26, 2024 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

Monday, February 26, 2024

8:00 AM

Zoom Telephonic Meeting

Zoom Telephonic Meeting

Join Zoom Meeting:

[https://glwater.zoom.us/j/85464569300?](https://glwater.zoom.us/j/85464569300?pwd=Zk94L3E0MHRtNDNXRFU2QXVIQnV0UT09)
[pwd=Zk94L3E0MHRtNDNXRFU2QXVIQnV0UT09](https://glwater.zoom.us/j/85464569300?pwd=Zk94L3E0MHRtNDNXRFU2QXVIQnV0UT09)

Join by Telephone

US Toll-Free:

877 853 5247; or 888 788 0099

Meeting ID: 854 6456 9300

Passcode: 878300

1. Call To Order

Chairperson Baker called the meeting to order at 8:00 a.m.

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 Amend the Agenda to combine item 8.G. (Quarterly WRAP Report) and Item 8.H. (Quarterly WRAP Report through June 30, 2023) as Item 8.G., WRAP Verbal Update.

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. [2024-071](#) Minutes of February 9, 2024

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [4A Minutes - February 9, 2024 Audit Committee Special Meeting](#)

Chairperson Baker requested a Motion to Approve the February 9, 2024 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. [2024-070](#) Proposed Appointment of 2024 Bond Transaction Syndicate and Advisors and Related Fees

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7A1 Proposed 2024 Bond Transaction Syndicate and Advisors](#)
[7A3 Underwriting Syndicate Memo for GLWA_2-6-2024vF2](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors
Agenda of February 28, 2024

The motion carried by a unanimous vote.

8. Reports

- A. [2024-073](#) CFO Report
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8A1 CFO Report February 2024](#)
- Motion By:** Gary Brown
Support By: Jaye Quadrozzi
Action: Received and Filed
The motion carried by a unanimous vote.
- B. [2024-074](#) Monthly Financial Report for November 2023
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8B November 2023 Financial Report](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- C. [2024-075](#) Affordability & Assistance Update
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8C Affordability & Assistance Update 2.23.2024](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- D. [2024-076](#) Gifts, Grants & Other Resources Report
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8D Grants Gifts and Other Resources Report](#)
- Motion By:** Gary Brown
Support By: Jaye Quadrozzi
Action: Received and Filed
The motion carried by a unanimous vote.

- E.** [2024-077](#) Annual Conflict of Interest & Disclosure Update
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8E Annual Conflict of Interest & Disclosure Update](#)
- Motion By:** Gary Brown
 Support By: Jaye Quadrozzi
 Action: Received and Filed
 The motion carried by a unanimous vote.
- F.** [2024-078](#) GLWA 2023 Vendor Outreach Event - Post Event Report
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8F GLWA Vendor Outreach Event - Post Event Report](#)
 [8F1 Vendor Outreach Event Final Report PowerPoint](#)
- Motion By:** Jaye Quadrozzi
 Support By: Gary Brown
 Action: Received and Filed
 The motion carried by a unanimous vote.
- G.** [2024-080](#) Water Residential Assistance Program - Income Based Plan Review as of
 December 31, 2023 - Verbal Update
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Nicolette Bateson, Chief Financial Officer/Treasurer, provided a verbal update on
 the Water Residential Assistance Program - Income Based Plan Review.**
- Motion By:** Jaye Quadrozzi
 Support By: Gary Brown
 Action: Received and File
 The motion carried by a unanimous vote.

9. Communications

- A.** [2024-082](#) The Procurement Pipeline for February 2024
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [9A The Procurement Pipeline for February 2024](#)
- No Action Taken**

10. Look Ahead

The next Audit Committee Meeting is scheduled for Friday, March 22, 2024 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 9:06 a.m.



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Jacqueline Morgan, CTP, State Revolving Fund Program Finance Manager

Re: Resolution to Adopt the Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Project Plan.

Background & Analysis: Attached are the following materials.

1. Draft Great Lakes Water Authority (“GLWA”) Board letter
2. DWSD - CWSRF Project Plan Summary and Resolution

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board of Directors approve the attached resolution to adopt the City of Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – FY 2025 Clean Water State Revolving Fund (CWSRF) Project Plan.

DRAFT for Audit Committee Review Only

..Title

Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – FY 2025 Clean Water State Revolving Fund (CWSRF) Project Plan

..Body

Agenda of: April 24, 2024

Item No.: 2024-111

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 24, 2024

RE: **Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Project Plan**

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA) **approves the attached Resolution for the City of Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – FY 2025 Clean Water State Revolving Fund (CWSRF) Project Plan;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Great Lakes Water Authority (GLWA) secures capital improvement financing for the of Detroit Water and Sewerage Department (DWSD) in accordance with foundational documents related to the establishment of GLWA. DWSD has identified the Sewer System Rehabilitations project for submittal to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for FY 2025 CWSRF funding consideration. The

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deadline for submitting CWSRF project planning documents to EGLE is May 1, 2024, but prior to submitting the project plans, a public hearing must be held for the affected area.

The Sewer System Rehabilitations project is comprised of rehabilitating aging and/or compromised selected sewer mains located in the city of Detroit. Construction will include replacement of sewer mains, cured-in-place pipe (CIPP) rehabilitation, manhole replacement, manhole rehabilitation, and spot repairs. The impact of the projects will be improved customer satisfaction and safe reliable collection of untreated sanitary sewage from customers. In addition, the project will reduce the frequency of basement backups and cave-ins caused by sewer mains. The estimated cost of this project is \$40 million.

The public hearing notice and Sewer System Rehabilitations project plan was posted on the DWSD website and can be viewed at: www.detroitmi.gov/dwsd. This project plan was presented at that DWSD Public Hearing on February 21, 2024.

JUSTIFICATION

Pursuant to Section 7.2(b) of the Regional Sewage Disposal System Lease between the City of Detroit and GLWA, the Authority shall cooperate fully with the City in the implementation of this Detroit capital improvement, including financing through the Authority. Therefore, GLWA will submit the local project plan as it will be the CWSRF loan applicant. Per notification from EGLE, GLWA does not need to hold a separate public hearing on the local project, however, the GLWA Board of Directors will need to act on the included resolution adopting the Project Plan. The resolution must be approved and signed to ensure that the finalized Project Plan is assembled and submitted to the EGLE by the deadline of May 1, 2024.

GLWA concurs with the DWSD Sewer System Rehabilitations Project Plan adoption, and as the CWSRF applicant, is seeking low interest loan assistance from the CWSRF program. Although the EGLE interest rate for FY 2025 will not be determined until October 2024, the current 30-year loan interest rate for an overburdened applicant, which is applicable for DWSD projects, is 2.00 percent. Savings are typically significant when comparing the interest rates under the CWSRF program with a similar open market revenue bond issue. Compared to an estimated market-based rate of 5%, potential interest savings on a 30-year loan would be approximately \$24.5 million based on a CWSRF loan amount of \$40 million.

Another advantage of the CWSRF is that interest costs are only incurred on the amount drawn from the loan as project expenditures are incurred. This results in additional debt service savings early in the term of the loan compared to market-based

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transactions. Further, use of CWSRF funding as junior lien does not impact GLWA debt reserve requirements.

BUDGET IMPACT

GLWA will be the loan applicant on CWSRF loans issued on behalf of the DWSD, and DWSD will be the CWSRF loan recipient as determined by EGLE. All project costs financed by GLWA, on behalf of DWSD, through the CWSRF program bonds and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system. Debt service is anticipated to begin on October 1, 2025 for this project and will be included as part of the FY 2026 – FY 2027 biennial budget.

COMMITTEE REVIEW

This matter was presented to the GLWA Audit Committee at its March 22, 2024 meeting. The Audit Committee [insert action] that the Great Lakes Water Authority Board of Directors approve the attached Resolution for the City of Detroit Water and Sewerage Department (DWSD) Sewer System Rehabilitations – FY 2025 Clean Water State Revolving Fund (CWSRF) Project Plan as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.

Great Lakes Water Authority
Resolution 2024-111

RE: Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD)
Sewer System Rehabilitations - FY 2025 Clean Water State Revolving Fund (CWSRF)
Project Plan

By Board Member: _____

Whereas: The City of Detroit through its Detroit Water and Sewerage Department (DWSD), and the Great Lakes Water Authority (GLWA), both jointly recognize the need to make improvements to its existing sewer system that are owned and operated by the City of Detroit and that are physically located within the city limits; and

Whereas: Pursuant to Section 7.2(b) of the Regional Sewage Disposal System Lease between the City of Detroit and GLWA, the Authority shall cooperate fully with the City in the implementation of this Detroit capital improvement, including financing through the Authority; and

Whereas: The Sewer System Rehabilitations Clean Water State Revolving Fund (CWSRF) Project Plan for the fiscal year (FY) 2025 has been prepared by DWSD; and

Whereas: The DWSD prepared a CWSRF Project Plan, which recommends rehabilitating aging and/or compromised selected sewer mains located within the City of Detroit; and

Whereas: The Project Plan was presented by DWSD at a public hearing held on February 21, 2024, at 2:00 p.m. in the DWSD Board of Water Commissioners (BOWC) hearing room, and all public comments were considered and addressed; and

Whereas: The DWSD formally adopted said Project Plan and agreed to implement the identified sewer rehabilitations, as described in said document, as evidenced by the DWSD resolution; and

Whereas: It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the CWSRF program.

Now Therefore Be It:

Resolved The GLWA Board hereby accepts and approves the DWSD Sewer System Rehabilitations CWSRF Project Plan as approved by the DWSD BOWC at its February 21, 2024, meeting; and Be It Further

Resolved The GLWA concurs with the CWSRF Project Plan adoption and agrees to serve as the CWSRF loan applicant on behalf of the City of Detroit, the loan recipient, for

all activities required by CWSRF financing, and in accordance with local and state intergovernmental agreement; and Be It Further

Resolved The GLWA Resolution identifying Designated Representatives adopted on April 26, 2017 established the GLWA authorized representatives for all CWSRF program activities, and no updates to these designations are necessary at this time and Be It Further

Resolved That the Chief Executive Officer (CEO) is authorized to transmit the final FY 2025 CWSRF Project Plan for the Sewer System Rehabilitations to the Michigan Department of Environment, Great Lakes, and Energy on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the State of Michigan Department of Environment, Great Lakes and Energy (EGLE) CWSRF procedures so that the project can proceed expeditiously to construction.

Adopted by the Great Lakes Water Authority Board on:

Detroit Water and Sewerage Department

FY2025 CWSRF Project

Combined Sewer Rehabilitation on
Selected High-Priority Assets



Water & Sewerage
Department



Funding Opportunity

SRF Program and Federal Grants

State Revolving Funds (SRF) Program Overview

Clean Water State Loan Revolving Fund (CWSRF)

- Low-interest state loan program.

City of Detroit is well positioned to receive significant grants

- Detroit typically qualifies as a Significantly Overburdened Community.

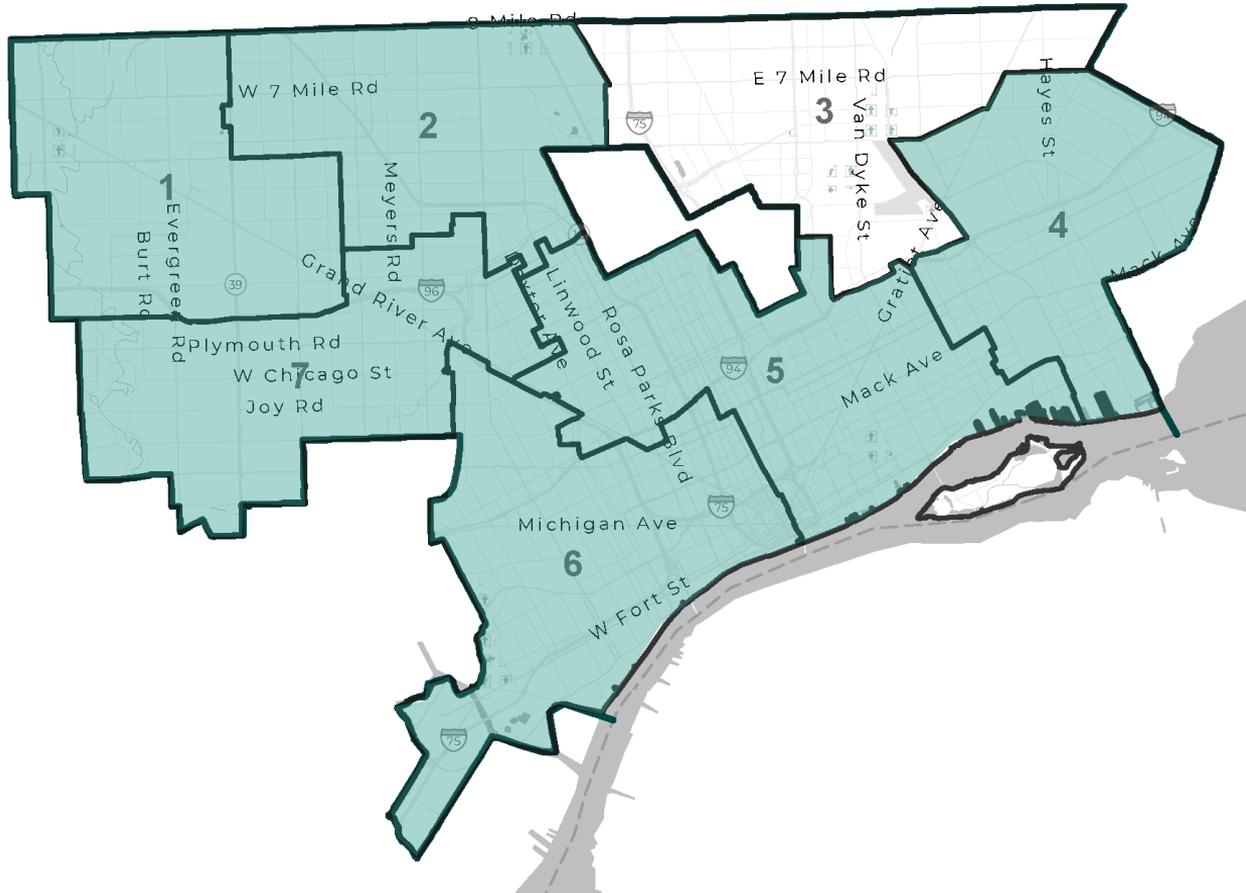
Why SRF Program?

- Disadvantaged community determination based on debt service on the upcoming loan will be charged to the City customers over time and built into the capital portion of the rate structure.
- DWSD's disadvantaged status allows for a 30-year term option instead of 20-year.

Project Locations and Scope of Work

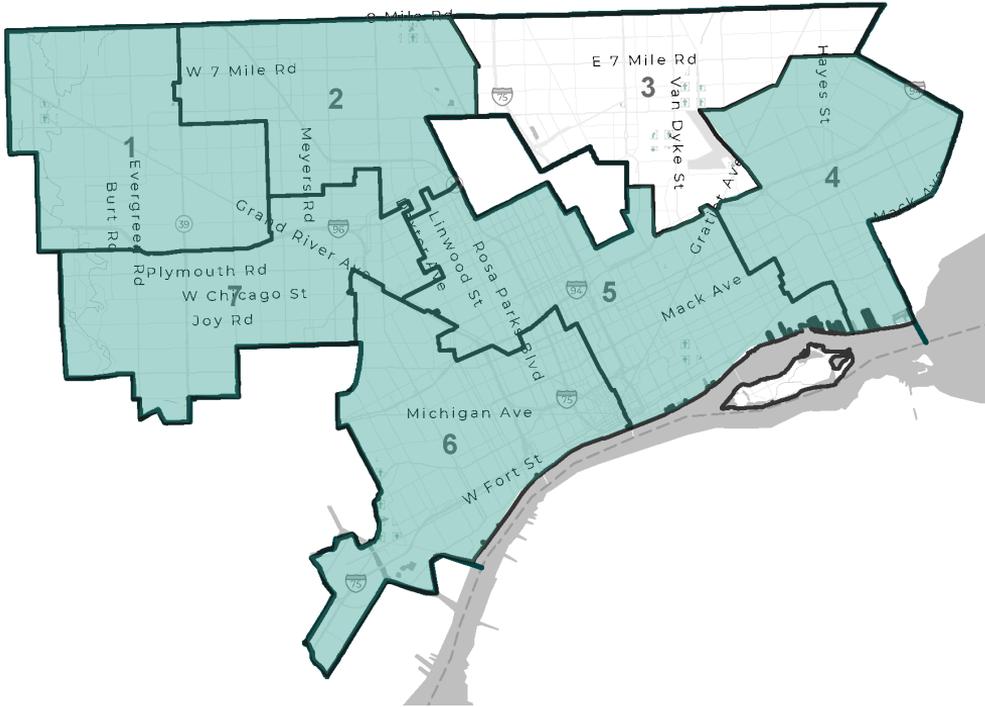
Selected Assets Throughout the City of Detroit

Project Area



**Council Districts
1, 2, 4, 5, 6, and 7
based on risk
assessments.**

FY2025 CWSRF Project – Rehabilitation of Selected High-Priority Assets



Sewer Rehabilitation

Up to \$100M investment in rehabilitation of existing DWSD combined sewer assets in these neighborhoods:

- | | | |
|-------------------------|------------------------|----------------------|
| Aviation Sub | Garden View | Plymouth-I96 |
| Barton-McFarland | Grand River-I96 | Rouge Park |
| Belmont | Grand River-St Marys | Schoolcraft-I96 |
| Bentler-Pickford | Grandmont | Southfield Plymouth |
| Cadillac Community | Grandmont #1 | State Fair |
| Carbon Works | Greenfield-Grand River | Warren Ave Community |
| College Park | Harmony Village | Warrendale |
| Conner Creek Industrial | Hubbell-Lyndon | Waterworks Park |
| Crary/St Marys | Hubbell-Puritan | We Care Community |
| East Village | Joy Community | Weatherby |
| Evergreen Lahser 7/8 | Joy-Schaefer | Westwood Park |
| Evergreen-Outer Drive | Mack Avenue | Winship |
| Fiskhorn | Marina District | |
| Five Points | O'Hair Park | |
| Franklin Park | Plymouth-Hubbell | |

Project Highlights



- Sewer assets assigned for rehabilitation were selected using DWSD Risk Assessment modeling techniques.
- Condition assessment data was used to develop and guide rehabilitation strategies.
- Projects are initiated in anticipation of grant funding.
- In the event that 100% grant funding is not secured, DWSD is under no obligation to move forward with construction.

Schedule

Project Plan, Design and Construction



SRF Project Plan Schedule

Preliminary Engineering

• December 2023 - February 2024

Draft Project Plan Public Meeting and Board Resolution

• February 21, 2024

GLWA Board Meeting and Board Resolution

• April 24, 2024

Final Project Plan Submitted to EGLE

• May 2024

Notice of Award Status

• 2025

BOWC Requested Action

Resolution Approving the Project Planning Document

- DWSD requests the BOWC approve the project planning document by adopting the resolution

**A RESOLUTION ADOPTING A FINAL PROJECT PLAN FOR THE DETROIT WATER AND SEWERAGE
DEPARTMENT FOR SEWER SYSTEM REHABILITATIONS FY25 CLEAN WATER STATE REVOLVING
FUND (CWSRF) PROJECT**

WHEREAS, Detroit Water and Sewerage Department (DWSD) and the Great Lakes Water Authority (GLWA) recognize the need to make improvements to its existing sewer system that are owned and operated by the City of Detroit and that are physically located within the city limits; and

WHEREAS, DWSD has prepared a Clean Water State Revolving Fund (CWSRF) Project Plan, which recommends sewer replacement and rehabilitation throughout Detroit; and

WHEREAS, said Project Plan was presented at the public meeting held on Wednesday, February 21, 2024 and all public comments have been considered and addressed; and

WHEREAS, DWSD formally adopted said Project Plan and agreed to implement the identified selected alternative of sewer system rehabilitation as described in said document, as evidenced by the DWSD resolution;

NOW THEREFORE BE IT RESOLVED, that Detroit Water and Sewerage Department formally adopts said Project Planning Document and agrees to implement the selected project design.

BE IT FURTHER RESOLVED, that the Detroit, Water and Sewerage Department Director, a position currently held by Gary Brown, is designated as the authorized representative for all activities associated with the project referenced above, including the submittal of said Project Planning Document as the first step in applying to the State of Michigan for a Clean Water State Revolving Fund Loan to assist in the implementation of the selected alternative.

Yeas (names of Members voting Yes): Commissioners: Einheuser, Blackmon, Coleman, Davis, Garcia, and Kinloch

Nays (names of Members voting No): None

I certify that the above Resolution was adopted by Great Lakes Water Authority and Detroit Water and Sewerage Department on February 21, 2024

BY: Marian King-Bell
(please print or type)

Marian King-Bell
Signature

Board Secretary
Title

2/23/2024
Date



Detroit Water and Sewerage Department Certified Copy

735 Randolph Street
Detroit, Michigan 48226
(313) 224-4704 Office
dwsd.legistar.com

Resolution, BOWC: 2024-22

File Number: 2024-22

The Board of Water Commissioners for the City of Detroit, Water and Sewerage Department recommends adoption of the “A final project plan for the Detroit Water and Sewerage Department Sewer Rehabilitation and Designating an Authorized Project Representative FY 2025 Clean Water State Revolving Fund (CWSRF)”. The BOWC also authorizes the Chief Financial Officer and the Director to take such other action as may be necessary to accomplish the intent of this vote.

Agenda of February 21, 2024
Item No. 2024-22

TO: The Honorable
Board of Water Commissioners
City of Detroit, Michigan

FROM: Gary Brown, Director
Water and Sewerage Department

RE: Final Project Plan for Sewer Rehabilitation and Designating an Authorized Project Representative
FY 2025 Clean Water State Revolving Fund (CWSRF)

MOTION

Upon recommendation of Samuel A. Smalley, P.E., Chief Operating Officer, the Board of Water Commissioners for the City of Detroit, Water and Sewerage Department recommends adoption of the “A final project plan for the Detroit Water and Sewerage Department Sewer Rehabilitation and Designating an Authorized Project Representative FY 2025 Clean Water State Revolving Fund (CWSRF)” and also authorizes the Chief Financial Officer and the Director to take such other action as may be necessary to accomplish the intent of this vote.

I, Marian King-Bell, certify that this is a true copy of Resolution, BOWC No. 2024-22, passed by the Board of Water Commissioners on 2/21/2024.

Attest: Marian King-Bell

2/23/2024
Date Certified

DETROIT WATER AND SEWERAGE DEPARTMENT NOTICE

PUBLIC MEETING FOR SEWER REHABILITATION

FY25 CLEAN WATER STATE REVOLVING FUND (CWSRF) PROJECT

The Detroit Water and Sewerage Department (DWSD) announces a Public Meeting regarding its Project Planning Document for proposed Sewer Main Rehabilitation throughout the city of Detroit. DWSD seeks low interest Clean Water State Revolving Fund (CWSRF) loan assistance for FY2025. These projects include rehabilitating aging and/or compromised selected sewer mains located in Council Districts 1, 2, 4, 5, 6, and 7 (under the Council District maps as of January 2024). Construction will include replacement of sewer mains, cured-in-place pipe (CIPP) rehabilitation, manhole replacement, manhole rehabilitation, and spot repairs. All work to be performed within the existing road right-of-way and easements. The impact of the project will be improved customer satisfaction and safe, reliable collection of untreated sanitary sewage from customers. This project will reduce the frequency of basement backups and cave-ins caused by sewer mains. The temporary impact of construction activities will be minimized through mitigation measures specified in the contract documents. Adverse impacts on historical, archaeological, geographic, or cultural areas are not expected. This project is necessary to ensure that DWSD can maintain the condition of its local combined sewer system. The Project Planning Document describes sewer mains in critical need of replacement or rehabilitation. The total cost of this work is \$40,000,000, which is being sought through the CWSRF program.

The Public Meeting will present a description of the recommended projects, estimated costs, noting no potential impact for customers. The purpose of the meeting is not only to inform, but to seek and gather input from people that will be affected. Comments and viewpoints from the public are encouraged.

THE PROJECT PRESENTATION AND PUBLIC COMMENT WILL BE DURING THE DETROIT BOARD OF WATER COMMISSIONERS MEETING ON:

DATE: Wednesday, February 21, 2024

PLACE: Detroit Water and Sewerage Department
Water Board Building
735 Randolph, 5th Floor, Board Room
Detroit, Michigan 48226

TIME: 2:00 p.m.

Call in using your phone: 301-715-8592
312-626-6799
267-831-0333

Zoom Meeting ID: 815 7263 5118
Zoom Passcode: 482262021

To attend online:

Zoom link: <https://cityofdetroit.zoom.us/j/81572635118>
Use Passcode: 482262021

Information on the Project Plan will be available for review after February 1, 2024 at the following locations:

1. City Website: detroitmi.gov/dwsd
2. By email request to Sonali Patel: sonali.patel@detroitmi.gov
3. In person at the Water Board Building

If you have questions or want to submit written statements for the Public Meeting, call or write:

Call: Sonali Patel at 313-782-2477

Email: Sonali Patel at sonali.patel@detroitmi.gov

Mail: Sonali Patel
Detroit Water and Sewerage Department
735 Randolph, Suite 901
Detroit, MI 48226

Written comments will be accepted at the above address if received prior to 2:00 p.m. EST, Wednesday, February 21, 2024.

Participating in Public Comment During the Public Hearing

You may provide your public comment in-person or via Zoom (see below).

In-person attendees

- If you want to make public comment, complete the form available in the Board Room and it will be provided to the Chair. The Chair will call on you during the appropriate time.
 - We respectfully request that you maximize your three minutes by sharing all your comments/questions at one time.
 - You will only be called upon once for public comment.
 - Once the chair closes public comment, there will be no other comments from the public accepted and all public attendees will not be acknowledged during the remainder of the meeting.

Attending via Zoom

- During the public comment section, raise your hand using the Zoom hand icon on your desktop or mobile device, or if calling into the meeting by phone, press *9 to raise your hand (press *6 to unmute when called upon).
- We respectfully request that you maximize your three minutes by sharing all your comments/questions at one time.
- You will only be called upon once for public comment.
- Once the chair closes public comment, there will be no other comments from the public accepted and all attendees will remain muted for the duration of the meeting.

City of Detroit Water and Sewerage Department
Gary Brown, Director



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Jacqueline Morgan, CTP, State Revolving Fund Program Finance Manager

Re: Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration

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 of Directors approve the attached Resolution to Adopt the GLWA project plans for the 1) Combined Sewer Overflow (CSO) Outfall Rehabilitations, 2) Oakwood and Leib CSO Facilities Improvement Project, and 3) Rehabilitation of the 7 Mile Sewer System projects for FY 2025 CWSRF funding consideration at its regularly scheduled meeting on April 24, 2024, 2:00 pm.

..Title

Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration

..Body

Agenda of: April 24, 2024

Item No.: **2024-117**

Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 24, 2024

RE: Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer//Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the Resolution to Adopt the Great Lakes Water Authority 1) Combined Sewer Overflow (CSO) Outfall Rehabilitation, 2) Oakwood and Leib CSO Facilities Improvement Project, and 3) Rehabilitation of the 7 Mile Sewer System Project Plans for FY 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Great Lakes Water Authority (the “GLWA”) has identified three (3) projects in the FY 2024 to FY 2028 Capital Improvement Plan (CIP) for submittal to the Michigan Department of Environment, Great Lakes and Energy (EGLE) FY 2025 CWSRF financing program. The deadline for submitting all CWSRF project plans to EGLE is May 1, 2024. Prior to submitting the project plans, GLWA must hold a public hearing to present the project plans, which is scheduled for April 24, 2024, at 2:00 pm.

At the public hearing, a summary of each project plan will be presented. The Public Hearing Notice and project plans for the following GLWA projects will be posted on the [GLWA website](#):

- 1) CSO Outfall Rehabilitation Phase VI,
- 2) Oakwood and Leib CSO Facilities Improvement Project, and
- 3) Rehabilitation of the 7 Mile Sewer System

Once the public hearing is closed, a resolution to adopt the final project planning document will be scheduled for action by the GLWA Board of Directors at its regularly scheduled meeting also on April 24, 2024.

The attached Resolution approves the project plan, directs GLWA staff to address all public comments, prepare responsiveness summary, and publish the final Project Plan; authorizes GLWA’s Chief Executive Officer to transmit the final FY 2025 CWSRF Project Plans to EGLE; and to secure a CWSRF loan for the project. The resolution must be approved and signed to ensure the final project plans, forms, and attachments are assembled and submitted to the EGLE by the deadline.

The Projects:

CSO Outfall Rehabilitation Phase VI (CIP # 260510) – The project is comprised of the rehabilitation of nineteen (19) outfall sewers located along the Rouge River. The outfall sewers function as the interface between collector sewers and the Northwest Interceptor (NWI) throughout the City of Detroit. The proposed structural rehabilitation of the outfalls will extend the service lives by another 25 to 30 years and allow them to continue to provide relief to the NWI and other GLWA and City of Detroit assets during wet weather events. The total cost of this project is estimated at \$10,000,000.

Oakwood and Leib CSO Facilities Improvement Project (CIP # 270004) – The project involves a significant series of improvements at the Oakwood CSO Retention Treatment

Basin and storm/ sanitary pumping station, and the Leib CSO Screening and Disinfection Facility (SDF). The proposed improvements will increase facility reliability, flexibility, operation, maintenance, and safety to support planned increases in utilization. The total cost of this project is estimated at \$55,500,000.

Rehabilitation of the 7 Mile Sewer System (CIP # 260206) – The project consists of the rehabilitation of several large diameter combined sewers including Segments 1, 2, and 3 of the 7 Mile Sewer, East 7 Mile Relief Sewer, and the West 7 Mile Relief Sewer. The structural rehabilitation of the sewers will extend their service lives by another 25 to 30 years and allows them to continue to convey flow to the GLWA Water Resource Recovery Facility (WRRF) providing relief to other components of the regional conveyance system during wet weather events. The total cost of this project is estimated at \$30,000,000.

JUSTIFICATION

GLWA is seeking low interest financing assistance through the CWSRF program for these projects. Although the interest rate for FY 2025 will not be determined by EGLE until October 2024, the current year's interest rate of 2.50% for 20-year and 2.75% for 30-year loans are lower than the present conventional revenue bond interest rates. Note that these projects may qualify for "overburdened applicant status" which lowers the interest rate to 2.00% for both the 20-year and 30-year loans. As long as GLWA continues to qualify for overburdened applicant status for sewer system projects, and interest rates for 30-year loans are comparable to 20-year loans, GLWA will select the 30-year option.

Potential dollar savings are significant when compared to municipal bond interest rates in a market-based transaction. By way of example, the GLWA ten-year financial plan utilizes an estimated interest rate of 5% for market-based debt. Comparing the current CWSRF overburdened applicant status interest rate of 2% to the GLWA estimated rate of 5%, the potential interest savings using the CWSRF loan are shown below.

- CSO Outfall Rehabilitation Phase VI – CWSRF of \$10 million
20-year loan, potentially \$3.8 million in interest savings
30-year loan, potentially \$6.1 million in interest savings
- Oakwood and Leib CSO Facilities Improvement – CWSRF of \$55.5 million
20-year loan, potentially \$21.2 million in interest savings
30-year loan, potentially \$34.0 million in interest savings
- Rehabilitation of the 7 Mile Sewer System – CWSRF of \$30 million
20-year loan, potentially \$11.5 million in interest savings

30-year loan, potentially \$18.4 million in interest savings

- A summary of this analysis is provided as Attachment 1 to this Board Letter in Table 1.

Another advantage of utilizing the CWSRF is that interest costs are only incurred on the amount drawn from the loans as project expenditures are being incurred, resulting in additional debt service savings early in the term of the loan compared to market-based transactions. Also, use of SRF funding as junior lien does not impact GLWA debt reserve requirements.

Note that the time period for financing will be aligned with the life of the asset. For example, the 25 year assets would be funded with 20 year, not 30 year debt. This alignment will occur at a future date.

BUDGET IMPACT

Debt service interest payments on these projects would begin in the fall of FY 2026 and will be included as part of the FY 2026 financial plan.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 22, 2024. The Audit Committee [insert action taken] that the Board of Directors of the Great Lakes Water Authority, **approves the Resolution to Adopt the Great Lakes Water Authority 1) Combined Sewer Overflow (CSO) Outfall Rehabilitation, 2) Oakwood and Leib CSO Facilities Improvement Project, and 3) Rehabilitation of the 7 Mile Sewer System Project Plans for FY 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration** at its regularly scheduled meeting on April 24, 2024 at 2:00 p.m.

Attachment 1

Table 1: CWSRF Program Loan Savings Comparison to 5% Estimated Market Interest Rate

CIP Project #	Project	Estimated SRF Project Cost	Comparative Savings (GLWA 5% Interest Rate versus CWSRF 2% Interest Rate)	
			20-Year Loan	30-Year Loan
260510	CSO Outfall Rehabilitation Phase VI	\$ 10,000,000	\$ 3,820,500	\$ 6,119,150
270004	Oakwood and Leib CSO Facilities Improvement Project	55,500,000	21,185,300	33,970,850
260206	Rehabilitation of the 7 Mile Sewer System	30,000,000	11,452,050	18,360,000

Great Lakes Water Authority
Resolution 2024-117

RE: Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration

By Board Member: _____

Whereas: The Combined Sewer Overflow (CSO) Outfall Rehabilitation Phase VI, Oakwood and Leib CSO Improvements, and Rehabilitation of the 7 Mile Sewer System CWSRF Project Plans for the FY 2025 CWSRF has been prepared by the GLWA;

Whereas: The CSO Outfall Rehabilitation Phase VI project is comprised of the rehabilitation of nineteen (19) outfall sewers located along the Rouge River;

Whereas: The CSO Outfall Rehabilitation Phase VI structural rehabilitation of the outfalls will extend the service lives by another 25 to 30 years and allow them to continue to provide relief to the NWI and other GLWA and City of Detroit assets during wet weather events;

Whereas: The Oakwood and Leib CSO Facilities Improvement Project is comprised of a significant series of improvements at the Oakwood CSO Retention Treatment Basin and storm/ sanitary pumping station, and the Leib CSO Screening and Disinfection Facility (SDF);

Whereas: The Oakwood and Leib CSO Facilities Improvement Project will improve facility reliability, flexibility, operation, maintenance, and safety to support planned increases in utilization;

Whereas: The Rehabilitation of the 7 Mile Sewer System project is comprised of the rehabilitation of several large diameter combined sewers;

Whereas: The Rehabilitation of the 7 Mile Sewer System project will extend their service lives by another 25 to 30 years and allow them to continue to convey flow to the GLWA Water Resource Recovery Facility (WRRF) and provide relief to other components of the regional conveyance system during wet weather events;

Whereas: The FY 2025 CWSRF Project Plans have been placed on public notice and a Public Hearing was held April 24, 2024, at 2:00 p.m. where comments on the recommended project were solicited;

Whereas: It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the CWSRF program; and

Whereas: Formal action by the GLWA Board of Directors is needed to adopt the recommended FY 2025 CWSRF Project Plans for CSO Outfall Rehabilitation

Phase VI, the Oakwood and Leib CSO Facilities Improvement Project, and Rehabilitation of the 7 Mile Sewer System; as a requirement for participation in the Michigan Department of Environment, Great Lakes and Energy (EGLE) CWSRF program;

Now Therefore Be It:

Resolved That this Board hereby accepts the FY 2025 the CSO Outfall Rehabilitation Phase VI, Oakwood and Leib CSO Facilities Improvement Project, and Rehabilitation of the 7 Mile Sewer System project plans dated April 24, 2024, and as directs staff members of the GLWA to address all public comments, prepares the responsiveness summary, and publish the final Project Plans; and Be It Further

Resolved That the Chief Executive Officer (CEO) is authorized to transmit the final FY 2025 CWSRF Project Plans for CSO Outfall Rehabilitation Phase VI, Oakwood and Leib CSO Facilities Improvement Project, and Rehabilitation of the 7 Mile Sewer System to EGLE on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with CWSRF procedures so that the projects can proceed expeditiously to construction.

Adopted by the Great Lakes Water Authority on April 24, 2024

PROJECT PLAN SUMMARY

CSO Outfall Rehabilitation Phase VI



Detroit, Michigan

April 24, 2024



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1.0 Introduction

The purpose of this Project Plan Summary is to provide an overview of the Great Lakes Water Authority (GLWA) CSO Outfall Rehabilitation Phase VI Project. The following sections provide a project summary, project needs and proposed improvements, environmental evaluations, estimated user cost impact, and proposed project schedule. The formal Project Plan document is in process and will be presented under separate cover.

2.0 Project Summary

The Great Lakes Water Authority (GLWA) is responsible for the operation and maintenance of numerous sewer outfalls located along the Rouge River starting near the Water Resource Recovery Facility (WRRF) and extending north to the Seven Mile Retention Treatment Basin (RTB) Facility. The outfalls function as the interface between collector sewers throughout the City of Detroit and the Northwest Interceptor (NWI).

In general, the outfalls and their components including regulator gates, dams, and connecting gravity mains, serve to redirect dry weather flow from the collector sewers to the NWI. Dry weather flow in the NWI then continues to the WRRF located in southwest Detroit. In the event of a wet weather event of sufficient size to cause surcharging of the NWI, the outfalls are designed and maintained to redirect a portion of the wet weather flow past the surcharged NWI through the outfall and to the Rouge River, resulting in a combined sewer overflow (CSO).

As part of the GLWA CSO Outfall Rehabilitation Phase VI project, nineteen (19) Rouge River Outfalls including B-46, B-49, B-50, B-54, B-56/57/58, B-60/61/62, B-63, B-64, B-65, B-67/68, B-69/70, B-71, B-72, B-77, B-79, B-80/81, B-82, B-85, and B-87 are planned to be rehabilitated using various repair methods. The outfalls are located along the Rouge River in Detroit, Michigan, beginning furthest downstream near Carbon Street and furthest upstream to Bert Road at nineteen

distinct and separate locations. Rehabilitation of the outfalls is necessary to ensure the proper function of these assets in relieving the NWI and preventing negative upstream hydraulic impacts such as basement flooding.

3.0 Project Needs

The current condition of the nineteen outfalls is generally poor to fair, with risk of failure at certain locations. Maintaining and repairing the outfalls is necessary in relieving the NWI and preventing negative upstream hydraulic impacts such as basement flooding. Structural rehabilitation of the outfalls will extend their service lives by an additional 25 to 30 years and allow them to continue to provide relief to the NWI and other GLWA and City of Detroit assets during wet weather events.

4.0 Proposed Improvements

This outfall rehabilitation project consists of repairing nineteen distinct and separate outfalls along the Rouge River in Detroit, Michigan. Sewer repairs will extend along the length of each outfall starting where each outfall meets the collector sewer and then extending downstream to the Rouge River. Repairs are also planned to be conducted within the outfall backwater gate chambers, regulator chambers, and associated gravity mains and siphons. Sewer repairs are proposed to consist of the following:

- Isolation, dewatering, and engineer inspection of submerged portions of the outfalls.
- Sewer reconstruction and replacement using both open cut excavation and trenchless methods.
- Reinforced spray lining.
- Backwater gate hatch replacement.
- Debris/sludge and concrete removal.
- Manhole frame and cover replacement.
- Spot repairs consisting of deep concrete repair, open joint repair, epoxy crack repair, tuckpointing, deteriorated brick repair, chemical

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grouting of leaks, removal of mineral deposits and roots, and rough tap repairs.

- Cleaning, CCTVing, and repair of all siphons.

As previously stated, rehabilitation and/or replacement of the select Rouge River Outfalls will extend the services lives of the sewers by another 25 to 30 years and allow them to continue to provide relief to the NWI and upstream communities. Multiple structural repair alternatives were considered during the study phase of this project. The repair options were evaluated to minimize construction costs and disruptions to the ground surface, traffic, adjacent utilities, nearby wetlands, and the environment.

5.0 Environmental Evaluation

Throughout the design of this project, the engineering team has evaluated environmental impacts that could occur from the operation of this project. The review included cultural and historical resources in the project area and the natural environment which includes air quality, wetlands, sensitive floodplains and high-risk erosion areas, rivers and surface waters, recreational facilities, agricultural resources, and the presence of rare and endangered species of plants and animals. It has been determined that any negative environmental impacts are short-term and will be limited to the anticipated 2-year construction phase of the project.

The majority of the construction areas will be below ground, although some work at the ground surface is planned, such as manhole frame and cover replacements, replacement of backwater gate hatches, reconstruction of two outfall sewers, and placement of riprap at the Rouge River. Excavation

methods and trenchless tunneling efforts will be developed to minimize any disturbances to the area. Short-term environmental impacts such as increased noise or dust and potential traffic disruption will be minimized by limiting the contractor working hours and the development of soil erosion and sedimentation plans and traffic control plans.

Two environmental impacts that are also expected to be encountered include disturbance to existing floodplains, wetlands, and to nearby species. A majority of the Rouge River Outfalls are located in existing floodplains and wetlands, specifically those located throughout Rouge Park. During construction, the use of mats for construction equipment may be required to limit excessive rutting to the area, and effective soil control measures will be necessary. There are several at-risk species and/or natural communities within 0.5 mile of the project location, including Indiana Bats, Snuffbox, Northern Riffleshell, Rayed Bean Mussel, and Round Hickorynut. Therefore, construction methods will be required that minimize disturbance to the area. No long-term negative impacts are expected to occur from this project.

6.0 Estimated User Cost Impact

This proposed project is anticipated to directly or indirectly impact 640,510 wastewater customers in the GLWA service area. The estimated total project cost of \$10,000,000 will be incorporated into the regional system revenue requirement and allocated to all member partners through the Sewer charges methodology process. GLWA serves approximately 2.9 million residents in approximately 1.16 million households. The estimated cost per household has been determined to be less than \$0.55 per year.

7.0 Proposed Implementation Schedule

Proposed Project Schedule	
Design Notice to Proceed	June 2021
30% Design	December 2022
60% Design	March 2023
90% Design	July 2024
Bid Due	November 2024
Construction Notice to Proceed	April 2025
Construction Final Completion	May 2027

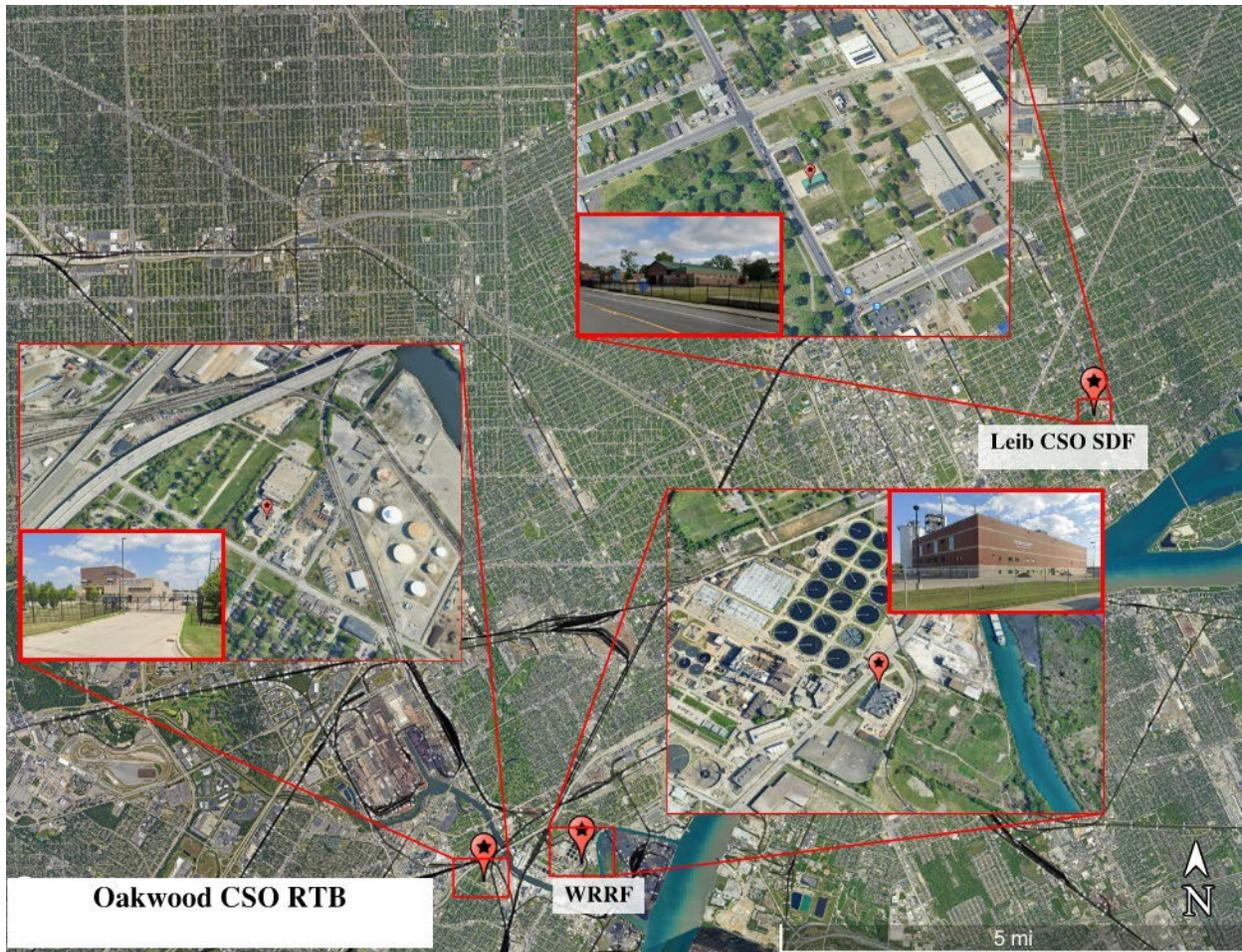
GREAT LAKES WATER AUTHORITY

Oakwood and Leib CSO Facilities Improvement Project

Project Plan Summary

April 24, 2024





Facilities Description

The Oakwood Combined Sewage Overflow (CSO) Retention Treatment Basin (RTB) and Leib CSO Screening and Disinfection Facility (SDF) are critical components of the Great Lakes Water Authority's (GLWA) sewage collection system, preventing backups of combined sewage into residential basements and discharges of untreated combined sewage into the Detroit and Rouge rivers. The Oakwood CSO RTB provides 9 million gallons of storage of combined sewage that is diverted from the Detroit Water Resource Recovery Facility (WRRF) during wet weather flow events, whenever the WRRF is overloaded, and the Oakwood RTB has available capacity. The Oakwood RTB can treat up to 1,660 cubic feet per second (cfs) with screening and disinfection. The Leib SDF does not retain flow

like the Oakwood RTB, but can treat up to 1,550 cfs with screening and disinfection through a nearly 1-mile-long effluent conduit, and hydraulically pass up to 2,000 cfs that would otherwise flow to the WRRF or cause backups of the sewage collection system. Both facilities use sodium hypochlorite as a chemical disinfectant, requiring the use of on-site storage facilities and chemical shipments.

Summary of Project Needs

This project will support planned increases in the utilization/peak flow at both facilities where there is planned diverted flows from the Northwest Interceptor (NWI) to Oakwood and Meldrum sewer to Leib. As a result, the volume of stormwater entering each facility will be significantly increased compared to the existing operations. To address these concerns and improve reliability of the treatment capacity, the disinfection systems will be

upgraded as a part of this work. Upgrades to the disinfection system include replacement of the storage system, feed system, and sampling system.

The overall purpose of the CSO Facility Improvements Project is to improve reliability, enhance operability and to accommodate the increased loading rates associated with new diversions to each facility. These improvements are critical for the facilities to be able to meet/exceed their current permit requirements. By optimizing pump operation and chemical dosing and monitoring, improving post-storm flushing capabilities, and providing mechanical redundancy will provide the operational flexibility and long-term improvements needed to maintain water quality standards.

Proposed Improvements

At the Oakwood CSO RTB, the proposed improvements include:

- Storm Pump Modifications
- Improved storm wet well flushing systems
- New grease lubrication system for storm pumps
- Improvements to the storm wet well and CSO basin flushing systems
- Changes to the storm pump system and sanitary pump system operation strategies
- Improvements to the screenings screw conveyor drainage
- Plumbing improvements, including replacement of damaged secondary water pipe and storm pump station sump pumps
- Vibration monitoring for the storm water pumps
- Cleaning of the storm and sanitary wet wells and influent tunnels

At the Leib CSO SDF, the proposed improvements:

- Replacement of all horizontally-mounted COPA screens with new vertically-mounted Romag screens, and rehabilitation of existing Romag screens
- New flushing system at upstream ends of screenings collection channel

At both facilities, proposed improvements include:

- Replacement of the sodium hypochlorite storage and feed systems
- Replacement of existing sampling pumps and associated monitoring and controls
- Site civil and security improvements, including repairing of damaged concrete, site drainage improvements, and traffic-related improvements e.g., new roadways and security gates
- Structural and architectural modifications
- Electrical improvements
- Integration of new field instruments, process equipment, and control panels with existing Emerson Ovation DCS platform

Potential Alternatives

Extensive alternatives assessments for the CSO improvements projects were performed as part of the development of the *CS-299 CSO Facilities Assessment* in April 2021 and documented thoroughly therein. Select alternatives included “status quo” or “do-nothing” alternatives, in-kind equipment replacement or rehabilitation, and alternative technology or control selections. In addition, the CDM Smith conducted a study to confirm the alternatives documented in the February 2024 Basis of Design Report.

Environmental Evaluation

Short-term and long-term impacts due to construction activities such as noise, dust, and traffic disruption cannot be avoided.

Where above-ground construction activities are anticipated, adverse environmental impacts will be made through thoroughly designed and well-planned construction sequencing. This will limit the hours of operation for noisy equipment. Dust and soil deposits on the streets will be controlled through watering and frequent street sweeping. Construction area footprints will be minimized, but traffic control measures during construction activities are unavoidable. Site restoration will minimize the adverse impacts of construction, and the implementation of a Soil Erosion and Sedimentation Control program will minimize the

impacts due to ground disturbance, when such disturbance is found to be necessary. Specific techniques will be specified in the construction contract documents.

Estimated Project Cost

Item	Estimated Cost (\$)
Design	\$7,000,000
Construction Admin	\$1,700,000
Construction	\$46,800,000
Total	\$55,500,000

Estimated User Cost Impact

The proposed project is anticipated to directly or indirectly impact 640,510 wastewater customers in the GLWA service area. The estimated total project cost of \$55,500,000 will be incorporated into the regional system revenue requirement and allocated to all member partners through the Sewer charges methodology process. GLWA serves approximately 2.9 million residents in approximately 1.16 million households. The estimated cost per household has been determined to be approximately \$2.36 per year.

Proposed Implementation Schedule

Item	Date
Design Notice to Proceed	September 2022
Design Complete	December 2024
Bid Opening	May 2025
Construction Notice to Proceed	October 2025
Construction Substantial Completion	February 2030
Construction Final Completion	April 2030

PROJECT PLAN SUMMARY

Rehabilitation of the 7 Mile Sewer System



Detroit, Michigan

April 24, 2024



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1.0 Introduction

The purpose of this Project Plan Summary is to provide an overview of the Great Lakes Water Authority (GLWA) Rehabilitation of the 7 Mile Sewer System Project. The following sections provide a project summary, project needs and proposed improvements, environmental evaluations, estimated user cost impact, and proposed project schedule. The formal Project Plan document is in process and will be presented under separate cover.

2.0 Project Summary

The Great Lakes Water Authority (GLWA) wastewater conveyance system consists of over 180 miles of large diameter collector and interceptor sewers which convey wastewater flows from member communities outside of Detroit to the Water Resource Recovery Facility (WRRF) located in southwest Detroit.

As part of the Rehabilitation of the 7 Mile Sewer System project, rehabilitation of several large diameter combined sewers including Segments 1, 2, and 3 of the 7 Mile Sewer, the East 7 Mile Relief Sewer, and the West 7 Mile Relief Sewer are planned to be rehabilitated. These five sewers comprise the 7 Mile Sewer System and are located along 7 Mile Road extending from Five Points Street to the west and the Grand Trunk Railroad to the east throughout the City of Detroit.

The 7 Mile Sewer System transports dry and wet weather flow to other GLWA assets including the Seven Mile Sewer Retention Treatment Basin (RTB) Facility and other large diameter sewers that transport flow to the WRRF. The East and West 7 Mile

Relief Sewers allow several large collector sewers to relieve and overflow into the relief sewers preventing negative upstream hydraulic impacts such as basement flooding.

3.0 Project Needs

The current condition of portions of the 7 Mile Sewer System is very poor with risk of failure. Maintaining and repairing the sewers is necessary in continuing to allow the sewers to convey flow to the GLWA WRRF and provide relief to other components of the regional conveyance system.

Structural rehabilitation of the sewers will also extend their service lives by an additional 25 to 30 years and allow them to continue to provide positive impacts to the system.

4.0 Proposed Improvements

This sewer rehabilitation project consists of repairing five separate combined sewers located along 7 Mile Road in Detroit, Michigan. Sewer repairs are proposed to consist of the following:

- Debris/sludge removal.
- Manhole frame and cover replacement.
- Spot repairs consisting of deep concrete repair, open joint repair, epoxy crack repair, tuckpointing, deteriorated brick repair, chemical grouting of leaks, removal of mineral deposits and roots, and rough tap repairs.
- In-depth structural repairs within Segment 3 of the 7 Mile Sewer.

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As previously mentioned, rehabilitation of the 7 Mile Sewer System will extend the service lives of the sewers and allow them to continue to provide relief to other components of the regional conveyance system during wet weather events. Multiple structural repair alternatives were considered during the study phase of this project. The repair options were evaluated to minimize construction costs, minimize disruptions to the ground surface, traffic, adjacent utilities, and the environment.

5.0 Environmental Evaluation

Throughout the design of this project, the engineering team has evaluated environmental impacts that could occur from the operation of this project. The review included cultural and historical resources in the project area and the natural environment which includes air quality, wetlands, sensitive floodplains and high-risk erosion areas, rivers and surface waters, recreational facilities, agricultural resources, and the presence of rare and endangered species of plants and animals. It has been determined that any negative environmental impacts are short-term and will be limited to the anticipated 2-year construction phase of the project.

The majority of the construction work will be below ground, although some work at the ground surface is planned, such as manhole frame and cover replacements, will take place at the ground surface. Excavation methods for manhole frame and cover replacements will be developed to minimize any disturbances to the area.

Short-term environmental impacts such as increased noise or dust and potential traffic disruption will be minimized by limiting the contractor working hours and the development of soil erosion and sedimentation plans and traffic control plans as necessary.

The location of the project extends along 7 Mile Road primarily through commercial areas. The project site does not extend throughout any floodplains, wetlands, or endangered species areas. Therefore, it is not expected that large amounts of environmental disturbance will be caused during construction. No long-term negative impacts are expected to occur from this project.

6.0 Estimated User Cost Impact

This proposed project is anticipated to directly or indirectly impact 640,510 wastewater customers in the GLWA service area. The estimated total project cost of \$30,000,000 will be incorporated into the regional system revenue requirement and allocated to all member partners through the Sewer charges methodology process. GLWA serves approximately 2.9 million residents in approximately 1.16 million households. The estimated cost per household has been determined to be approximately \$1.63.

7.0 Proposed Implementation Schedule

Proposed Project Schedule	
Design Notice to Proceed	June 2021
30% Design	April 2023
60% Design	April 2023
90% Design	March 2024
Bid Due	November 2024
Construction Notice to Proceed	April 2025
Construction Final Completion	July 2027



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Nick Fedewa, CPA, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02)

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

Proposed Action: Audit Committee recommends that the Great Lakes Water Authority Board of Directors approve the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02).

DRAFT for Audit Committee Review Only

..Title

Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02)

..Body

Agenda of: April 24, 2024
Item No.: **2024-118**
Amount: Not to Exceed \$500,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 24, 2024

RE: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02)

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer\Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-02) as presented**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

DRAFT for Audit Committee Review Only

BACKGROUND

The Great Lakes Water Authority (“GLWA”) may proceed with the issuance of refunding of various outstanding water supply system bonds for the purpose of achieving annual debt service savings. In order to do so, the GLWA Board must approve the attached resolution approving the Series Ordinance.

The Series Ordinance sets forth the guidelines for the Refunding 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 Bond Purchase Agreement, within the parameters set forth in the Series Ordinance.

JUSTIFICATION

The authorized amount for the Refunding Bonds is presented for an aggregate principal amount of not to exceed \$500,000,000.

Key Provisions:

- Not to Exceed Par Amount: \$500 million (for refunding)
- Maximum Coupon Rate: 6.00%
- Minimum Purchase Price: 98% of principal amount of bonds
- Maximum Underwriter Discount: 0.40% of principal amount of bonds
- Present Value Savings: Equal to or greater than 2.50% of principal amount of bonds to be refunded

BUDGET IMPACT

Savings resulting from the potential Water Refunding Bonds has not been included in the FY 2025 budget or ten-year financial plan. When savings are achieved, the financial plan will be revised accordingly.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 22, 2024. The Audit Committee *[insert action]* the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2024-02

**SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF
WATER SUPPLY SYSTEM REVENUE REFUNDING
BONDS IN A PRINCIPAL AMOUNT NOT TO EXCEED \$500,000,000**

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

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

WHEREAS, the Authority Board has determined that it is necessary to authorize at this time one or more Series of Bonds to provide moneys to refund a portion of the Outstanding Bonds (the “Bonds To Be Refunded”) and cause the Bonds To Be Refunded to be defeased in accordance with the Ordinance.

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 “2024 Series Ordinance”) is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2024 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings, respectively, in this 2024 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) “2024 Bonds” means the Bonds authorized by Section 3 of this 2024 Series Ordinance, issued for the purpose of refunding the Bonds To Be Refunded and paying Refunding Costs.

(b) “2024 Reserve Requirement” means the sum of the 2024 Senior Lien Reserve Requirement and the 2024 Second Lien Reserve Requirement.

(c) “2024 Second Lien Bonds” means those 2024 Bonds, if any, issued as Second Lien Bonds as provided in this 2024 Series Ordinance.

(d) “2024 Second Lien Reserve Requirement” means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Second Lien Bond Reserve Account at least equal to the Reserve Requirement for the Second Lien

Bond Reserve Account immediately upon the issuance of the 2024 Second Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2024 Second Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Second Lien Bond Reserve Account.

(e) “2024 Senior Lien Bonds” means those 2024 Bonds, if any, issued as Senior Lien Bonds as provided in this 2024 Series Ordinance.

(f) “2024 Senior Lien Reserve Requirement” means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Senior Lien Bond Reserve Account at least equal to the Reserve Requirement for the Senior Lien Bond Reserve Account immediately upon the issuance of the 2024 Senior Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2024 Senior Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Senior Lien Bond Reserve Account.

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

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

(i) “Bonds To Be Refunded” has the meaning set forth in the recitals hereto.

(j) “Continuing Disclosure Undertaking” means the continuing disclosure undertaking or undertakings with respect to the 2024 Bonds to be entered into by the Authority pursuant to the Rule.

(k) “Escrow Agreement” shall have the meaning set forth in Section 10 of this 2024 Series Ordinance.

(l) “Escrow Deposit” means cash or Government Obligations, or a combination of cash and Government Obligations, at least sufficient to discharge the lien of the Pledged Assets securing the Bonds To Be Refunded in accordance with Section 1001 of the Ordinance.

(m) “Fitch” means Fitch Ratings, Inc., and any successor rating agency.

(n) “Interest Payment Date” means except as otherwise determined in the Sale Order each January 1 and July 1, or such other dates and commencing as set forth in the Sale Order.

(o) “Maturity Date” means such dates of maturity of the 2024 Bonds as determined in the Sale Order.

(p) “Moody’s” means Moody’s Investors Service, Inc., and any successor rating agency.

(q) “Official Statement” means the final disclosure document with respect to the 2024 Bonds.

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

(s) “Preliminary Official Statement” means the preliminary disclosure document with respect to the 2024 Bonds.

(t) “Purchase Agreement” means the bond purchase agreement between the Authority and the Underwriter providing for the sale of the 2024 Bonds.

(u) “Refunding Costs” means the costs of refunding the Bonds To Be Refunded, including, to the extent authorized in the Sale Order, the amount of the Escrow Deposit, and funding of the 2024 Reserve Requirement and Issuance Costs relating to the 2024 Bonds.

(v) “Regular Record Date” means the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

(w) “Rule” means Rule 15c2-12 promulgated by the United States Securities and Exchange Commission under the Securities and Exchange Act of 1934, as amended.

(x) “S&P” means S&P Global Ratings, and any successor rating agency.

(y) “Sale Order” means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2024 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2024 Bonds and to complete the other transactions contemplated herein.

(z) “Securities Depository” means (i) The Depository Trust Company and its successors and assigns, if any, or (ii) any other securities depository which agrees to follow the procedures required to be followed by a securities depository in connection with the 2024 Bonds and which is selected by the Authority as provided in Section 6.

(aa) “Taxable 2024 Bonds” means any 2024 Bonds other than Tax-Exempt 2024 Bonds.

(bb) “Tax-Exempt 2024 Bonds” means any 2024 Bonds that are Tax-Exempt Bonds.

(cc) “Underwriter” means Siebert Williams Shank & Co., LLC, on behalf of itself and such underwriters as may be named in the Purchase Agreement.

Section 3. Authorization of 2024 Bonds.

(a) Authorization of Borrowing. The Authority may borrow an aggregate principal amount not in excess of \$500,000,000, all as is finally determined in the Sale Order, and issue 2024 Bonds at one or more times and in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2024 Senior Lien Bonds and/or 2024 Second Lien Bonds, all as finally determined in the Sale Order.

(b) Purpose of 2024 Bonds. The 2024 Bonds shall be issued as Additional Bonds for the purpose of refunding the Bonds To Be Refunded and paying Refunding Costs, and may include amounts necessary to satisfy the 2024 Reserve Requirement and paying the costs of a Credit Facility.

(c) Limitation on Issuance of 2024 Bonds. No 2024 Bonds shall be issued unless:

- (1) The proceeds thereof (exclusive of accrued interest), together with other moneys available to the Authority under the Ordinance, are sufficient to provide the Escrow Deposit after payment of the 2024 Reserve Requirement and Issuance Costs relating to the 2024 Bonds set forth in the Sale Order.
- (2) Concurrently with or prior to the delivery of the 2024 Bonds, an Authorized Officer gives notice to the Trustee to call for redemption at the applicable redemption price all of the Bonds To Be Refunded on the dates set forth in the Escrow Agreement. In such notice, an Authorized Officer may direct that the notice of redemption to be given by the Trustee to the Holders of the Bonds To Be Refunded pursuant to Section 303 of the Ordinance shall be given prior to the delivery of the 2024 Bonds and that such notice of redemption be conditioned upon the delivery of the 2024 Bonds and the funding of the Escrow Deposit. As provided in Section 303 of the Ordinance, if such conditions in the notice of redemption are not satisfied on or before the date fixed for redemption, then the notice of redemption shall be canceled and of no further force or effect.

(d) Priority of Lien. The 2024 Bonds shall be issued as Senior Lien Bonds and/or Second Lien Bonds, as set forth in the Sale Order.

(e) Separate Series. The 2024 Bonds are issuable at one or more times and as one or more separate Series of Bonds in such amounts as determined in the Sale Order.

(f) Taxable and Tax-Exempt 2024 Bonds. The 2024 Bonds may be issued as Taxable 2024 Bonds or Tax-Exempt 2024 Bonds, or as separate Series of both, as determined in the Sale Order.

(g) Source of Payment and Security. The 2024 Bonds shall be payable and secured as provided in Section 5.

(h) Applicability of Ordinance. Except as otherwise provided in this 2024 Series Ordinance or the Sale Order, all of the provisions of the Ordinance shall apply to the 2024 Bonds as if set forth in full in this 2024 Series Ordinance, the purpose of this 2024 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2024 Bonds for the purposes set forth herein.

Section 4. 2024 Bond Details.

(a) Designation.

- (1) The 2024 Bonds shall bear the designations Water Supply System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[A/B] and shall include the Series designation and such other designations, including, without limitation, designations for multiple Series or subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2024 Series Ordinance.
- (2) If the 2024 Bonds are not issued in 2024, an Authorized Officer is authorized in his or her discretion to re-designate the year and Series designation of the 2024 Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of the 2024 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 2024 Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. The 2024 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 July 1, or such other date as set forth in a 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 limitations applicable to Taxable 2024 Bonds in Section 4(j) hereof and the following limitations:

- (1) No 2024 Bonds shall mature later than 40 years after the date of issuance thereof.
- (2) 2024 Bonds shall only be issued with principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2024 Bonds or portions thereof shall bear interest at such fixed rate or rates as determined in the Sale Order not in excess of the maximum rate permitted by law. Interest on the 2024 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 2024 Bonds shall be payable in lawful money of the United States. The principal of and premium, if any, on the 2024 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 2024 Bonds shall be dated such date or dates as determined in the Sale Order.

(g) Reserve Requirement. The 2024 Reserve Requirement, if any, with respect to each Series of the 2024 Bonds shall be satisfied by a deposit into the appropriate Bond Reserve Account

of a portion of the proceeds of such Series of 2024 Bonds, funds already on deposit in the appropriate Bond Reserve Account or the provision of a Credit Facility in the same amount and with a credit rating at the time of issuance of such Series of 2024 Bonds not less than the credit rating of such Series of 2024 Bonds, or any combination of the foregoing. The amounts, if any, required to be deposited in the Senior Lien Bond Reserve Account and the Second Lien Bond Reserve Account to cause the amounts on deposit therein to be at least equal to the Reserve Requirement for the Senior Lien Bonds and the Reserve Requirement for the Second Lien Bonds, respectively, shall be set forth in the Sale Order.

(h) Exchange. The registered owner of any 2024 Bond may exchange such 2024 Bond for a new 2024 Bond or Bonds of the same Series, interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2024 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 2024 Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2024 Bonds.

(i) Execution and Delivery of 2024 Bonds. The 2024 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 2024 Bonds to the Underwriter upon receiving the purchase price therefor in lawful money of the United States.

(j) Selection of Taxable 2024 Bonds for Redemption. Pursuant to Section 303 of the Ordinance, when Taxable 2024 Bonds are to be redeemed in part, an Authorized Officer shall specify to the Trustee the Series designation and maturity of the Taxable 2024 Bonds from which 2024 Bonds or portions of 2024 Bonds to be redeemed shall be selected. Subject to the Authorized Officer's specification, the particular Taxable 2024 Bonds or portions of Taxable 2024 Bonds to be redeemed will be selected by the Trustee by lot; provided, however, that the Trustee shall select Taxable 2024 Bonds to be redeemed on the basis of a pro rata pass-through distribution of principal in accordance with DTC procedures and provided that, so long as the Taxable 2024 Bonds are held in book-entry form the selection for redemption of such Taxable 2024 Bonds will be made in accordance with the operational arrangements of DTC then in effect and, if the DTC operational arrangements do not allow for redemption on the basis of a pro-rata pass-through distribution of principal, the Taxable 2024 Bonds will be selected for redemption, in accordance with DTC procedures, by lot. The portion of any Taxable 2024 Bonds to be redeemed in part shall be in the principal amount of \$5,000 or any integral multiple thereof.

(k) Form of 2024 Bonds. The 2024 Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by an Authorized Officer within the parameters of this 2024 Series Ordinance:

R-__

**UNITED STATES OF AMERICA
STATE OF MICHIGAN
COUNTIES OF MACOMB, OAKLAND AND WAYNE
GREAT LAKES WATER AUTHORITY**

**WATER SUPPLY SYSTEM REVENUE REFUNDING
[SENIOR LIEN] [SECOND LIEN] BOND, SERIES 2024[__]**

REGISTERED OWNER:

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, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above in lawful money of the United States of America. Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate per annum set forth above, and shall be payable on _____ 1, 20__ and semiannually on each July 1 and January 1 thereafter (each an “Interest Payment Date”) in lawful money of the United States of America.

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 Bond 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.

This Bond is one of a series of bonds designated “Water Supply System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[__]” and is issued pursuant to the provisions of (i) Act 233, Public Acts of Michigan, 1955, as amended (“Act 233”), and Act 94, Public Acts of Michigan, 1933, as amended (“Act 94”), (ii) Master Bond Ordinance No. 2015-01 adopted by the Board on October 7, 2015, as amended (the “Bond Ordinance”), (iii) the Series

Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in a Principal Amount not to Exceed \$500,000,000, adopted by the Board on _____, 2024 (the “Series Ordinance”), and (vi) a Sale Order of an Authorized Officer of the Issuer dated _____, 2024 (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 revenues of the Water System (as defined in the Bond Ordinance), after provision is made for reasonable and necessary expenses of operation, maintenance and administration of the Water System (the “Net Revenues”), and a statutory lien on the Net Revenues and Pledged Assets (as defined in the Bond Ordinance) (the “Pledged Assets”) is hereby recognized and acknowledged. Such lien is a [first] [second] lien[, subject to obligations heretofore and hereafter issued or incurred under the Bond Ordinance secured by a first 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 [first] [second] 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 to the extent, and as provided in, the Sale Order.

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

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

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

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

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

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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 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 one of the bonds designated by the Issuer as “Water Supply System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[]”.

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

By: _____

Date of Authentication: _____, 2024

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.

END OF BOND FORM

Section 5. Payment of 2024 Bonds; Confirmation of Statutory Lien.

(a) The 2024 Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2024 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 2024 Bonds as follows:

- (1) Such lien in favor of the 2024 Senior Lien Bonds shall be a first lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Senior Lien Bonds.
- (2) Such lien in favor of the 2024 Second Lien Bonds shall be a second lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Second Lien Bonds.

Section 6. Concerning the Securities Depository.

(a) As used herein:

“Beneficial Owner” means any Person who indirectly owns 2024 Bonds pursuant to the indirect ownership system maintained by the Securities Depository and its Participants, commonly known as the “Book-Entry Only System.”

“Participant” means any Person whose ownership of 2024 Bonds is shown on books of the Securities Depository.

(b) Initially, one fully-registered bond for each maturity of each Series of 2024 Bonds, in the aggregate principal amount of such maturity, shall be issued in the name of Cede & Co., as nominee of the Securities Depository, for the benefit of the Participants in the Book-Entry Only System. While the 2024 Bonds are 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 2024 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 2024 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 2024 Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2024 Bonds only to or upon the order of the Securities Depository, 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 2024 Bonds to the extent of the sum or sums so paid.

(d) If (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 2024 Bonds that they be able to obtain 2024 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 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 2024 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 2024 Series Ordinance to the contrary, so long as any 2024 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 2024 Bond and all notices of redemption, tender and otherwise with respect to such 2024 Bond shall be made and given, respectively, to the Securities Depository as provided in the blanket issuer letter of representations between the Authority and the Securities Depository;
- (2) if less than all of the 2024 Bonds of the same type of any maturity are to be redeemed, then the particular 2024 Bonds or portions of 2024 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 2024 Bonds and premium, if any and interest on the 2024 Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and
- (4) if a 2024 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 2024 Bond pursuant to the procedures of the Securities Depository.

Section 7. Credit Facility.

(a) An Authorized Officer is authorized to negotiate and obtain a Credit Facility with respect to the 2024 Bonds, if the Authorized Officer determines that it is in the best interest of the Authority. An Authorized Officer is further authorized to renegotiate the terms of any outstanding Credit Facility, if the Authorized Officer determines that it is in the best interest of the Authority.

(b) An Authorized Officer is authorized to pay the cost of any such Credit Facility from the proceeds of the 2024 Bonds or any other funds legally available therefor.

(c) An Authorized Officer is authorized to make such covenants and agreements of the Authority as shall be necessary or appropriate in any agreement with the Credit Entity providing such Credit Facility.

Section 8. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2024 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 9. Disposition of Proceeds.

(a) 2024 Senior Lien Bonds.

- (1) Disposition of Accrued Interest: From the proceeds of the sale of the 2024 Senior Lien Bonds there shall be immediately deposited in the Senior Lien Bond and Interest Redemption Fund an amount equal to any accrued interest received on the delivery of the 2024 Senior Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Bond and Interest Redemption Fund for payment of the next maturing interest payment on the 2024 Senior Lien Bonds.
- (2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2024 Series Ordinance, from the proceeds of the 2024 Senior Lien Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account at least equal to the 2024 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2024 Senior Lien Bonds or any other funds legally available therefor.
- (3) Issuance Costs: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Senior Lien Bonds shall be applied to the payment of Issuance Costs upon submission of proper documentation to an Authorized Officer.
- (4) Escrow Deposit: As provided in the Sale Order, the balance of the proceeds from the sale of the 2024 Senior Lien Bonds shall be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit to be held in the Escrow Fund.

(b) 2024 Second Lien Bonds.

- (1) Disposition of Accrued Interest: From the proceeds of the sale of the 2024 Second Lien Bonds there shall be immediately deposited in the Second Lien Bond and Interest Redemption Fund an amount equal to any accrued interest received on the delivery of the 2024 Second Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Bond and Interest Redemption Fund for payment of the next maturing interest payment on the 2024 Second Lien Bonds.
- (2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2024 Series Ordinance, from the proceeds of the 2024 Second Lien Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account at least equal to the 2024 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2024 Second Lien Bonds or any other funds legally available therefor.
- (3) Issuance Costs: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Second Lien Bonds shall be applied to the payment of Issuance Costs upon submission of proper documentation to an Authorized Officer.
- (4) Escrow Deposit: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Second Lien Bonds shall be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit to be held in the Escrow Fund.

Section 10. Escrow Fund; Escrow Agreement.

(a) Establishment of Escrow Fund. The Escrow Deposit shall be held in or credited to an account designated as the “Great Lakes Water Authority Water Supply System Revenue Refunding Bonds Series 2024 Escrow Fund” (the “Escrow Fund”) pursuant to an escrow agreement (the “Escrow Agreement”).

(b) Escrow Agreement.

- (1) An Authorized Officer is authorized to enter into the Escrow Agreement on behalf of the Authority with U.S. Bank Trust Company, National Association as “Escrow Trustee.”
- (2) The Escrow Agreement:
 - a) shall be in the form and substance customary for refunding escrow agreements;

- b) may permit any balance after paying the principal (and premium, if any) and interest on the Bonds To Be Refunded to be applied to any lawful purpose of the Water System if such use will not, in the opinion of Bond Counsel, impair the exclusion of interest on the 2024 Bonds that are Tax-Exempt 2024 Bonds from gross income for federal income tax purposes; and
- c) shall otherwise be in the best interests of the Authority as determined by an Authorized Officer, as conclusively established by his or her execution of the Escrow Agreement.

Section 11. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2024 Bonds that so long as any of the Tax-Exempt 2024 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 2024 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 2024 Bonds and moneys deemed to be proceeds of Tax-Exempt 2024 Bonds, and to prevent the Tax-Exempt 2024 Bonds from being or becoming “private activity bonds” as that term is used in the Code.

Section 12. Preliminary and Final Official Statements.

(a) An Authorized Officer shall assist in the preparation of the Preliminary Official Statement and is authorized to deem the portions of the Preliminary Official Statement relating to the 2024 Bonds and the Authority “final” for purposes of the Rule.

(b) The Preliminary Official Statement with such changes and additions as an Authorized Officer shall approve shall constitute the final Official Statement, and an Authorized Officer is authorized to execute the final Official Statement on behalf of the Authority approved by him or her with such changes as the Authorized Officer may authorize.

(c) Such final Preliminary Official Statement and final Official Statement and other offering materials satisfactory to an Authorized Officer are authorized to be distributed by the Underwriter in conjunction with the offering and sale of the 2024 Bonds.

Section 13. Continuing Disclosure. Unless otherwise set forth in the Sale Order because of an exemption from the Rule, the 2024 Bonds shall be subject to the Rule, and an Authorized Officer is authorized to execute and deliver the Continuing Disclosure Undertaking in form and substance customary for continuing disclosure undertakings entered into pursuant to the Rule.

Section 14. Sale of 2024 Bonds; Purchase Agreement.

(a) The 2024 Bonds shall be sold by negotiated sale to the Underwriter pursuant to a Purchase Agreement or Agreements 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 2024 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer's execution of the Purchase Agreement or Agreements.

(b) The Authority Board hereby determines that the sale of the 2024 Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2024 Bonds to be sold in the most efficient manner so as to result in the lowest possible borrowing costs to the Authority.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the Underwriter to purchase the 2024 Bonds subject to the following limitations:

- (1) The interest rate coupon with respect to the 2024 Bonds shall not exceed 6%.
- (2) The purchase price of the 2024 Bonds shall not be less than 98% of the principal amount thereof.
- (3) The Underwriter's discount with respect to the 2024 Bonds or the compensation to be paid to the Underwriter shall not exceed 0.40% of the principal amount of the 2024 Bonds.
- (4) The present value of the savings (net of Issuance Costs) to be realized by the issuance of the 2024 Bonds shall be equal to or greater than 2.5% of the par value of the Bonds To Be Refunded.

(d) An Authorized Officer is authorized to determine if the Purchase Agreement shall provide for liquidated damages and if so, the amount thereof, and if the purchaser of the 2024 Bonds is required to provide a good faith check and if so, the amount thereof.

Section 15. 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 2024 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2024 Series Ordinance, an Authorized Officer shall determine the Bonds To Be Refunded and aggregate principal amount of 2024 Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2024 Series Ordinance. An Authorized Officer shall also determine and establish, in accordance with this 2024 Series Ordinance, the maturities of the 2024 Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities, and the redemption provisions for the 2024 Bonds.

(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 his or her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2024 Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2024 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 2024 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 2024 Bonds which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2024 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 16. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2024 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, letters of representation, documents, instruments, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2024 Bonds and otherwise give effect to the transactions contemplated by this 2024 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 18. 2024 Series Ordinance a Contract. The provisions of this 2024 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2024 Bond.

Section 19. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2024 Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2024 Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2024 Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2024 Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2024 Bonds or other available funds.

(d) An Authorized Officer is authorized to engage other consultants, including, without limitation, verification agents or other parties as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2024 Bonds and to pay the fees and expenses thereof from the proceeds of the 2024 Bonds or other available funds.

Section 20. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2024 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 2024 Series Ordinance. The section and paragraph headings in this 2024 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2024 Series Ordinance.

Section 21. Publication and Recordation. This 2024 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 2024 Series Ordinance are, to the extent of such conflict, repealed.

Section 23. Effective Date. This 2024 Series Ordinance shall be effective upon adoption.

Adopted and signed on the ____ day of _____, 2024.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

4866-9775-9145 v3 [63818-54]

Great Lakes Water Authority

Resolution 2024-118

RE: Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue Refunding Bonds in an Amount not to Exceed \$500,000,000

Ordinance 2024-02

By Board Member: _____

Whereas There has been presented to the Board of Directors of the Great Lakes Water Authority (the “Authority”) an ordinance entitled “Series Ordinance Authorizing the Issuance and Sale of Water Supply System Revenue Refunding Bonds in an Amount not to Exceed \$500,000,000” (the “2024 Water Series Ordinance”), which ordinance is a Series Ordinance as defined and described in Master Bond Ordinance No. 2015-01 adopted by the Board of Directors on October 7, 2015, as amended on December 9, 2015, January 27, 2016, August 10, 2016 and February 12, 2020 (as amended, the “Master Water Bond Ordinance”).

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 2024 Water Series Ordinance.

Now, Therefore Be It:

Resolved That the 2024 Water Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2024 Water 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: _____, 2024



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Nick Fedewa, CPA, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-03)

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

Proposed Action: Audit Committee recommends that the Great Lakes Water Authority Board approve the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000.

DRAFT for Audit Committee Review Only

..Title

Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-03)

..Body

Agenda of: April 24, 2024
Item No.: **2024-119**
Amount: Not to Exceed \$500,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 24, 2024

RE: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 (Ordinance 2024-03)

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer\Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the resolution for the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000**, and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

DRAFT for Audit Committee Review Only

BACKGROUND

The Great Lakes Water Authority (“GLWA”) may proceed with the issuance of refunding of various outstanding sewage disposal system bonds for the purpose of achieving annual debt service savings. In order to do so, the GLWA Board must approve the attached resolution approving the Series Ordinance.

The Series Ordinance sets forth the guidelines for the Refunding 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 Bond Purchase Agreement, within the parameters set forth in the Series Ordinance.

JUSTIFICATION

The authorized amount for the Refunding Bonds is for an aggregate principal amount of not to exceed \$500,000,000.

Key Provisions:

- Not to Exceed Par Amount: \$500 million (for refunding)
- Maximum Coupon Rate: 6.00%
- Minimum Purchase Price: 98% of principal amount of bonds
- Maximum Underwriter Discount: 0.40% of principal amount of bonds
- Present Value Savings: Greater than 2.50% of principal amount of bonds to be refunded

BUDGET IMPACT

Savings resulting from the potential Sewer Refunding Bonds has not been included in the FY 2025 budget or ten-year financial plan. When savings are achieved, the financial plan will be revised accordingly.

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 22, 2024. The Audit Committee *[insert action]* the resolution for the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in a Principal Amount Not to Exceed \$500,000,000 as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2024-03

**SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF
SEWAGE DISPOSAL SYSTEM REVENUE REFUNDING
BONDS IN A PRINCIPAL AMOUNT NOT TO EXCEED \$500,000,000**

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 Bonds to provide moneys to refund a portion of the Outstanding Bonds (the “Bonds To Be Refunded”) and cause the Bonds To Be Refunded to be defeased in accordance with the Ordinance.

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 “2024 Series Ordinance”) is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2024 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings, respectively, in this 2024 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) “2024 Bonds” means the Bonds authorized by Section 3 of this 2024 Series Ordinance, issued for the purpose of refunding the Bonds To Be Refunded and paying Refunding Costs.

(b) “2024 Reserve Requirement” means the sum of the 2024 Senior Lien Reserve Requirement and the 2024 Second Lien Reserve Requirement.

(c) “2024 Second Lien Bonds” means those 2024 Bonds, if any, issued as Second Lien Bonds as provided in this 2024 Series Ordinance.

(d) “2024 Second Lien Reserve Requirement” means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Second Lien Bond Reserve Account at least equal to the Reserve Requirement for the Second Lien

Bond Reserve Account immediately upon the issuance of the 2024 Second Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2024 Second Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Second Lien Bond Reserve Account.

(e) “2024 Senior Lien Bonds” means those 2024 Bonds, if any, issued as Senior Lien Bonds as provided in this 2024 Series Ordinance.

(f) “2024 Senior Lien Reserve Requirement” means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Senior Lien Bond Reserve Account at least equal to the Reserve Requirement for the Senior Lien Bond Reserve Account immediately upon the issuance of the 2024 Senior Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2024 Senior Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Senior Lien Bond Reserve Account.

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

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

(i) “Bonds To Be Refunded” has the meaning set forth in the recitals hereto.

(j) “Continuing Disclosure Undertaking” means the continuing disclosure undertaking or undertakings with respect to the 2024 Bonds to be entered into by the Authority pursuant to the Rule.

(k) “Escrow Agreement” shall have the meaning set forth in Section 10 of this 2024 Series Ordinance.

(l) “Escrow Deposit” means cash or Government Obligations, or a combination of cash and Government Obligations, at least sufficient to discharge the lien of the Pledged Assets securing the Bonds To Be Refunded in accordance with Section 1001 of the Ordinance.

(m) “Fitch” means Fitch Ratings, Inc., and any successor rating agency.

(n) “Interest Payment Date” means except as otherwise determined in the Sale Order each January 1 and July 1, or such other dates and commencing as set forth in the Sale Order.

(o) “Maturity Date” means such dates of maturity of the 2024 Bonds as determined in the Sale Order.

(p) “Moody’s” means Moody’s Investors Service, Inc., and any successor rating agency.

(q) “Official Statement” means the final disclosure document with respect to the 2024 Bonds.

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

(s) “Preliminary Official Statement” means the preliminary disclosure document with respect to the 2024 Bonds.

(t) “Purchase Agreement” means the bond purchase agreement between the Authority and the Underwriter providing for the sale of the 2024 Bonds.

(u) “Refunding Costs” means the costs of refunding the Bonds To Be Refunded, including, to the extent authorized in the Sale Order, the amount of the Escrow Deposit, and funding of the 2024 Reserve Requirement and Issuance Costs relating to the 2024 Bonds.

(v) “Regular Record Date” means the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

(w) “Rule” means Rule 15c2-12 promulgated by the United States Securities and Exchange Commission under the Securities and Exchange Act of 1934, as amended.

(x) “S&P” means S&P Global Ratings, and any successor rating agency.

(y) “Sale Order” means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2024 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2024 Bonds and to complete the other transactions contemplated herein.

(z) “Securities Depository” means (i) The Depository Trust Company and its successors and assigns, if any, or (ii) any other securities depository which agrees to follow the procedures required to be followed by a securities depository in connection with the 2024 Bonds and which is selected by the Authority as provided in Section 6.

(aa) “Taxable 2024 Bonds” means any 2024 Bonds other than Tax-Exempt 2024 Bonds.

(bb) “Tax-Exempt 2024 Bonds” means any 2024 Bonds that are Tax-Exempt Bonds.

(cc) “Underwriter” means Siebert Williams Shank & Co., LLC, on behalf of itself and such underwriters as may be named in the Purchase Agreement.

Section 3. Authorization of 2024 Bonds.

(a) Authorization of Borrowing. The Authority may borrow an aggregate principal amount not in excess of \$500,000,000, all as is finally determined in the Sale Order, and issue 2024 Bonds at one or more times and in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2024 Senior Lien Bonds and/or 2024 Second Lien Bonds, all as finally determined in the Sale Order.

(b) Purpose of 2024 Bonds. The 2024 Bonds shall be issued as Additional Bonds for the purpose of refunding the Bonds To Be Refunded and paying Refunding Costs, and may include amounts necessary to satisfy the 2024 Reserve Requirement and paying the costs of a Credit Facility.

(c) Limitation on Issuance of 2024 Bonds. No 2024 Bonds shall be issued unless:

- (1) The proceeds thereof (exclusive of accrued interest), together with other moneys available to the Authority under the Ordinance, are sufficient to provide the Escrow Deposit after payment of the 2024 Reserve Requirement and Issuance Costs relating to the 2024 Bonds set forth in the Sale Order.
- (2) Concurrently with or prior to the delivery of the 2024 Bonds, an Authorized Officer gives notice to the Trustee to call for redemption at the applicable redemption price all of the Bonds To Be Refunded on the dates set forth in the Escrow Agreement. In such notice, an Authorized Officer may direct that the notice of redemption to be given by the Trustee to the Holders of the Bonds To Be Refunded pursuant to Section 303 of the Ordinance shall be given prior to the delivery of the 2024 Bonds and that such notice of redemption be conditioned upon the delivery of the 2024 Bonds and the funding of the Escrow Deposit. As provided in Section 303 of the Ordinance, if such conditions in the notice of redemption are not satisfied on or before the date fixed for redemption, then the notice of redemption shall be canceled and of no further force or effect.

(d) Priority of Lien. The 2024 Bonds shall be issued as Senior Lien Bonds and/or Second Lien Bonds, as set forth in the Sale Order.

(e) Separate Series. The 2024 Bonds are issuable at one or more times and as one or more separate Series of Bonds in such amounts as determined in the Sale Order.

(f) Taxable and Tax-Exempt 2024 Bonds. The 2024 Bonds may be issued as Taxable 2024 Bonds or Tax-Exempt 2024 Bonds, or as separate Series of both, as determined in the Sale Order.

(g) Source of Payment and Security. The 2024 Bonds shall be payable and secured as provided in Section 5.

(h) Applicability of Ordinance. Except as otherwise provided in this 2024 Series Ordinance or the Sale Order, all of the provisions of the Ordinance shall apply to the 2024 Bonds as if set forth in full in this 2024 Series Ordinance, the purpose of this 2024 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2024 Bonds for the purposes set forth herein.

Section 4. 2024 Bond Details.

(a) Designation.

- (1) The 2024 Bonds shall bear the designations Sewage Disposal System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[A/B] and shall include the Series designation and such other designations, including, without limitation, designations for multiple Series or subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2024 Series Ordinance.
- (2) If the 2024 Bonds are not issued in 2024, an Authorized Officer is authorized in his or her discretion to re-designate the year and Series designation of the 2024 Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of the 2024 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 2024 Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. The 2024 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 July 1, or such other date as set forth in a 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 limitations applicable to Taxable 2024 Bonds in Section 4(j) hereof and the following limitations:

- (1) No 2024 Bonds shall mature later than 40 years after the date of issuance thereof.
- (2) 2024 Bonds shall only be issued with principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2024 Bonds or portions thereof shall bear interest at such fixed rate or rates as determined in the Sale Order not in excess of the maximum rate permitted by law. Interest on the 2024 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 2024 Bonds shall be payable in lawful money of the United States. The principal of and premium, if any, on the 2024 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 2024 Bonds shall be dated such date or dates as determined in the Sale Order.

(g) Reserve Requirement. The 2024 Reserve Requirement, if any, with respect to each Series of the 2024 Bonds shall be satisfied by a deposit into the appropriate Bond Reserve Account of a portion of the proceeds of such Series of 2024 Bonds, funds already on deposit in the appropriate Bond Reserve Account or the provision of a Credit Facility in the same amount and with a credit rating at the time of issuance of such Series of 2024 Bonds not less than the credit rating of such Series of 2024 Bonds, or any combination of the foregoing. The amounts, if any, required to be deposited in the Senior Lien Bond Reserve Account and the Second Lien Bond Reserve Account to cause the amounts on deposit therein to be at least equal to the Reserve Requirement for the Senior Lien Bonds and the Reserve Requirement for the Second Lien Bonds, respectively, shall be set forth in the Sale Order.

(h) Exchange. The registered owner of any 2024 Bond may exchange such 2024 Bond for a new 2024 Bond or Bonds of the same Series, interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2024 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 2024 Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2024 Bonds.

(i) Execution and Delivery of 2024 Bonds. The 2024 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 2024 Bonds to the Underwriter upon receiving the purchase price therefor in lawful money of the United States.

(j) Selection of Taxable 2024 Bonds for Redemption. Pursuant to Section 303 of the Ordinance, when Taxable 2024 Bonds are to be redeemed in part, an Authorized Officer shall specify to the Trustee the Series designation and maturity of the Taxable 2024 Bonds from which 2024 Bonds or portions of 2024 Bonds to be redeemed shall be selected. Subject to the Authorized Officer's specification, the particular Taxable 2024 Bonds or portions of Taxable 2024 Bonds to be redeemed will be selected by the Trustee by lot; provided, however, that the Trustee shall select Taxable 2024 Bonds to be redeemed on the basis of a pro rata pass-through distribution of principal in accordance with DTC procedures and provided that, so long as the Taxable 2024 Bonds are held in book-entry form the selection for redemption of such Taxable 2024 Bonds will be made in accordance with the operational arrangements of DTC then in effect and, if the DTC operational arrangements do not allow for redemption on the basis of a pro-rata pass-through distribution of principal, the Taxable 2024 Bonds will be selected for redemption, in accordance with DTC procedures, by lot. The portion of any Taxable 2024 Bonds to be redeemed in part shall be in the principal amount of \$5,000 or any integral multiple thereof.

(k) Form of 2024 Bonds. The 2024 Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by an Authorized Officer within the parameters of this 2024 Series Ordinance:

R-__

**UNITED STATES OF AMERICA
STATE OF MICHIGAN
COUNTIES OF MACOMB, OAKLAND AND WAYNE
GREAT LAKES WATER AUTHORITY**

**SEWAGE DISPOSAL SYSTEM REVENUE REFUNDING
[SENIOR LIEN] [SECOND LIEN] BOND, SERIES 2024[__]**

REGISTERED OWNER:

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, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above in lawful money of the United States of America. Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate per annum set forth above, and shall be payable on _____ 1, 20__ and semiannually on each July 1 and January 1 thereafter (each an “Interest Payment Date”) in lawful money of the United States of America.

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 Bond 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.

This Bond is one of a series of bonds designated “Sewage Disposal System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[__]” 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 Refunding Bonds in a Principal Amount not to Exceed \$500,000,000, adopted by the Board on _____, 2024 (the “Series Ordinance”), and (vi) a Sale Order of an Authorized Officer of the Issuer dated _____, 2024 (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 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 (as defined in the Bond Ordinance) (the “Pledged Assets”) is hereby recognized and acknowledged. Such lien is a [first] [second] lien [, subject to obligations heretofore and hereafter issued or incurred under the Bond Ordinance secured by a first 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 [first] [second] 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 to the extent, and as provided in, the Sale Order.

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, 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.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan, has caused this Bond to be signed in its name by the facsimile signatures of its Chief Executive Officer and its Secretary of the Board, and its corporate seal 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 one of the bonds designated by the Issuer as “Sewage Disposal System Revenue Refunding [Senior Lien] [Second Lien] Bonds, Series 2024[]”.

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

By: _____

Date of Authentication: _____, 2024

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.

END OF BOND FORM

Section 5. Payment of 2024 Bonds; Confirmation of Statutory Lien.

(a) The 2024 Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2024 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 2024 Bonds as follows:

- (1) Such lien in favor of the 2024 Senior Lien Bonds shall be a first lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Senior Lien Bonds.
- (2) Such lien in favor of the 2024 Second Lien Bonds shall be a second lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Second Lien Bonds.

Section 6. Concerning the Securities Depository.

(a) As used herein:

“Beneficial Owner” means any Person who indirectly owns 2024 Bonds pursuant to the indirect ownership system maintained by the Securities Depository and its Participants, commonly known as the “Book-Entry Only System.”

“Participant” means any Person whose ownership of 2024 Bonds is shown on books of the Securities Depository.

(b) Initially, one fully-registered bond for each maturity of each Series of 2024 Bonds, in the aggregate principal amount of such maturity, shall be issued in the name of Cede & Co., as nominee of the Securities Depository, for the benefit of the Participants in the Book-Entry Only System. While the 2024 Bonds are 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 2024 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 2024 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 2024 Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2024 Bonds only to or upon the order of the Securities Depository, 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 2024 Bonds to the extent of the sum or sums so paid.

(d) If (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 2024 Bonds that they be able to obtain 2024 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 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 2024 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 2024 Series Ordinance to the contrary, so long as any 2024 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 2024 Bond and all notices of redemption, tender and otherwise with respect to such 2024 Bond shall be made and given, respectively, to the Securities Depository as provided in the blanket issuer letter of representations between the Authority and the Securities Depository;
- (2) if less than all of the 2024 Bonds of the same type of any maturity are to be redeemed, then the particular 2024 Bonds or portions of 2024 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 2024 Bonds and premium, if any and interest on the 2024 Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and
- (4) if a 2024 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 2024 Bond pursuant to the procedures of the Securities Depository.

Section 7. Credit Facility.

(a) An Authorized Officer is authorized to negotiate and obtain a Credit Facility with respect to the 2024 Bonds, if the Authorized Officer determines that it is in the best interest of the Authority. An Authorized Officer is further authorized to renegotiate the terms of any outstanding Credit Facility, if the Authorized Officer determines that it is in the best interest of the Authority.

(b) An Authorized Officer is authorized to pay the cost of any such Credit Facility from the proceeds of the 2024 Bonds or any other funds legally available therefor.

(c) An Authorized Officer is authorized to make such covenants and agreements of the Authority as shall be necessary or appropriate in any agreement with the Credit Entity providing such Credit Facility.

Section 8. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2024 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 9. Disposition of Proceeds.

(a) 2024 Senior Lien Bonds.

- (1) Disposition of Accrued Interest: From the proceeds of the sale of the 2024 Senior Lien Bonds there shall be immediately deposited in the Senior Lien Bond and Interest Redemption Fund an amount equal to any accrued interest received on the delivery of the 2024 Senior Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Bond and Interest Redemption Fund for payment of the next maturing interest payment on the 2024 Senior Lien Bonds.
- (2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2024 Series Ordinance, from the proceeds of the 2024 Senior Lien Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account at least equal to the 2024 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2024 Senior Lien Bonds or any other funds legally available therefor.
- (3) Issuance Costs: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Senior Lien Bonds shall be applied to the payment of Issuance Costs upon submission of proper documentation to an Authorized Officer.
- (4) Escrow Deposit: As provided in the Sale Order, the balance of the proceeds from the sale of the 2024 Senior Lien Bonds shall be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit to be held in the Escrow Fund.

(b) 2024 Second Lien Bonds.

- (1) Disposition of Accrued Interest: From the proceeds of the sale of the 2024 Second Lien Bonds there shall be immediately deposited in the Second Lien Bond and Interest Redemption Fund an amount equal to any accrued interest received on the delivery of the 2024 Second Lien Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Bond and Interest Redemption Fund for payment of the next maturing interest payment on the 2024 Second Lien Bonds.
- (2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2024 Series Ordinance, from the proceeds of the 2024 Second Lien Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account at least equal to the 2024 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2024 Second Lien Bonds or any other funds legally available therefor.
- (3) Issuance Costs: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Second Lien Bonds shall be applied to the payment of Issuance Costs upon submission of proper documentation to an Authorized Officer.
- (4) Escrow Deposit: As provided in the Sale Order, a portion of the proceeds from the sale of the 2024 Second Lien Bonds shall be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit to be held in the Escrow Fund.

Section 10. Escrow Fund; Escrow Agreement.

(a) Establishment of Escrow Fund. The Escrow Deposit shall be held in or credited to an account designated as the “Great Lakes Water Authority Sewage Disposal System Revenue Refunding Bonds Series 2024 Escrow Fund” (the “Escrow Fund”) pursuant to an escrow agreement (the “Escrow Agreement”).

(b) Escrow Agreement.

- (1) An Authorized Officer is authorized to enter into the Escrow Agreement on behalf of the Authority with U.S. Bank Trust Company, National Association as “Escrow Trustee.”
- (2) The Escrow Agreement:
 - a) shall be in the form and substance customary for refunding escrow agreements;

- b) may permit any balance after paying the principal (and premium, if any) and interest on the Bonds To Be Refunded to be applied to any lawful purpose of the Sewer System if such use will not, in the opinion of Bond Counsel, impair the exclusion of interest on the 2024 Bonds that are Tax-Exempt 2024 Bonds from gross income for federal income tax purposes; and
- c) shall otherwise be in the best interests of the Authority as determined by an Authorized Officer, as conclusively established by his or her execution of the Escrow Agreement.

Section 11. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2024 Bonds that so long as any of the Tax-Exempt 2024 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 2024 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 2024 Bonds and moneys deemed to be proceeds of Tax-Exempt 2024 Bonds, and to prevent the Tax-Exempt 2024 Bonds from being or becoming “private activity bonds” as that term is used in the Code.

Section 12. Preliminary and Final Official Statements.

(a) An Authorized Officer shall assist in the preparation of the Preliminary Official Statement and is authorized to deem the portions of the Preliminary Official Statement relating to the 2024 Bonds and the Authority “final” for purposes of the Rule.

(b) The Preliminary Official Statement with such changes and additions as an Authorized Officer shall approve shall constitute the final Official Statement, and an Authorized Officer is authorized to execute the final Official Statement on behalf of the Authority approved by him or her with such changes as the Authorized Officer may authorize.

(c) Such final Preliminary Official Statement and final Official Statement and other offering materials satisfactory to an Authorized Officer are authorized to be distributed by the Underwriter in conjunction with the offering and sale of the 2024 Bonds.

Section 13. Continuing Disclosure. Unless otherwise set forth in the Sale Order because of an exemption from the Rule, the 2024 Bonds shall be subject to the Rule, and an Authorized Officer is authorized to execute and deliver the Continuing Disclosure Undertaking in form and substance customary for continuing disclosure undertakings entered into pursuant to the Rule.

Section 14. Sale of 2024 Bonds; Purchase Agreement.

(a) The 2024 Bonds shall be sold by negotiated sale to the Underwriter pursuant to a Purchase Agreement or Agreements 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 2024 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer's execution of the Purchase Agreement or Agreements.

(b) The Authority Board hereby determines that the sale of the 2024 Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2024 Bonds to be sold in the most efficient manner so as to result in the lowest possible borrowing costs to the Authority.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the Underwriter to purchase the 2024 Bonds subject to the following limitations:

- (1) The interest rate coupon with respect to the 2024 Bonds shall not exceed 6%.
- (2) The purchase price of the 2024 Bonds shall not be less than 98% of the principal amount thereof.
- (3) The Underwriter's discount with respect to the 2024 Bonds or the compensation to be paid to the Underwriter shall not exceed 0.40% of the principal amount of the 2024 Bonds.
- (4) The present value of the savings (net of Issuance Costs) to be realized by the issuance of the 2024 Bonds shall be equal to or greater than 2.5% of the par value of the Bonds To Be Refunded.

(d) An Authorized Officer is authorized to determine if the Purchase Agreement shall provide for liquidated damages and if so, the amount thereof, and if the purchaser of the 2024 Bonds is required to provide a good faith check and if so, the amount thereof.

Section 15. 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 2024 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2024 Series Ordinance, an Authorized Officer shall determine the Bonds To Be Refunded and aggregate principal amount of 2024 Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2024 Series Ordinance. An Authorized Officer shall also determine and establish, in accordance with this 2024 Series Ordinance, the maturities of the 2024 Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities, and the redemption provisions for the 2024 Bonds.

(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 his or her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2024 Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2024 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 2024 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 2024 Bonds which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2024 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 16. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2024 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, letters of representation, documents, instruments, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2024 Bonds and otherwise give effect to the transactions contemplated by this 2024 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 18. 2024 Series Ordinance a Contract. The provisions of this 2024 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2024 Bond.

Section 19. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2024 Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2024 Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2024 Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2024 Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2024 Bonds or other available funds.

(d) An Authorized Officer is authorized to engage other consultants, including, without limitation, verification agents or other parties as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2024 Bonds and to pay the fees and expenses thereof from the proceeds of the 2024 Bonds or other available funds.

Section 20. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2024 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 2024 Series Ordinance. The section and paragraph headings in this 2024 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2024 Series Ordinance.

Section 21. Publication and Recordation. This 2024 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 2024 Series Ordinance are, to the extent of such conflict, repealed.

Section 23. Effective Date. This 2024 Series Ordinance shall be effective upon adoption.

Adopted and signed on the _____ day of _____, 2024.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

Great Lakes Water Authority

Resolution 2024-119

RE: Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue Refunding Bonds in an Amount not to Exceed \$500,000,000 Ordinance 2024-03

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 Refunding Bonds in an Amount not to Exceed \$500,000,000” (the “2024 Sewer 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 (as amended, the “Master Sewer Bond Ordinance”).

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 2024 Sewer Series Ordinance.

Now, Therefore Be It:

Resolved That the 2024 Sewer Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2024 Sewer 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: _____, 2024



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Haran Stanley, Affordability & Assistance Management Professional

Re: Water Residential Assistance Program (WRAP) Service Delivery Partner Funding Authorization for FY 2025

Background: Upon the approval of the Great Lakes Water Authority (GLWA) FY 2025 & FY 2026 Biennial Budget and FY 2025 charges by the Board of Directors, an allocation of Water Residential Assistance Program funding by Service Delivery Partner is prepared. Service Delivery Partner contracts are in place, however the dollar amount of that contract is updated each year with the new WRAP funding amount. This memo serves as a request for authorization to allocate FY 2025 WRAP funding by Service Delivery Partner.

Analysis: The FY 2025 GLWA budget, approved on February 28, 2024, includes \$4,599,500 in Wholesale Water and Sewer funding. In addition, the Detroit Water & Sewerage Department (DWSD) Board of Directors proposed FY 2025 budget includes \$2,249,500 of WRAP funding. Their budget could be adopted as soon as March 20, 2024. Pending that action, the combined amount for WRAP is \$6,849,000.

Funding allocation by service area: WRAP is allocated by a pro-rata percentage of the total approved wholesale member partner charges and revenue requirements by service area.

Service Area	Service Delivery Partner	Allocation	Percentage
Area 1 - City of Detroit	Wayne Metro	\$1,234,342	26.84%
Area 2 - City of Flint	Wayne Metro	\$26,453	0.58%
Area 2 - Wayne County (outside Detroit), Washtenaw County, and Monroe County	Wayne Metro	\$1,344,138	29.22%
Area 4 - Oakland County	United Way	\$1,134,183	24.66%
Area 5 - Macomb, St. Clair, & Lapeer Counties	Macomb Community Action	\$860,384	18.71%
Total Wholesale Allocation		\$4,599,500	100.00%

Funding allocation by type of service provided: Of the total funds, 80% is allocated for direct payment assistance, and 20% is allocated for conservation assistance for all areas, except for City of Detroit where 100% of the funding is for the Lifeline Program.

Budget allocation: The outcome of the two calculations is shown on the table below.

AREA	Budgeted Direct Assistance	Budgeted Conservation Assistance	Budgeted Administration Costs	Budgeted Lifeline Program	Total WRAP Budget	Wholesale Allocation	DWSD Additional Allocation	Total FY 2025 WRAP Funding
Area 1 City of Detroit*				1,234,342	1,234,342	26.84%	2,249,500	3,483,842
Area 2 City of Flint	17,988	4,497	3,968		26,453	0.58%		26,453
Area 3 Wayne (not including Detroit), Washtenaw, Monroe Counties	914,014	228,503	201,621		1,344,138	29.22%		1,344,138
Area 4 Oakland County	771,244	192,811	170,127		1,134,183	24.66%		1,134,183
Area 5 Macomb, St. Clair, Lapeer Counties	564,412	141,103	154,869		860,384	18.71%		860,384
Total	\$2,267,658	\$566,915	\$530,585	\$1,234,342	\$4,599,500	100.00%	\$2,249,500	\$6,849,000

**In addition to this Wholesale allocation of \$1,234,342, DWSD's proposed budget for FY 2025 includes \$2,249,500 for both direct and conservation assistance totaling \$3,483,842 in funding available for the FY 2025 Lifeline Program.*

Wrap Service Delivery Partner Contracts: The WRAP Program is administered by three contracted Service Delivery Partners (SDP): Wayne Metropolitan Community Action Agency (Areas 1, 2, & 3), United Way for Southeastern Michigan (Area 4), and Macomb Community Action Agency (Area 5). Each contract is for five years, and there are four options to renew. These contracts cover such topics as program management, member-partner relations, and reporting expectations.

Proposed Action: The Audit Committee recommends that the Board of Directors approve the Service Delivery Partner Funding Authorization as outlined in the "Budget Allocation" above for FY 2025 pending final confirmation of the DWSD budget approval.



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Nicholas Fedewa, CPA, Public Finance Manager

Re: 2024 Municipal Market Outlook and GLWA Debt Management Considerations

Background: PFM Financial Advisors LLC (PFM) serves as the Great Lakes Water Authority's (GLWA) municipal bond advisors. Annually, representatives of PFM provide the Audit Committee with an update on public finance matters in general as well as how those matters impact GLWA.

Analysis: Referencing the attached presentation titled "2024 Municipal Market Outlook and GLWA Debt Management Considerations", PFM will provide an overview of the current municipal market outlook, a discussion regarding potential refinancing opportunities for GLWA consideration, a rating agency update, and a recap of state revolving fund loan borrowing and notice of intent status.

Proposed Action: Receive and file this report.



2024 Municipal Market Outlook and GLWA Debt Management Considerations

March 22, 2024

PFM Financial Advisors LLC

555 Briarwood Circle
Suite 333
Ann Arbor, MI 48108

734.994.9710
pfm.com

Agenda

- I. Municipal Market Update
- II. Update on Potential Refinancing Opportunity
- III. Rating Agency Update
- IV. SRF Borrowing and Notice of Intent Status
- V. Appendix

Select Public Finance Acronyms

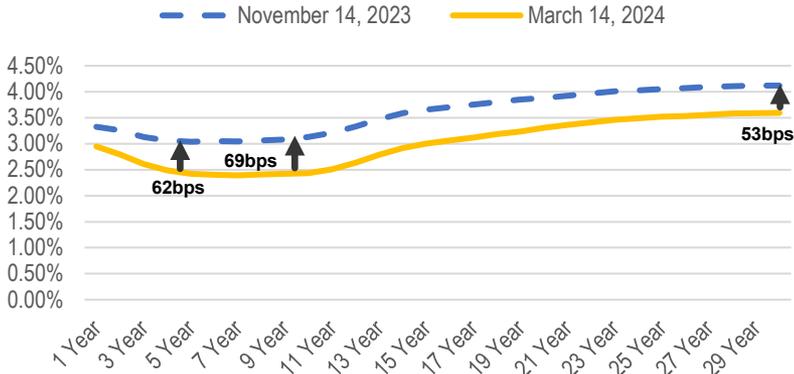
- **DS** – Debt Service. The amount of money necessary to pay interest on outstanding bonds, the principal of maturing or redeemed bonds and any required contributions to a sinking fund for term bonds.
- **DSRF** – Debt Service Reserve Fund. A fund in which funds are placed to be applied to pay debt service if pledged revenues are insufficient to satisfy the debt service requirements.
- **CWSRF** – Clean Water State Revolving Fund. Michigan’s CWSRF program is a low-interest loan financing program that assists qualified municipalities with the construction of needed water pollution control facilities.
- **DWSRF** – Drinking Water State Revolving Fund. Michigan’s DWSRF program is a low-interest loan financing program that assists eligible water suppliers in satisfying the requirements of the Safe Drinking Water Act.
- **FOMC** – Federal Open Market Committee. A key committee within the Federal Reserve System that oversees open market operations and makes key decisions about interest rates and the growth of the United States money supply.
- **NOI** – Notice of Intent. A notice of intent to issue revenue bonds funding new money projects is required under Michigan Public Act 94.
- **PV** – Present Value. The current value of a payment or stream of payments expected to be received in the future discounted at a given interest rate or rates.
- **SRF** – State Revolving Fund. A state revolving fund is a fund administered by a U.S. state for the purpose of providing low-interest loans to eligible borrowers for investments in water and sanitation infrastructure.
- **WAM** – Weighted Average Maturity. A reflection of the rapidity with which the principal of a bond issue is expected to be paid.

I. Municipal Market Update

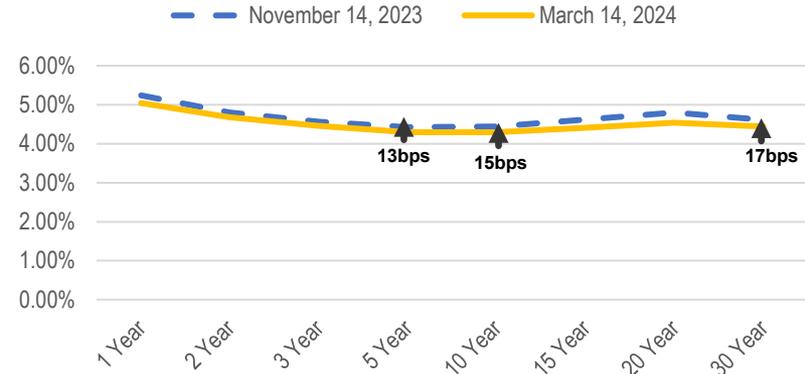
Despite Volatility Throughout 2023, Interest Rates are Similar to Last Year



Tax-Exempt Yield Curve Comparison



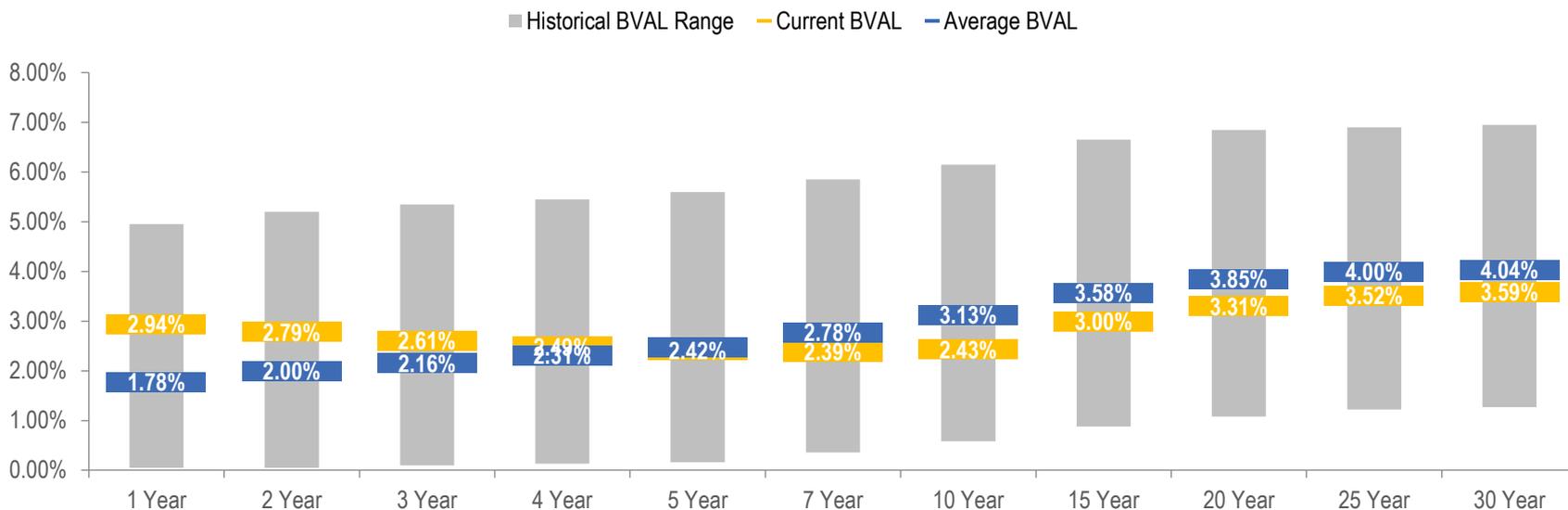
Taxable Yield Curve Comparison



Source: Thomson Reuters; Federal Reserve Economic Database (FRED); Rates as of March 14, 2024

Inverted Yield Curve With Short-Term Rates Above Historical Averages and Long-Term Rates Moderately Below

30 Year History of AAA BVAL Rate Position
(March 14, 1994 to March 14, 2024)

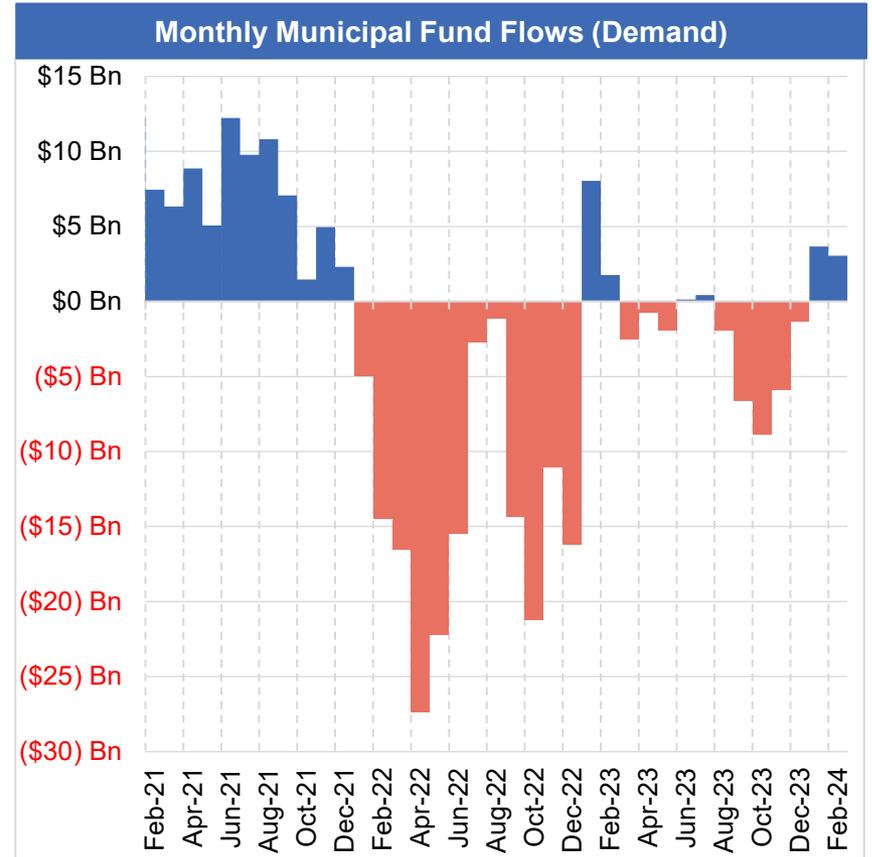
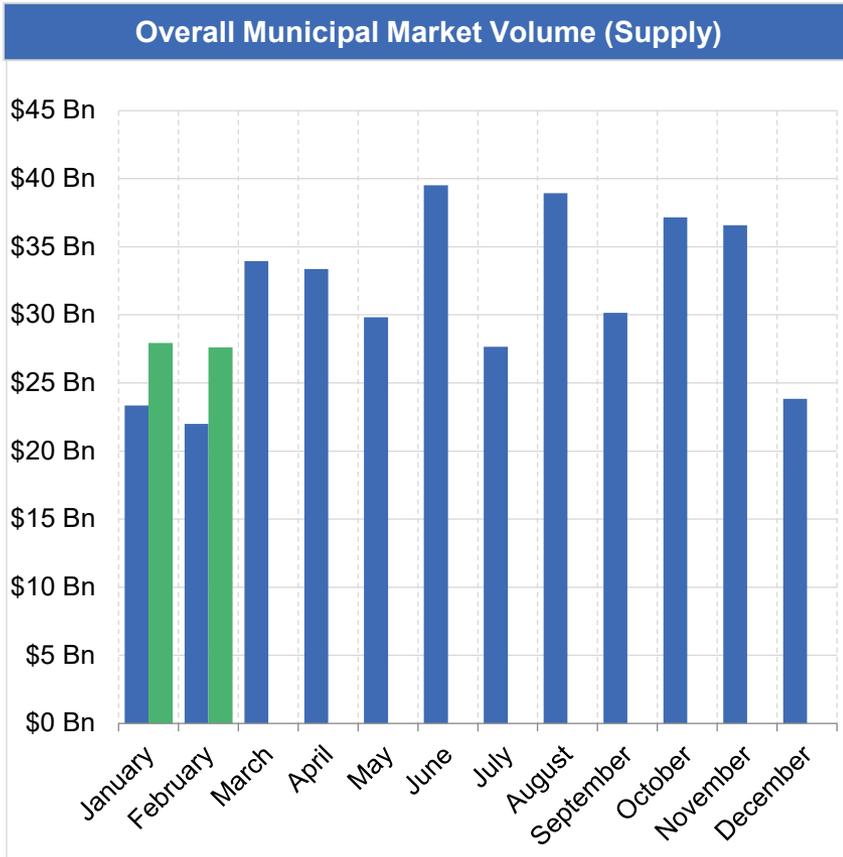


Statistic	1 Year	2 Year	3 Year	4 Year	5 Year	7 Year	10 Year	15 Year	20 Year	25 Year	30 Year
3/14/2024	2.94%	2.79%	2.61%	2.49%	2.42%	2.39%	2.43%	3.00%	3.31%	3.52%	3.59%
Average	1.78%	2.00%	2.16%	2.31%	2.47%	2.78%	3.13%	3.58%	3.85%	4.00%	4.04%
Spread to Average	1.16%	0.79%	0.45%	0.18%	-0.05%	-0.39%	-0.70%	-0.58%	-0.54%	-0.48%	-0.45%
Minimum	0.05%	0.05%	0.10%	0.13%	0.16%	0.36%	0.58%	0.88%	1.08%	1.22%	1.27%
Spread to Minimum	2.89%	2.74%	2.51%	2.36%	2.26%	2.03%	1.85%	2.12%	2.23%	2.30%	2.32%
Maximum	4.95%	5.20%	5.35%	5.45%	5.60%	5.85%	6.15%	6.65%	6.85%	6.90%	6.95%
Spread to Maximum	-2.01%	-2.41%	-2.74%	-2.96%	-3.18%	-3.46%	-3.72%	-3.65%	-3.54%	-3.38%	-3.36%
Percent of Market Days Lower	68.37%	65.81%	60.83%	56.53%	51.31%	45.70%	35.42%	37.87%	37.68%	37.97%	38.04%

Source: Bloomberg; Rates as of March 14, 2024

Municipal Market Funds Experienced Significant Outflows in 2023, but Rebound to Start 2024

- New issuance volume was up by 25.6% year-over-year in February
- Last month, funds reported strong inflows of over \$3.0 billion



Tax-Exempt to Taxable Ratios are Historically Low as Tax-Exempt Bonds Have Outperformed



Source: Bloomberg; Rates as of March 14, 2024

FOMC Signals Hesitation to Cut Rates

- At the Federal Reserve Open Market Committee meeting on January 31, the committee stated that it “... **does not expect it will be appropriate to reduce the target range until it has gained greater confidence that inflation is moving sustainably toward 2 percent.**”
- The current expectation for the March 20 FOMC meeting is that the fed funds rate will maintain at the current 5.25-5.50%
- The Fed has stated that it will reduce holdings of treasury and agency securities in accordance with previously outlined plans

CME FEDWATCH TOOL- Rate Probabilities by Meeting Date								
Meeting Date	3.50-3.75%	3.75-4.00%	4.00-4.25%	4.25-4.50%	4.50-4.75%	4.75-5.00%	5.00-5.25%	5.25-5.50%
3/20/2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	99.0%
5/1/2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	94.6%
6/12/2024	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	55.5%	41.5%
7/31/2024	0.0%	0.0%	0.0%	0.0%	1.3%	25.8%	49.4%	23.5%
9/18/2024	0.0%	0.0%	0.0%	1.0%	19.4%	43.3%	30.2%	6.1%
11/7/2024	0.0%	0.0%	0.5%	9.7%	30.7%	37.1%	18.8%	3.2%
12/18/2024	0.0%	0.3%	6.5%	23.5%	34.9%	25.1%	8.6%	1.1%
1/29/2025	0.2%	3.6%	15.4%	29.4%	29.8%	16.5%	4.7%	0.5%

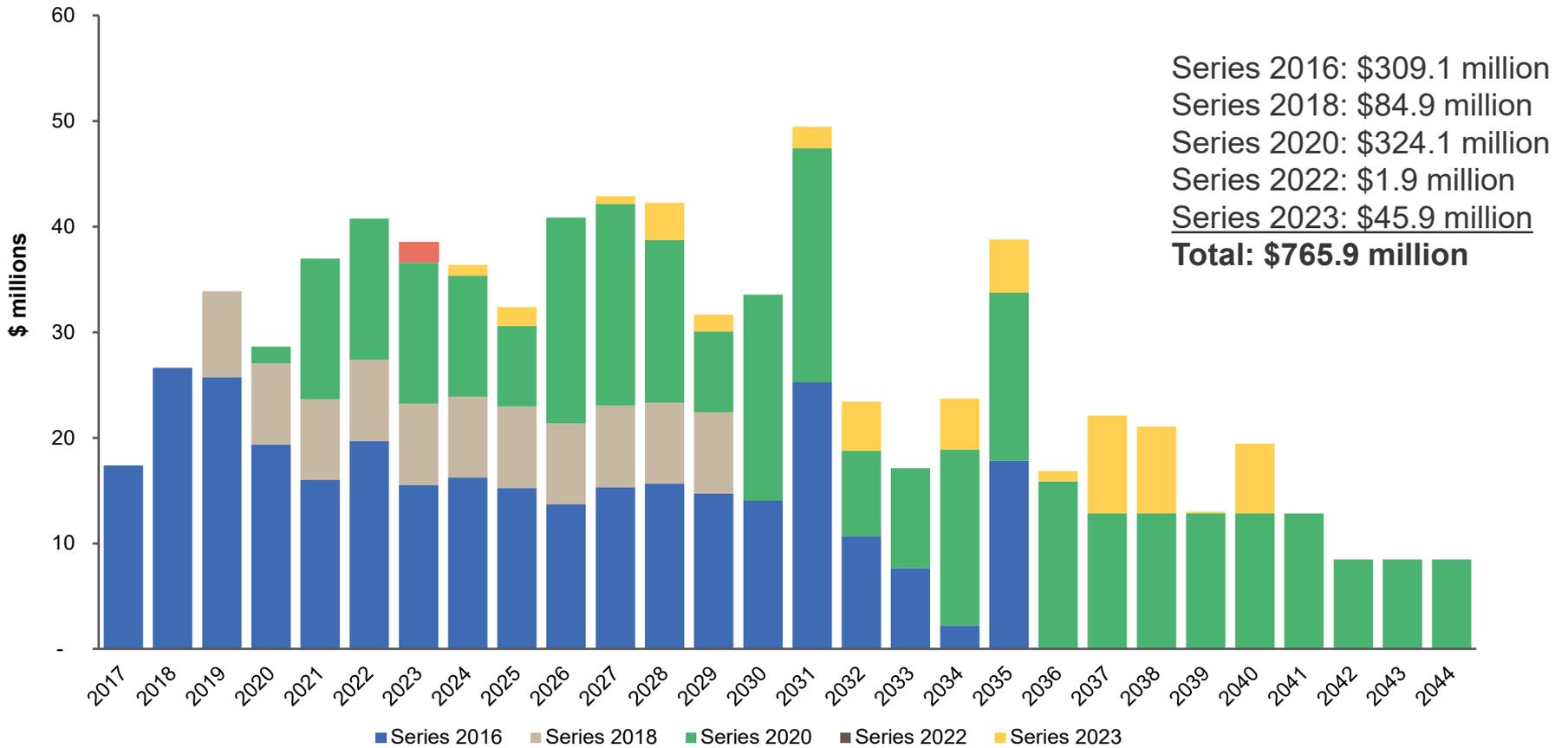
Bond Yield Forecast (As of March 11, 2024)											
Average Forecasts	Current	Q1 24	Q2 24	Q3 24	Q4 24	Q1 25	Q2 25	Q3 25	Q4 25	Q1 26	Q2 26
30-Year UST	4.26 %	4.36 %	4.22 %	4.11 %	4.08 %	3.98 %	3.94 %	3.92 %	3.95 %	3.88 %	3.87 %
10-Year UST	4.10 %	4.14 %	3.98 %	3.87 %	3.83 %	3.74 %	3.67 %	3.64 %	3.63 %	3.59 %	3.57 %
5-Year UST	4.08 %	4.08 %	3.92 %	3.76 %	3.64 %	3.57 %	3.51 %	3.49 %	3.48 %	3.43 %	3.40 %
2-Year UST	4.52 %	4.41 %	4.17 %	3.89 %	3.66 %	3.50 %	3.36 %	3.27 %	3.20 %	3.20 %	3.14 %
3M Term SOFR	5.31 %	5.29 %	5.06 %	4.72 %	4.37 %	4.00 %	3.69 %	3.48 %	3.26 %	3.23 %	3.13 %
Fed Funds Target Rate (Upper)	5.50 %	5.50 %	5.25 %	4.90 %	4.50 %	4.10 %	3.80 %	3.55 %	3.35 %	3.20 %	3.10 %
Fed Funds Target Rate (Lower)	5.25 %	5.25 %	5.01 %	4.63 %	4.26 %	3.86 %	3.53 %	3.29 %	3.11 %	2.95 %	2.86 %

Source: Bloomberg; Federal Reserve press release dated January 31, 2024; CME FedWatch Tool as of March 14, 2024.

II. Update on Potential Refinancing Opportunity

History of Debt Service Savings Achieved Since 2016

- Through the leadership of the Authority’s management team, the financing team has been able to achieve over \$765 million of cash flow debt service savings for the systems since the stand-up of GLWA



1: Totals may not add due to rounding
 Note: Debt service savings is shown on a cash flow basis

Refunding Opportunities for GLWA in the Current Market

- GLWA has an opportunity in the current market to generate substantial present value savings through a tax-exempt current refunding executed as soon as April 2, 2024
 - Targeted bonds become eligible for a tax-exempt refunding 90 days in advance of July 1, 2024 call date
 - Although the finance team has monitored these bonds for refunding for some time, savings has been significantly enhanced by recent declines in interest rates
- Assuming current interest rates, refunding of targeted bonds generates present value savings that is greater than \$90 million, split between the Water System and Sewer System
 - Water System net present value savings of \$46 million (10.5% of \$434.2 million refunded principal)
 - Sewer System net present value savings of \$45 million (10.4% of \$436.6 million refunded principal)
- Debt Management Policy provides that GLWA will generally target a minimum net present value threshold of 2.5% of the refunded bond principal amount
- Targeted bonds were monitored for refunding opportunities in concert with Series 2023 transactions, but prohibition on tax-exempt advance refunding provided only limited refinancing options at that time
 - Available alternatives that include taxable advance refunding or tax-exempt forward refunding would generate significantly lower savings and are less favorable from a risk perspective
- Refunding transaction will build on recent disclosure documents and ratings process to make process as efficient as possible

GLWA Upcoming Callable Par in 2024 Targeted for Refunding

Water							
Senior Lien							
Series Name	Indenture	Lien	Tax Status	Coupons (%)	Outstanding (\$000s)	Next Call Date	Callable Par (\$000s)
Series 2014D-1	Water	Senior	Tax-Exempt	5.00	44,190	7/1/2024	44,190
Series 2014D-2	Water	Senior	Tax-Exempt	5.00	182,480	7/1/2024	136,925
Series 2014D-4	Water	Senior	Tax-Exempt	5.00	209,360	7/1/2024	209,360
					436,030		390,475

Second Lien							
Series Name	Indenture	Lien	Tax Status	Coupons (%)	Outstanding (\$000s)	Next Call Date	Callable Par (\$000s)
Series 2014D-6	Water	Second	Tax-Exempt	5.00	45,820	7/1/2024	43,690

Sewer							
Senior Lien							
Series Name	Indenture	Lien	Tax Status	Coupons (%)	Outstanding (\$000s)	Next Call Date	Callable Par (\$000s)
Series 2014C-3	Sewer	Senior	Tax-Exempt	5.00	347,585	7/1/2024	303,570
Series 2014C-6	Sewer	Senior	Tax-Exempt	5.00	88,900	7/1/2024	88,900
					436,485		392,470

Second Lien							
Series Name	Indenture	Lien	Tax Status	Coupons (%)	Outstanding (\$000s)	Next Call Date	Callable Par (\$000s)
Series 2014C-7	Sewer	Second	Tax-Exempt	5.00	48,800	7/1/2024	44,065

Current Refunding – Water System

Savings Summary

- Greater than \$55 million in gross cash flow savings can be achieved (~\$45.8 million present value)

Refunding Candidates

- Includes all callable bonds with 2024 call dates that generate positive NPV savings

Assumptions

- Uninsured, matched lien refunding
- Interest rates as of March 14, 2024
- Conservatively assumes no DSRF release
- Contribution of accrued interest from DS fund
- SLGS escrow as of March 14, 2024
- Savings structured for level savings by lien
- Par coupon structure
- Assumes par call on 1/1/2034
- PV at Bond Yields to 5/30/2024

Senior Lien Refunding	
Delivery Date:	5/30/2024
Call Date:	1/1/2034
Refunding Par (\$):	354,675,000
Refunded Par (\$):	390,475,000
NPV Savings (\$):	40,608,695
NPV Savings as % :	10.40%
Negative Arbitrage (\$) ¹ :	(934,855)
Escrow Efficiency ¹ :	102.4%
TIC:	3.04%
WAM:	6.17 yrs
Refunded Bonds WAM:	6.07 yrs
PV of 0.01% Change in Interest Rates (\$)	194,320
Second Lien Refunding	
Delivery Date:	5/30/2024
Call Date:	1/1/2034
Refunding Par (\$):	38,985,000
Refunded Par (\$):	43,690,000
NPV Savings (\$):	5,185,150
NPV Savings as % :	11.87%
Negative Arbitrage (\$) ¹ :	(91,282)
Escrow Efficiency ¹ :	101.8%
TIC:	3.55%
WAM:	10.68 yrs
Refunded Bonds WAM:	10.07 yrs
PV of 0.01% Change in Interest Rates (\$)	30,697

DSIR Year	Senior Lien Savings (\$)	Second Lien Savings (\$)	Total Savings (\$)
7/1/2024	154,139	20,258	174,397
7/1/2025	4,040,000	580,250	4,620,250
7/1/2026	4,037,500	578,000	4,615,500
7/1/2027	4,039,500	580,000	4,619,500
7/1/2028	4,040,500	581,000	4,621,500
7/1/2029	4,040,250	581,000	4,621,250
7/1/2030	4,038,500	545,000	4,583,500
7/1/2031	4,040,000	539,750	4,579,750
7/1/2032	4,039,250	538,750	4,578,000
7/1/2033	4,036,000	531,750	4,567,750
1/1/2034	4,040,000	579,000	4,619,000
7/1/2035	4,040,500	27,750	4,068,250
7/1/2036	192,250	582,750	775,000
7/1/2037	4,037,250	-	4,037,250
Total	48,815,639	6,265,258	55,080,897

1. Negative arbitrage and escrow efficiency calculated for illustrative purposes assuming earnings cap on investments at refunding bond yield

Current Refunding – Sewer System

Savings Summary

- Greater than \$52 million in gross cash flow savings can be achieved (~\$45.3 million present value)

Refunding Candidates

- Includes all callable bonds with 2024 call dates that generate positive NPV savings

Assumptions

- Uninsured, matched lien refunding
- Interest rates as of March 14, 2024
- Conservatively assumes no DSRF release
- Contribution of accrued interest from DS fund
- SLGS escrow as of March 14, 2024
- Savings structured for level savings by lien
- Par coupon structure
- Assumes par call on 1/1/2034
- PV at Bond Yields to 5/30/2024

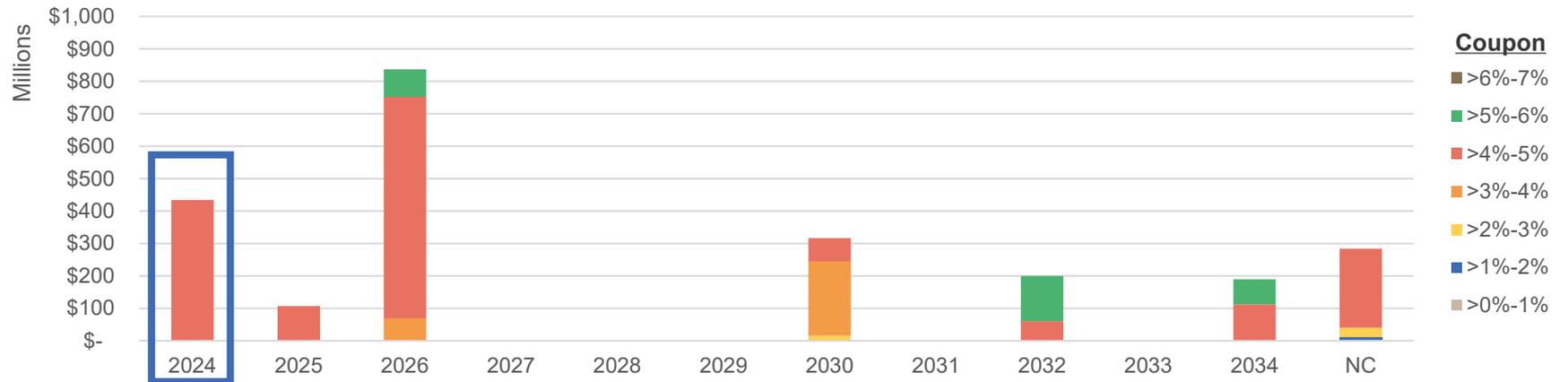
Senior Lien Refunding	
Delivery Date:	5/30/2024
Call Date:	1/1/2034
Refunding Par (\$):	355,185,000
Refunded Par (\$):	392,470,000
NPV Savings (\$):	41,235,424
NPV Savings as % :	10.51%
Negative Arbitrage (\$) ¹ :	(958,099)
Escrow Efficiency ¹ :	102.4%
TIC:	2.90%
WAM:	5.92 yrs
Refunded Bonds WAM:	5.65 yrs
PV of 0.01% Change in Interest Rates (\$)	197,954
Second Lien Refunding	
Delivery Date:	5/30/2024
Call Date:	1/1/2034
Refunding Par (\$):	40,465,000
Refunded Par (\$):	44,065,000
NPV Savings (\$):	4,045,853
NPV Savings as % :	9.18%
Negative Arbitrage (\$) ¹ :	(103,970)
Escrow Efficiency ¹ :	102.6%
TIC:	3.02%
WAM:	5.29 yrs
Refunded Bonds WAM:	5.25 yrs
PV of 0.01% Change in Interest Rates (\$)	19,951

DSIR Year	Senior Lien Savings (\$)	Second Lien Savings (\$)	Total Savings (\$)
7/1/2024	160,533	15,500	176,033
7/1/2025	5,244,250	450,000	5,694,250
7/1/2026	5,245,250	451,500	5,696,750
7/1/2027	5,247,750	447,250	5,695,000
7/1/2028	5,246,250	447,500	5,693,750
7/1/2029	5,245,500	452,000	5,697,500
7/1/2030	5,245,000	380,500	5,625,500
7/1/2031	5,244,250	371,750	5,616,000
7/1/2032	5,247,750	447,750	5,695,500
7/1/2033	5,244,750	59,250	5,304,000
1/1/2034	-	449,250	449,250
7/1/2035	-	449,750	449,750
7/1/2036	-	404,250	404,250
Total	47,371,283	4,826,250	52,197,533

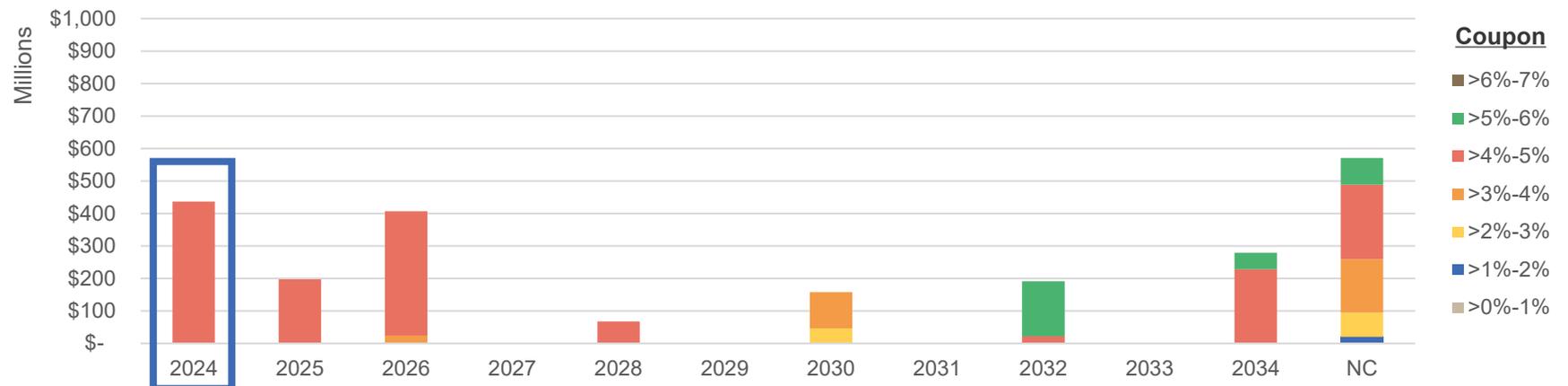
1. Negative arbitrage and escrow efficiency calculated for illustrative purposes assuming earnings cap on investments at refunding bond yield

GLWA Fixed Rate Par Call Options¹

Distribution of Par Call Options on Water Debt (Senior & Second Lien)



Distribution of Par Call Options on Sewer Debt (Senior & Second Lien)

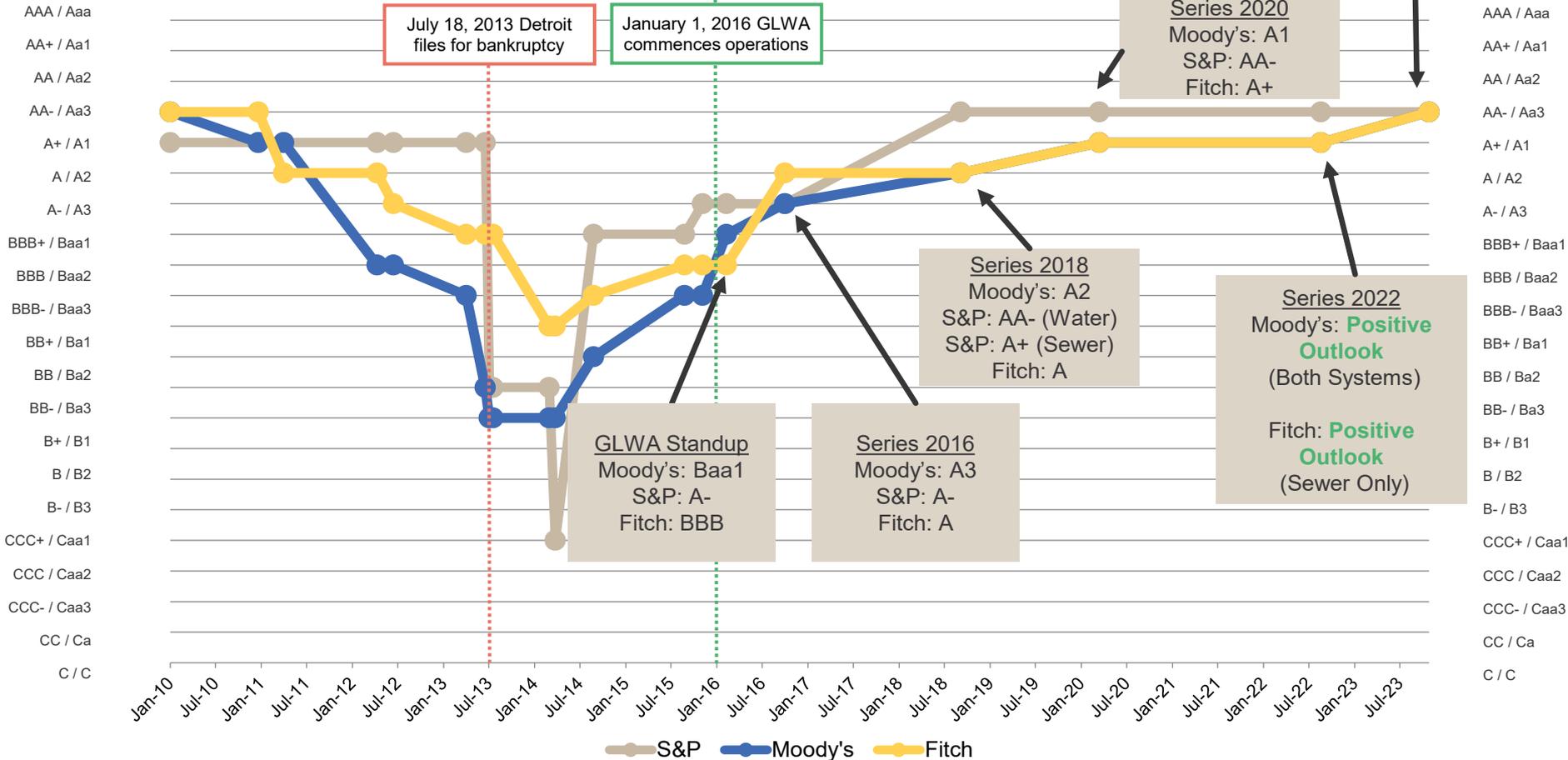


¹. Excludes variable rate debt

III. Rating Agency Update

History of Senior Lien Water and Sewer Ratings

GLWA Senior Lien Ratings History (DWSD Prior to January 1, 2016)



Note: in cases where a rating agency rates Water Senior and Sewer Senior Lien differently, chart displays highest of the two ratings

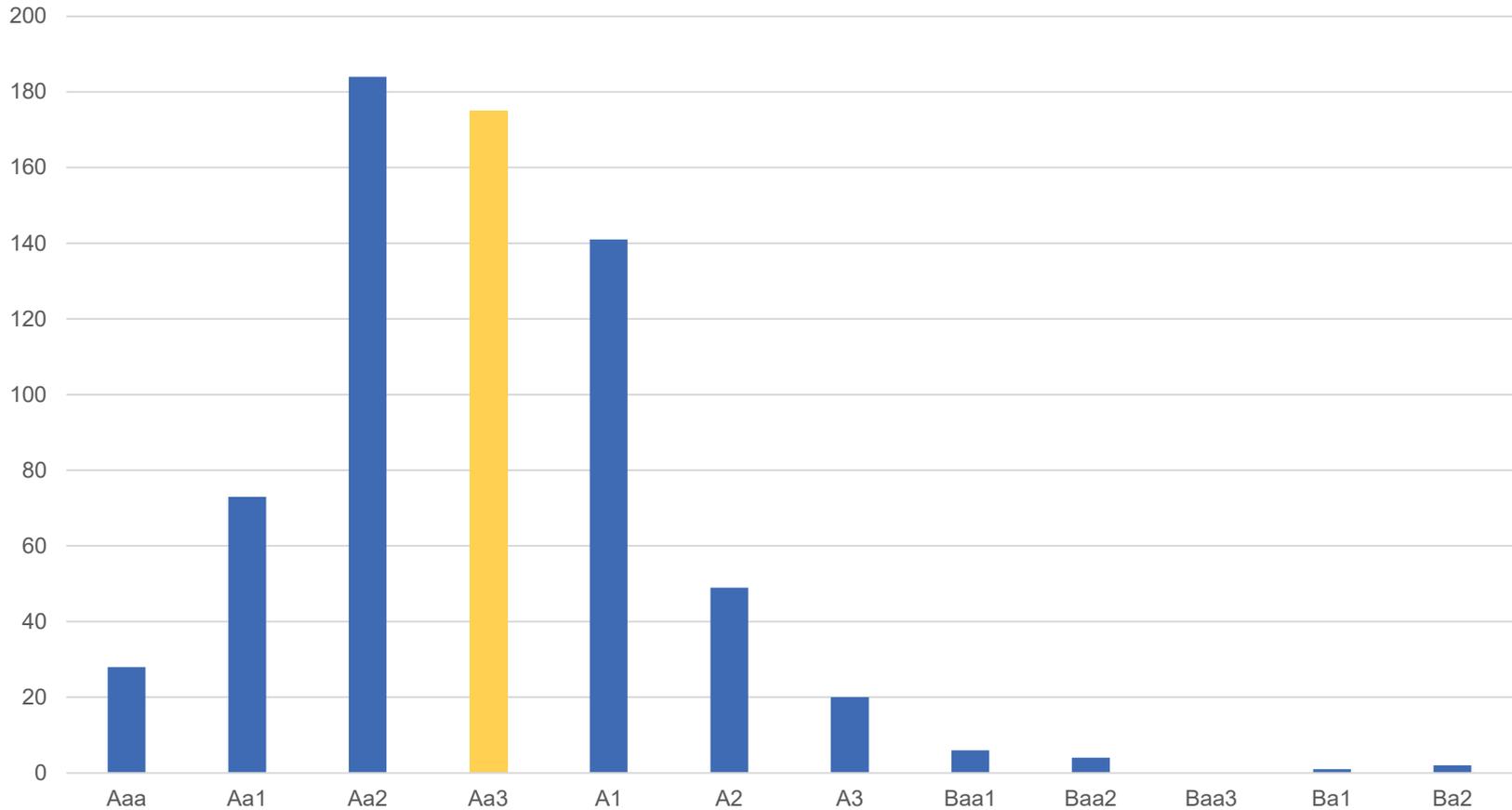
Current Water and Sewer Ratings

Water			
	Moody's	S&P	Fitch
Senior Lien	Aa3	AA-	A+
Second Lien	A1	A+	A
Outlook	Stable	Stable	Stable

Sewer			
	Moody's	S&P	Fitch
Senior Lien	Aa3	AA-	AA-
Second Lien	A1	A+	A+
Outlook	Stable	Stable	Positive

GLWA Rated at Median US Water and Sewer Credit Rating

Water, Sewer, and Combined Water & Sewer Rating Distribution



Source: Moody's Report: "Water and Sewer Utilities – US Medians - Steady revenue growth, strong coverage and robust liquidity boost sector", June 21, 2023.

Rating Agency Commentary on Factors that Could Change GLWA Ratings

Moody's Aa3	S&P AA-	Fitch A+ (Water); AA- / Positive (Sewer)
Factors that Could Lead to an Upgrade		
<ul style="list-style-type: none"> • Sustained expansion and diversification of the service area's economic base • Growth in revenue that continues to outpace borrowing and moderates leverage of pledged resources 	<ul style="list-style-type: none"> • GLWA meaningfully outperforms its current financial forecast while still funding its CIP generally as planned, in a sustainable manner over a long-term horizon • Sustainable, long-term economic recovery in Detroit continues and has meaningful positive effects on its economic fundamentals and utility collection rates 	<ul style="list-style-type: none"> • Greater certainty that upcoming planned capital spending has fully accounted for inflationary pressures and keeps leverage within current expectations • Sustained leverage below 11.0x (Water) or 10.0x (Sewer), assuming stability in the current revenue defensibility and operating risk assessments
Factors that Could Lead to a Downgrade		
<ul style="list-style-type: none"> • Material reduction to the water or sewer system's liquidity or debt service coverage ratios • Renewed economic stress that pressures consumption and revenue trends • Growth in leverage of the water or sewer system's net revenue 	<ul style="list-style-type: none"> • Actual financial performance falls below current projections • Significant deferral of capital projects that artificially increases liquidity but causes deferred maintenance • Erosion of processes that have evolved to help make the budget for both DWSD and GLWA more predictable while minimizing revenue fluctuations 	<ul style="list-style-type: none"> • Sustained leverage approaching 13.0x (Water) or 12.0x (Sewer), assuming stability in the revenue defensibility and operating risk assessments • Downward revisions to the system's overall Purchaser Credit Quality and/or revenue defensibility assessment (Sewer)¹ • Material declines in liquidity that expose bondholders to timing risk

Sources: Moody's Report, "Great Lakes Water Auth, MI", October 26, 2023. S&P Reports, "Great Lakes Water Authority, Michigan; Water/Sewer", October 26, 2023. Fitch Reports, "Great Lakes Water Authority (Water System), Michigan" and "Great Lakes Water Authority (Sewer System), Michigan", dated November 9, 2023.

1. See appendix for further detail

2024 Rating Agency Sector Outlooks

- Rating agencies generally cite a **stable/neutral sector outlook**, with rate increases and growing customer bases supporting revenue growth and offsetting expenditure pressures
- Stabilizing business conditions are a positive factor that will allow for greater certainty with respect to capital and operating budgets
- Nevertheless, despite the easing of inflation and supply chain disruptions, the “new normal” operating environment is one with stable but higher costs
- Regulatory burden continues to grow, and expectation is for continued increase in mandated capital and operating expenses
- Expense pressures will generally require the implementation of larger rate adjustments, and utilities that have delayed the implementation of rate increases will face significant pressure
- Utilities facing higher costs may face a choice in the short term between narrowing financial margins and deteriorating asset condition
- Strong governance will continue to support utilities as the sector remains pressured by longer-term environmental risks including extreme storm events
- Key sector issues to watch include the increased frequency and severity of extreme weather events and potential breach of critical utility assets from cyberattacks

IV. SRF Borrowing and Notice of Intent Status

Sufficient Notice of Intent Capacity to Fund Upcoming SRF Loans

- ◆ GLWA seeks to maximize required borrowing through available State Revolving Fund (“SRF”) loan programs to the extent that subsidized interest rates provide significant debt service savings to GLWA
 - Interest rates for SRF loan programs are set annually, with current FY 2024 interest rates that are significantly below prevailing rates available in the bond markets
 - Interest rate for overburdened communities is 2.00% under both DWSRF and CWSRF
- ◆ SRF borrowing occurs at the Junior Lien level, without a Debt Service Reserve Requirement, and interest does not accrue until draws occur
- ◆ Remaining authorization under existing Notice of Intent authorization is expected to be sufficient to fund planned Regional System and Local System SRF financings

	Water System	Sewer System
Notice of Intent Capacity Remaining	286,327,500	541,692,280
Planned FY 2024 SRF Financings	-	375,900,000
Remaining Authorization After Planned FY 2024 SRF Financings	286,327,500	165,792,280

V. Appendix

Importance of Bond Ratings

- ◆ Credit ratings are a critical factor in determining the cost of capital for GLWA
 - Impacts both new capital project funding and refinancing of existing debt
 - One notch in ratings can translate to millions of dollars of debt service cost differential
- ◆ Ratings represent a public “scorecard” relating to management of the system, as well as public perception
- ◆ Financial strength important to wholesale customers, including potential additional members
- ◆ Bond ratings may also be referenced in various contractual documents, requiring minimum ratings with counterparties or creating a cost differential

Changes and Transparency in Rating Agency Criteria

Driven by the transparency required by Dodd-Frank legislation, the rating agencies have moved to a more formulaic approach to bond ratings

- ◆ After the passage of Dodd-Frank in 2010, all three rating agencies have implemented new rating methodologies for water and sewer credits
- ◆ The rating methodologies have each evolved to create more transparent and formulaic approaches to determining bond ratings, with clearer framework of rating variables
- ◆ While analysts retain significant discretion to influence ratings, based on subjective factors, new methodologies generally limit this discretion to one rating notch from a final “scorecard indicated” rating
 - Within each scorecard subfactor, there may be additional subjective factors can influence the subfactor score
- ◆ As a result, municipal issuers generally know the criteria that will impact their bond ratings and can appropriately set policies with this transparency in mind

Key Drivers of GLWA Credit Ratings

- ◆ Although scorecard methodology, metrics, and specifics of calculations differ between rating agencies, the fundamental financial factors driving evaluations of credit quality at each of the rating agencies are the same, and include:
 - **Debt Service Coverage** – *the magnitude by which net revenues are sufficient to cover debt service shows a utility’s margin to tolerate business risks or declines in demand while still assuring repayment of debt*
 - **Liquidity** – *measure of a utility’s resources to meet expenses, cope with emergencies, and navigate business interruptions*
 - **Leverage** – *measure of flexibility to reduce costs if demand shrinks and provide funding for future capital improvements*
- ◆ Because ratings are forward-looking, great emphasis is placed upon perception of willingness and ability to raise rates to maintain these financial metrics, and system management, governance, and planning
- ◆ Service area wealth and ratepayer capacity to pay higher rates is an additional credit consideration

Relationship of GLWA Ratings with DWSD

- Given the unique construction of the GLWA Master Bond Ordinance that includes revenues attributable to the DWSD system, GLWA credit quality is impacted by DWSD finances and planning
- Combination of retail and wholesale rating criteria are applied to the GLWA rating
- Various financial metrics (and rating variables) are calculated by the combination of GLWA and DWSD, including:
 - Debt Service Coverage
 - Days Cash on Hand
 - Leverage and Debt / Operating Revenues
 - Asset Condition
- Given forward-looking nature of ratings, rating agencies incorporate DWSD projections for borrowing, capital spending, and rate-setting into GLWA credit rating metrics
 - Rating agency evaluation of management, capital planning, and rate-setting extends to DWSD
- Continued communication and collaboration with DWSD will be critical to maintaining upward ratings trajectory

Indicated Rating Scorecard

- In October 2017, Moody's revised their existing ratings methodology for US municipal utility revenue debt, with the stated goal of providing more transparency into the ratings process
- The scorecard contains ten metrics which capture, according to Moody's, the most critical aspects of a utility's credit profile

Rating Factors, Subfactors and Weighting			
Broad Rating Factor		Rating Subfactor	Weighting
System Characteristics	30%	Asset Condition	10%
		Service Area Wealth	12.5%
		System Size (O&M)	7.5%
Financial Strength	40%	Annual Debt Service Coverage	15%
		Days Cash on Hand	15%
		Debt to Operating Revenues	10%
Management	20%	Rate Management	10%
		Regulatory Compliance & Capital Planning	10%
Legal Provisions	10%	Rate Covenant	5%
		Debt Service Reserve Requirement	5%
Total:			100%

Source: Moody's Rating Report, "US Municipal Utility Revenue Debt," October 19, 2017

Moody's Water & Sewer Utility Scorecard

Scoring on Moody's Municipal Utility Methodology										
Factor	Description	Weight	Aaa 0.50-1.49	Aa 1.50-2.49	A 2.50-3.49	Baa 3.50-4.49	Ba 4.50-5.49	GLWA Input	Category Score	GLWA Score
System Characteristics (30%)	Asset Condition - Remaining Useful Life (Net Assets / Annual Depreciation)	10%	> 75 Years	75 years > n > 25 years	25 years > n > 12 years	12 years > n > 9 years	9 years > n > 6 years	18 years	3	0.30
	System Size: (O&M in 000s)	7.5%	> \$65 million	\$65 M > n > \$30 M	\$30 M > n > \$10 M	\$10 M > n > \$3 M	\$3 M > n > \$1 M	\$179 million	1	0.08
	Service Area Wealth: MFI	12.5%	> 150% of US median	150% to 90% of US Median	90% to 75% of US Median	75% to 50% of US Median	50% to 40% of US Median	96%	2	0.25
Financial Strength and Liquidity (40%)	Annual Debt Service Coverage	15%	greater than 2.00X	1.70X to < 2.00X	1.25X to < 1.70X	1.00X to < 1.25X	1.00X to < 0.70X	1.4x	3	0.45
	Days Cash on Hand	15%	≥ 250 days	150 to < 250 days	35 to <150 days	15 to <35 days	7 to <15 days	602 days	1	0.15
	Debt to Operating Revenues	10%	Less than 2.00x	2.00x to < 4.00x	4.00X to < 7.00X	7.00X to < 8.00X	8.00X to < 9.00X	5.4x	3	0.30
Management of System (20%)	Rate Management	10%	Excellent rate setting; no material political, practical, or regulatory limit to rate increases	Strong rate setting; little material political, practical, or regulatory limit to rate increases	Average rate setting; some material political, practical, or regulatory limit to rate increases	Adequate rate setting; political, practical, or regulatory impediments place material limits to rate increases	Below average rate setting; political, practical, or regulatory impediments place material limits to rate increases	Strong rate setting	2	0.20
	Regulatory Compliance and Capital Planning	10%	Fully compliant OR proactively addressing compliance issues; Maintains sophisticated and manageable Capital Improvement Plan that addresses more than a 10-year period	Actively addressing minor compliance issues; Maintains comprehensive and manageable 10-year Capital Improvement Plan	Moderate violations with adopted plan to address issues; Maintains manageable 5-year Capital Improvement Plan	Significant compliance violations with limited solutions adopted; Maintains single year Capital Improvement Plan	Not fully addressing compliance issues; Limited or weak capital planning	Material compliance with existing permits; no comment on CIP	3	0.30
Legal Provisions (10%)	Rate Covenant	5%	greater than 1.30X	1.30X to < 1.20X	1.20X to < 1.10X	1.00X to < 1.10X	< 1.00x	1.20x	3	0.15
	Debt Service Reserve Requirement	5%	DSRF funded at MADS	DSRF funded at lesser of standard 3 prong test	DSRF funded at less than 3 prong test	No explicit DSRF	No explicit DSRF	DSRF: Lesser of 3 Test	2	0.10
									(Aa3 = 2.17 to 2.50) (A1 = 2.50 to 2.83)	2.28

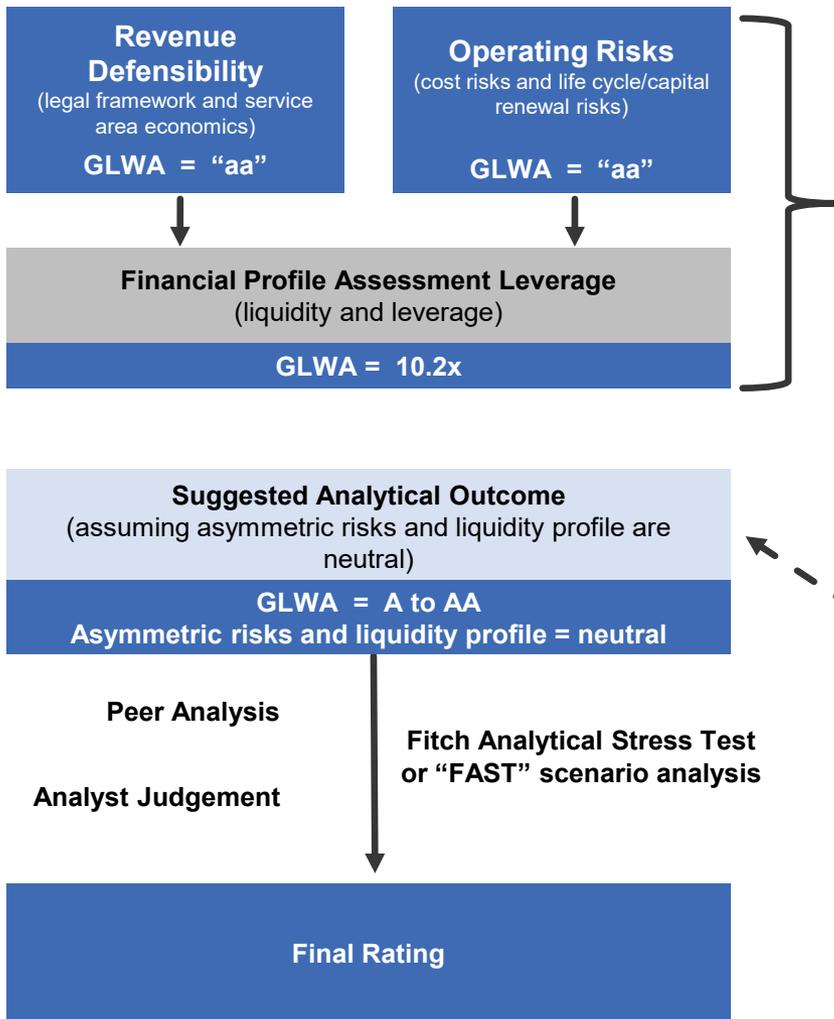
Source: Moody's Municipal Utility Debt Methodology, October 19, 2017; Data from Moody's Report dated October 26, 2023

Moody's Water & Sewer Utility Scorecard

Scoring on Moody's Municipal Utility Methodology										
Factor	Description	Weight	Aaa 0.50-1.49	Aa 1.50-2.49	A 2.50-3.49	Baa 3.50-4.49	Ba 4.50-5.49	GLWA Input	Category Score	GLWA Score
System Characteristics (30%)	Asset Condition - Remaining Useful Life (Net Assets / Annual Depreciation)	10%	> 75 Years	75 years > n > 25 years	25 years > n > 12 years	12 years > n > 9 years	9 years > n > 6 years	18 years	3	0.30
	System Size: (O&M in 000s)	7.5%	> \$65 million	\$65 M > n > \$30 M	\$30 M > n > \$10 M	\$10 M > n > \$3 M	\$3 M > n > \$1 M	\$263 million	1	0.08
	Service Area Wealth: MFI	12.5%	> 150% of US median	150% to 90% of US Median	90% to 75% of US Median	75% to 50% of US Median	50% to 40% of US Median	96%	2	0.25
Financial Strength and Liquidity (40%)	Annual Debt Service Coverage	15%	greater than 2.00X	1.70X to < 2.00X	1.25X to < 1.70X	1.00X to < 1.25X	1.00X to < 0.70X	1.5x	3	0.45
	Days Cash on Hand	15%	≥ 250 days	150 to < 250 days	35 to <150 days	15 to <35 days	7 to <15 days	484 days	1	0.15
	Debt to Operating Revenues	10%	Less than 2.00x	2.00x to < 4.00x	4.00X to < 7.00X	7.00X to < 8.00X	8.00X to < 9.00X	4.6x	3	0.30
Management of System (20%)	Rate Management	10%	Excellent rate setting; no material political, practical, or regulatory limit to rate increases	Strong rate setting; little material political, practical, or regulatory limit to rate increases	Average rate setting; some material political, practical, or regulatory limit to rate increases	Adequate rate setting; political, practical, or regulatory impediments place material limits to rate increases	Below average rate setting; political, practical, or regulatory impediments place material limits to rate increases	Strong rate setting	2	0.20
	Regulatory Compliance and Capital Planning	10%	Fully compliant OR proactively addressing compliance issues; Maintains sophisticated and manageable Capital Improvement Plan that addresses more than a 10-year period	Actively addressing minor compliance issues; Maintains comprehensive and manageable 10-year Capital Improvement Plan	Moderate violations with adopted plan to address issues; Maintains manageable 5-year Capital Improvement Plan	Significant compliance violations with limited solutions adopted; Maintains single year Capital Improvement Plan	Not fully addressing compliance issues; Limited or weak capital planning	Material compliance with existing permits; no comment on CIP	3	0.30
Legal Provisions (10%)	Rate Covenant	5%	greater than 1.30X	1.30X to < 1.20X	1.20X to < 1.10X	1.00X to < 1.10X	< 1.00x	1.20x	3	0.15
	Debt Service Reserve Requirement	5%	DSRF funded at MADS	DSRF funded at lesser of standard 3 prong test	DSRF funded at less than 3 prong test	No explicit DSRF	No explicit DSRF	DSRF: Lesser of 3 Test	2	0.10
									(Aa3 = 2.17 to 2.50) (A1 = 2.50 to 2.83)	2.28

Source: Moody's Municipal Utility Debt Methodology, October 19, 2017; Data from Moody's Report dated October 26, 2023

Fitch – Indicated Scorecard Rating



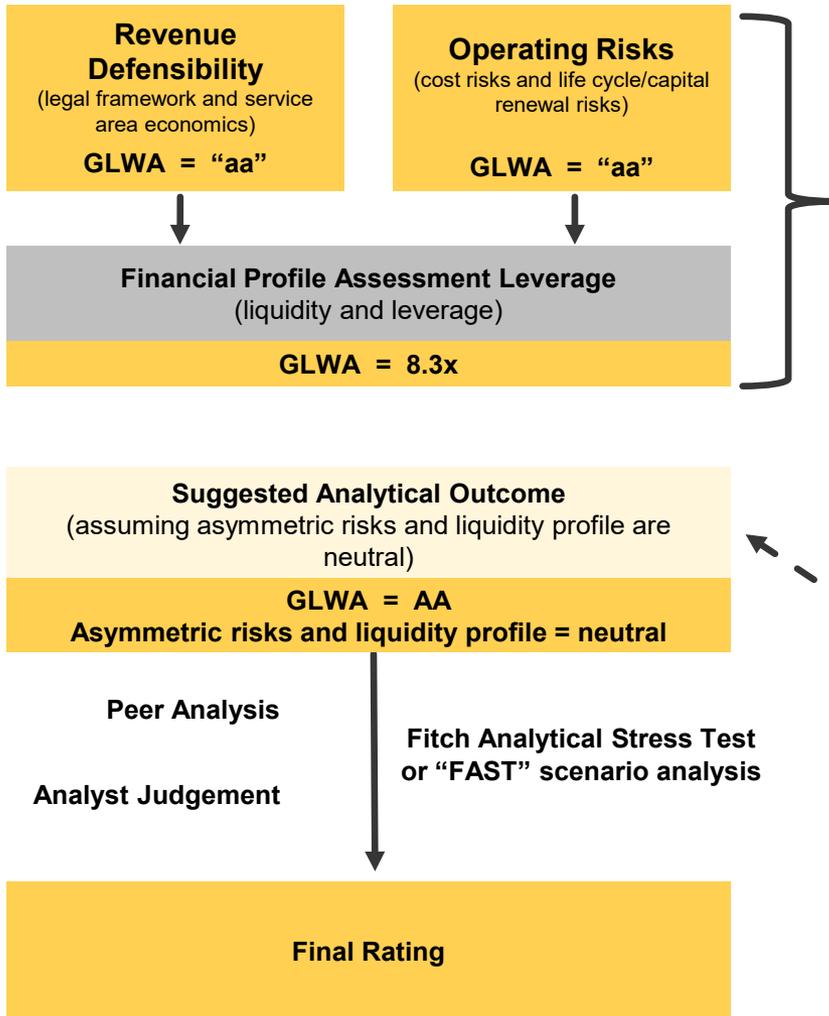
Rating Positioning

Revenue Defensibility Assessment	Operating Risks Assessment	Financial Profile Assessment Leverage (Net Adjusted Debt/Adjusted FADS) (x)				
		aaa	aa	a	bbb	bb
aa	aa	<5	5-10	10-14	14-16	>16
aa	a	<4	4-8	8-12	12-16	>16
a	aa	<4	4-8	8-12	12-16	>16
aa	bbb	—	<7	7-11	11-14	>14
a	a	—	<6	6-11	11-14	>14
a	bbb	—	<6	6-11	11-14	>14
aa	bb	—	<5	5-9	9-12	>12
a	bb	—	<4	4-7	7-12	>12
bbb	aa	—	<4	4-7	7-12	>12
bbb	a	—	<4	4-7	7-12	>12
bbb	bbb	—	<0	0-5	5-6	>6
bbb	bb	—	<0	0-1	1-4	>4
bb	aa	—	—	<1	1-4	>4
bb	a	—	—	<0	0-4	>4
bb	bbb	—	—	<0	0-2	>2
bb	bb	—	—	<(3)	(3)-0	>0
Suggested Analytical Outcome		AAA	AA	A	BBB	BB

FADS – Funds available for debt service.
Source: Fitch Ratings.

Sources: Fitch Report dated November 9, 2023

Fitch – Indicated Scorecard Rating



Rating Positioning

Revenue Defensibility Assessment	Operating Risks Assessment	Financial Profile Assessment Leverage (Net Adjusted Debt/Adjusted FADS) (x)				
		aaa	aa	a	bbb	bb
aa	aa	<5	5-10	10-14	14-16	>16
aa	a	<4	4-8	8-12	12-16	>16
a	aa	<4	4-8	8-12	12-16	>16
aa	bbb	—	<7	7-11	11-14	>14
a	a	—	<6	6-11	11-14	>14
a	bbb	—	<6	6-11	11-14	>14
aa	bb	—	<5	5-9	9-12	>12
a	bb	—	<4	4-7	7-12	>12
bbb	aa	—	<4	4-7	7-12	>12
bbb	a	—	<4	4-7	7-12	>12
bbb	bbb	—	<0	0-5	5-6	>6
bbb	bb	—	<0	0-1	1-4	>4
bb	aa	—	—	<1	1-4	>4
bb	a	—	—	<0	0-4	>4
bb	bbb	—	—	<0	0-2	>2
bb	bb	—	—	<(3)	(3)-0	>0
Suggested Analytical Outcome		AAA	AA	A	BBB	BB

FADS – Funds available for debt service.
Source: Fitch Ratings.

Sources: Fitch Report dated November 9, 2023

Fitch – Financial Profile Assessment Leverage

- ◆ Fitch measures financial leverage via a new ratio: Net Adjusted Debt to Adjusted FADS
- ◆ Measures a utility’s debt and other fixed obligations (net of certain balance sheet resources) relative to its annual cash flows available to service those obligations

Financial Profile Assessment Leverage (Net Adjusted Debt to Adjusted FADS)

$$\frac{\text{Total Debt} + \text{Capitalized Fixed Charges} + \text{Adjusted Net Pension Liability} - \text{Available Cash} - \text{Funds Restricted for Debt Service}}{\text{FADS} + \text{Fixed Services Expense} + \text{Operating Leases} + \text{Pension Expense}}$$
GLWA = 10.2x
GLWA = 8.3x

Ratio	Definition
Total Debt	All long-term and short-term debt obligations including capital leases, outstanding commercial paper, notes payable and current maturities. Certain nonrecourse obligations and separately secured obligations may be excluded
Capitalized Fixed Charges	(Fixed services expense + operating leases) * 7
Adjusted Net Pension Liability	Equals the utility’s reported annual pension liability adjusted upward to reflect Fitch’s assumed 6% discount rate, if the plan uses a higher discount rate
Available Cash	Cash and investments available for short-term liquidity needs with no limitations on use, including funds restricted solely by board or management policy and/or available for general utility purposes (e.g., rate stabilization fund, operating reserve, and renewal and replacement reserve). Funds that are explicitly limited for construction or other capital investment such as bond proceeds are not included.
Funds Restricted for Debt Service	Includes amounts deposited in debt service and debt service reserve funds
FADS (Funds Available for Debt Service)	EBITDA plus interest income, taxes, other non-operating cash receipts not restricted as to spending and connection/availability fees. FADS may further reflect adjustments for noncash expenses, nonrecurring items and non-operating expenses paid ahead of debt service as appropriate.
Fixed Services Expense	Purchased water and/or sewer services * 35%
Net Transfers	Sum of transfers in less sum of transfers out
Pension Expense	Equals the utility’s reported net pension liability adjusted upward to reflect Fitch’s assumed 6% discount rate, if the plan uses a higher discount rate.

Sources: Fitch Report dated November 9, 2023

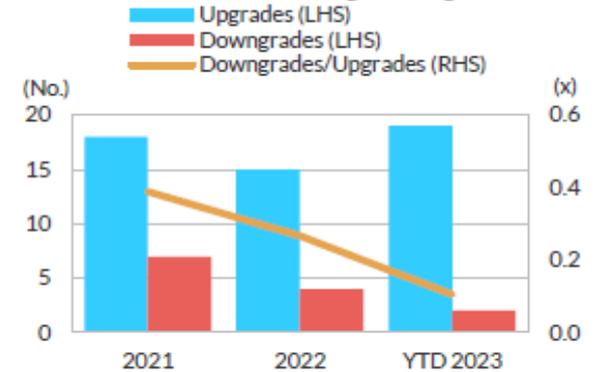
Moody's Water & Sewer Sector Outlook for 2024

- **Stable Outlook**, noting rate increases and growing customer bases help support strong revenue growth, offsetting inflation-driven expenditure pressures
- Affordability will continue to affect utility rate-setting nationwide in 2024 and management will likely face public and political resistance to implementing sizable rate increases
- Water and sewer utilities enter 2024 with increasing costs at a time when there are greater needs associated with aging infrastructure, including adverse effects tied to the increase in the frequency and severity of extreme weather events, and regulatory requirements to replace lead service lines
- Without continued and consistent increases in federal dollars, the burden of investing in water and sewer infrastructure will fall largely on ratepayers
- Deterioration in asset condition is likely as utilities delay or scale back capital projects due to higher borrowing costs, increased cost of construction materials, and supply-chain issues
- Increasing government regulations such as the EPA's policy to reduce per- and polyfluoroalkyl substances (PFAS) levels in drinking water will cause systems to begin allocating more reserves, start long-term capital planning for PFAS remediation, and consider rate increases for users
- Autonomous rate-setting authority remains a critical tool for utilities to effectively recover revenue and build reserves to pay for future capital needs
- Strong governance will continue to support the utility sector as the sector remains pressured by longer-term environmental risks

Fitch’s Water & Sewer Sector Outlook for 2024

- **Neutral outlook**, with the key factors affecting the sector’s performance being easing inflationary pressures, and stable increase in chemical, labor and power costs
- Fitch expects that improved revenue generation moving in line with cost increases should stabilize ratings across the sector in 2024
- Rating distribution remains stable across the portfolio as most utilities still have headroom for absorbing higher costs
- Although the Fitch-rated portfolio maintains sound rate flexibility, affordability remains a key concern for stakeholders in 2024
- The cost of complying with environmental regulations is expected to be meaningful but the full scope of new rules and effect on cost and capital remain undetermined
- Additional key sector issues include the increased frequency and severity of extreme weather events and breach of critical utility assets from cyberattacks

Water & Sewer – Rating Changes



Source: Fitch Ratings

Water & Sewer – Rating Outlooks



Source: Fitch Ratings

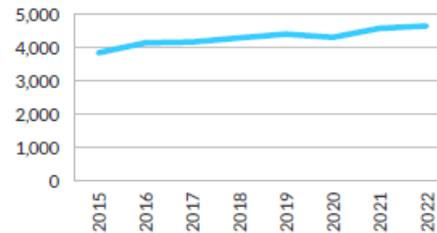
Source: Fitch “2024 Outlook: Water and Sewer Sector” December 6, 2023.

Fitch's Water & Sewer Sector Outlook for 2024

- Operating costs are expected to remain elevated over the new term as a result of moderately increasing inflationary pressures and high interest rate environment
- Increased capital spending levels will contribute to leverage pressures although strong liquidity and adequate debt capacity should ease pressure on credit quality
- Sustained high inflation has a dampening effect on how far federal and infrastructure funding will stretch but increased inflation could shift the outlook to deteriorating
- Utilities maintain flexibility within capital programs to defer projects
- Sustained high inflation has a dampening effect on how far federal and infrastructure funding will stretch but a rapid return to lower inflation could shift the outlook to neutral

Operating Cost Burden

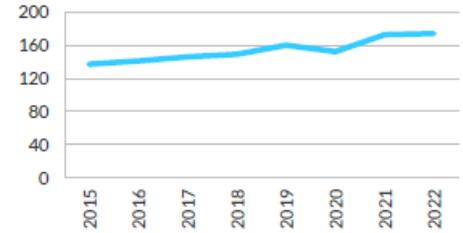
(\$ mil. gallons production)



Source: Fitch Ratings

Five-Year Average Capex to Depreciation

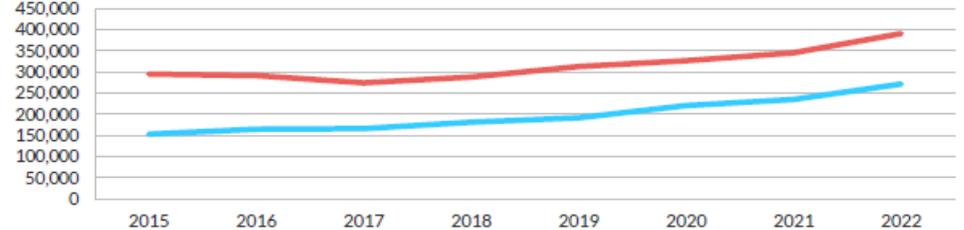
(%)



Source: Fitch Ratings

National Public-Sector Annual Construction Spending

(\$ Mil.)



Source: U.S. Census Bureau

Source: Fitch "2024 Outlook: Water and Sewer Sector" December 6, 2023.

Standard & Poor's Water & Sewer Sector Outlook

- **Stable outlook**, supported by proven cost recovery and financial cushion but rising costs likely will increase rate pressures
- Expect challenges in the capital markets due to higher interest rates and the inability to defer projects
- While increases to operating and capital costs will slow in 2024, labor costs continue to rise though the impact to the income statement is masked by the persistent high vacancy rates
- With rate increases outpacing inflation and discretionary income growth remaining stagnant, rate-setting flexibility has diminished and delinquencies have increased
- Customer assistance programs will be increasingly important and utilities with state limitations on rate structure will be at a disadvantage

What We're Watching -- U.S. municipal water and sewer utilities



Regulations

The current regulatory docket is ambitious, especially with respect to emerging contaminants and nutrient removal. We expect an increase in mandated capital costs and operating expenses.



Expense pressures

Operating costs have been rising rapidly due to inflation and supply chain issues, causing weakened margins as management defers rate increases.



Rate affordability

Rising costs will pressure affordability, especially for service areas with weaker demographic characteristics, increasing the importance of rate structure.



Weather

Variability in hydrology stresses water supply, operations, and flood control, while greater frequency of severe storms and wildfires also influences the operating and financial landscape.



Labor

Labor shortages in all areas of utility organizations pose critical operating, financial, and compliance challenges, although these are somewhat masked by high vacancy rates.



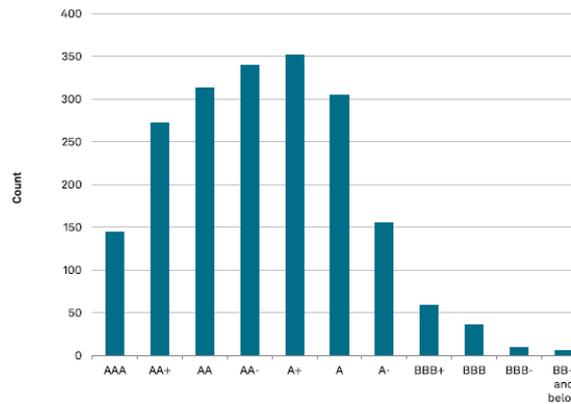
Planning

Emerging risks in the sector require sophisticated planning and management, exposing weaker management teams to substantial vulnerabilities.

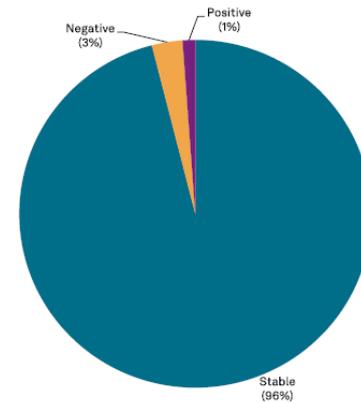
Standard & Poor's Water & Sewer Sector Outlook

- Expect greater focus on surface and aquifer-specific water rights, as population growth and climate change have led to groundwater overdraft and subsidence, particularly in regions that rely on agriculture
- Higher leverage and increased costs of regulatory mandates could pressure financial performance but positively influence community health and human safety
- Failure to maintain assets by deferring capital spending is viewed as a significant vulnerability to credit quality and will likely result in a downgrade
- Smaller systems remain more vulnerable to negative rating pressure given their lower nominal liquidity and limited ability to access economies of scale which exposes them to acute credit deterioration

Rating distribution
As of Jan. 1, 2024



Outlook distribution
As of Jan. 1, 2024



Source: S&P Report, "U.S. Municipal Water and Sewer Utilities 2024 Sector Outlook" January 18, 2024.





Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Nicholas Fedewa, CPA, Public Finance Manager

Re: Debt Service Reserve Fund Background and Considerations

Background: PFM Financial Advisors LLC (PFM) serves as the Great Lakes Water Authority's (GLWA) municipal bond advisors. Annually, representatives of PFM provide the Audit Committee with an update on public finance matters in general as well as how those matters impact GLWA.

Analysis: Referencing the attached presentation titled "Debt Service Reserve Fund Background and Considerations" PFM will provide an overview of the current GLWA Debt Reserves and relevant considerations.

Proposed Action: Receive and file this report.



Debt Service Reserve Fund Background and Considerations

March 22, 2024

PFM Financial Advisors LLC

555 Briarwood Circle
Suite 333
Ann Arbor, MI 48108

734.994.9710
pfm.com

Debt Service Reserve Fund is Established for Bondholder Security

- ◆ Debt Service Reserve Fund (“DSRF”) is a fund that is established as part of some bond indentures or ordinances to enhance bondholder security and creditworthiness
 - Holds funds that are applied to pay debt service if pledged revenues are insufficient to timely satisfy debt service payment requirements
 - Intended to act as a financial buffer if pledged revenues are temporarily insufficient to pay debt service requirements
- ◆ DSRF may be advantageous or required for bond issuers depending on considerations related to borrower creditworthiness, borrower type, and the type of debt
 - Historically, DSRF has been found in most municipal credit packages except for those issued with a General Obligation pledge
 - Market preferences and the value investors attribute to a DSRF change over time
 - Credit considerations relative to specific bond issuers change over time

Debt Service Reserve Fund Sizing and Mechanics

- ◆ Amount required to be deposited in the DSRF (“Reserve Requirement”) is set with reference to credit needs and federal tax code limitations
- ◆ Valuation typically occurs upon each issuance and at least once annually on an ongoing basis
- ◆ Most commonly, Reserve Requirement is specified as either Maximum Annual Debt Service or as the lesser of three tests:
 - Maximum Annual Debt Service
 - 125% of Average Annual Debt Service
 - 10% of Principal Amount
- ◆ When bond documents provide for the issuance of multiple series of bonds over time that share the same lien on pledged revenues, a single DSRF may secure all outstanding series
 - In case of common DSRF, Reserve Requirement is calculated with reference to all outstanding bonds
 - In GLWA’s case, there are four common DSRFs that support bonds secured by the following systems and liens: (1) Water Senior (2) Water Second (3) Sewer Senior (4) Sewer Second

Options for DSRF Funding Include Cash and Eligible Surety Policies

- ◆ Provisions within the bond indenture or ordinance dictate the options available to an issuer for funding of a Reserve Requirement
- ◆ Two most frequently available funding options include:
 - Cash (and permitted securities)
 - Eligible surety policies
- ◆ Surety policy is generally issued by a bond insurance company and can be drawn upon to provide funds if the DSRF must be tapped to pay debt service
 - Surety policy is issued in exchange for an upfront payment and certain covenants of the issuer
 - Any draws on a surety policy must be repaid with interest
- ◆ Issuer's decision to use a surety bond in place of a cash-funded DSRF depends on multiple factors but impact is a reduction upfront borrowing requirement
 - Cash deposit and surety premium are both typically paid using bond proceeds

Current GLWA DSRF Requirements and Funding Composition

GLWA DSRF Requirements by System and Lien ¹				
	Water System		Sewer System	
	Senior Lien	Second Lien	Senior Lien	Second Lien
<u>Lesser of:</u>				
Maximum Annual Debt Service	\$162,594,984	\$143,274,365	\$172,618,249	\$182,427,707
125% of Average Annual Debt Service ²	108,604,583	48,316,814	108,624,794	40,963,245
10% of Principal	168,929,500	67,807,000	177,946,500	76,602,500
Reserve Requirement	\$108,604,583	\$48,316,814	\$108,624,794	\$40,963,245

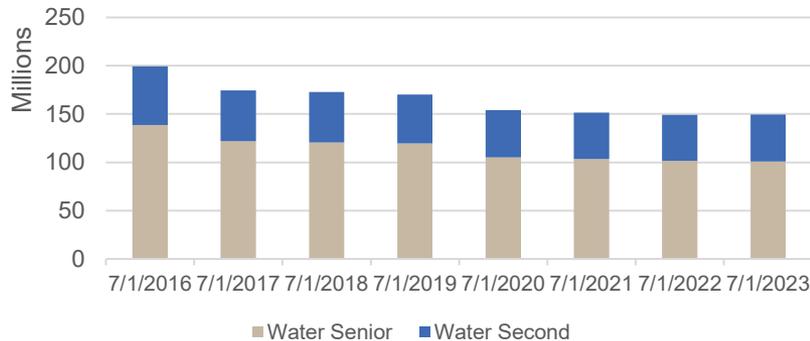
GLWA DSRF Funding Amounts by System and Lien ¹				
	Water System		Sewer System	
	Senior Lien	Second Lien	Senior Lien	Second Lien
Credit Facilities ³	\$96,494,258	\$45,815,645	\$93,936,981	\$40,300,000
Cash and Investments	12,210,325	3,368,591	14,787,813	763,245
Total DSRF Funding	\$108,704,583	\$49,184,236	\$108,724,794	\$41,063,245

- (1) Shown as of December 5, 2023, the last valuation date for Water Senior, Sewer Senior, and Sewer Second. Water Second is shown on an indicative basis as of the same date.
- (2) Sewer Second Lien calculated at 100% of Average Annual Debt Service in accordance with MBO requirements.
- (3) Includes surety policies issued on a series-specific and parity basis.

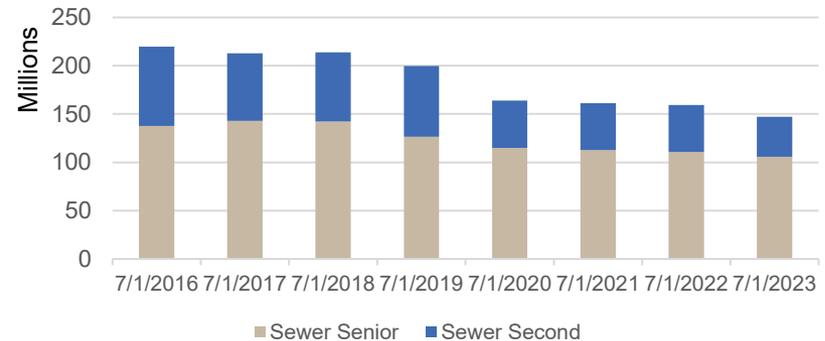
Successful GLWA Refinancing Program has Resulted in Significant DSRF Releases

- Reserve Requirement is recalculated upon each issuance and if debt service requirements are reduced can result in a release
- GLWA refinancing program has resulted in significant decreases in aggregate Reserve Requirements due to reduction in debt service and optimization of structure between liens

Water DSRF Requirement Over Time



Sewer DSRF Requirement Over Time



- Releases from DSRF are restricted to certain uses, and have generally been applied to reduce the size of a refunding debt issuance

GLWA DSRF Releases Applied to Refunding Transactions						
	Water System			Sewer System		
	Senior Lien	Second Lien	Total	Senior Lien	Second Lien	Total
Series 2016	\$14,367,220	\$10,795,798	\$25,163,017	\$23,804,512	\$19,927	\$23,824,439
Series 2018	-	1,602,152	1,602,152	11,201,491	-	11,201,491
Series 2020	10,548,456	-	10,548,456	8,454,576	25,142,779	33,597,356
Series 2022	-	-	-	1,572,882	7,303,667	8,876,550
Series 2023	-	-	-	-	209,161	209,161
Total	\$24,915,676	\$12,397,949	\$37,313,625	\$45,033,465	\$32,675,534	\$77,708,996

2016 Amendment to GLWA Master Bond Ordinances

- Reserve Requirements for GLWA bonds are detailed in the Master Bond Ordinances and date back decades to prior DWSD Bond Ordinance
- Market preferences and credit considerations differed when Reserve Requirements were originally established
- Substantive changes to Master Bond Ordinances require investor consent to implement
- In 2016, GLWA Board adopted amendments to the Reserve Requirements within the Master Bond Ordinances that became effective with investor consent through a springing amendment
- Reserve Fund Amendment was adopted to modernize terms of Master Bond Ordinance and eliminate significant associated cost
- Reserve Fund Amendment allows GLWA the option (but not requirement) to reduce or eliminate the Reserve Requirement once conditions precedent have been met:
 - Attain ratings of at least AA- or Aa3 on the Senior Lien from at least two of Moody's, S&P, and Fitch **and**
 - Confirmation that ratings will not be reduced solely because of the change in the Reserve Requirement

Multiple Considerations Surround Elimination of Reserve Requirement

- ◆ Limited immediate economic implications of eliminating Reserve Requirement
 - Cash balances are modest given prior aggressive refunding program structured to maximize releases
 - Surety policies that represent a substantial portion of DSRF balances have already been paid for in full
 - Releases from cash balances are restricted for certain purposes and have historically been used to reduce borrowing and enhance debt service savings related to refunding transactions
- ◆ Regardless of consents, some risk of modestly negative reception from rating agencies and certain investors
 - Rating agencies generally see limited value of funded DSRF except where a utility holds narrow liquidity
 - Some investors value a funded DSRF, regardless of rating agency views
- ◆ Cost of maintaining cash within DSRF is currently substantially lower than in 2016, as earnings on DSRF investments can now easily exceed GLWA tax-exempt long-term borrowing rate
- ◆ Elimination of Reserve Requirement reduces risks related to existing surety policies and future debt issuances
 - Potential for substantial future deposit requirements upon expiration of current surety policies (\$29 million in 2027) and in concert with each future debt issuance
 - Significant new money borrowings will occur through SRF program on Junior Lien, which does not require a DSRF
 - As GLWA credit quality increases, the availability of surety policies that must be rated at or above the level of the bonds will decrease





Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

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

Re: CFO Update

Workday Implementation

March 29, 2024 marks the final date for the end-to-end testing period for the Workday implementation. The Financial Services and Information Technology teams have had a herculean workload on top of their day-to-day responsibilities. Overall, the project is going well and the team is excited about the efficiencies that can be leveraged from the new system. As we move in to the next phase of the effort, the focus will be on training and cutover efforts for July 1, 2024 as well as post-implementation efforts.

Another aspect of the project is the implementation of Adaptive Insights for reporting, forecasting, and other analytics.

Charges Rollout Complete!

The Charges Outreach & Modeling Team has completed the notification of the FY 2025 Schedule of Charges as approved by the Board of Directors on February 28, 2024. The notification included a communication toolkit (attached) intended to help member partners explain changes in the wholesale water and sewer service charges.



**FY 2025 & FY 2026
Biennial Budget
and
FY 2025 Schedule of Charges
Communications Toolkit**

March 4, 2024

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FY 2025 Budget & Charges Communications Toolkit Cover Letter

FY 2025 Approved Charges

One Pager Series – FY 2025 Schedule of Charges

One Pager Series – FY 2025 Revenue Requirement

FY 2025 & FY 2026 Adopted Biennial Budget

One Pager Series – FY 2025 Budget Analysis

FY 2025 Budget Infographic Water System

FY 2025 Budget Infographic Wastewater System

FY 2025 Budget Infographic Combined Water and Wastewater



March 4, 2024

Greetings Member Partner,

Thank you for your continued partnership as we wrap up the annual Charges rollout process for FY 2025. The Great Lakes Water Authority (GLWA) Board of Directors approved the FY 2025 - FY 2026 Biennial Budget and FY 2025 Schedule of Service Charges on February 28, 2024. Having experienced first-hand the challenges of communicating changes in regional charges in my role at GLWA as well as local rates in my previous career as a local government administrator, I know that there can be numerous hurdles to creating a shared understanding of an entire budget and charge/rate-setting process.

That is why I wanted to share this communications toolkit with you. The items in this packet provide simplified graphics and distilled descriptions of the GLWA budget and service charges. These may be helpful when providing information to your governing bodies, internal teams, or the public at-large. These documents can also be found in other various publications, such as the full budget document but are compiled here for ease of access.

In addition to this set of materials I want to also let you know that the Charges Outreach & Modeling team offers, by request, a "*Charges 101*" training to new (or existing) Member Partner staff who are interested in, or would benefit from, learning more about the GLWA charge-setting process, including a brief introduction to the water and wastewater charges methodologies.

If you have any questions, comments, or ideas for more useful and effective communication assets, please do not hesitate to reach out and let me know. I may be contacted directly at charges@glwater.org.

We are One Water.

Best Regards,

Matt S. Lane

Matthew S. Lane, MPA
Manager- Charges Outreach & Modeling

FY 2025 Service Charges Highlights

The Water and Sewer Service Charges for FY 2025 were adopted by the GLWA Board of Directors on February 28, 2024 following a public hearing.

Charges are Based on Four Key Elements.

1) Budget: The daily costs to provide service (such as the people, utilities, chemicals, contractors, and materials to operate plants and maintain the pipes), the lease payment for the regional system, Water Residential Assistance Program (WRAP) funding, debt service, legacy pension, and capital project funding. The budget is also known as the “revenue requirement” as it defines the amount of revenue required to run the utility.

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

3) Units of Service (UOS): Quantifies each community’s service needs based on engineering studies, metering data, and other criteria. Each member partner is assigned an allocation of the annual revenue requirement based on their relative use of the system. For the water system, this includes the amount of water purchased each year and contracted demands during peak periods. For the sewer system, each member partner’s SHARE is based on contributed wastewater.

4) Cost of Service Study (COS): The inputs from the three sources above are applied to an agreed upon charges methodology to allocate the revenue requirement (i.e., budget) by functional categories (such as purification for the water system or sludge disposal for the sewer system) and then allocated to each customer. The outcome is the charge calculation for each member partner.

Adopted FY 2025 Water System Charges

The average system charge adjustment for water is a 3.25 percent increase. This is the result of an adopted Water budget increase of 4.0 percent offset by 0.75 percent reflecting the net effect of a) increased investment earnings and b) reductions in estimated sales volumes. As a result of the 2022 Contract Alignment Process (CAP), the FY 2025 Units of Service only changed for three Member Partners (MOD). The charges for these three Member Partners have been calculated using the new simplified Water Charge Methodology. There are no significant variances from the system-wide charge (after consideration of contract adjustments) increase of 3.06 percent for the remaining 85 (No MOD) Member Partners.

Adopted FY 2025 Sewer System Charges

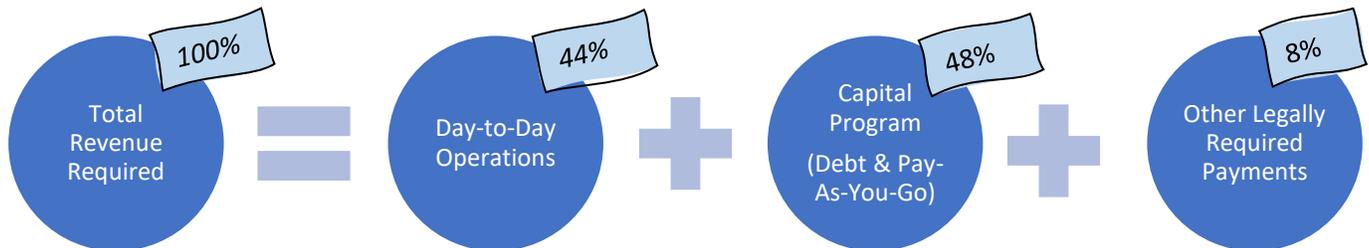
The average system charge adjustment for sewer is a 3.0 percent increase. This is the result of an adopted Sewer budget increase of 4.0 percent offset by increased investment earnings which funds 1.0 percent of the budget increase. The Sewer SHARES have been updated to include FY 2023 flow balance data in the ten-year average for the FY 2025 Units of Service, and the updated COS. The SHARES are scheduled to remain in effect until the Sewer SHARES are updated for FY 2028.

Average System Charge Adjustments

Year	Water	Sewer
2018	1.8%	-0.7%
2019	1.8%	0.1%
2020	0.6%	0.8%
2021	3.2%	2.0%
2022	1.5%	-0.6%
2023	3.7%	2.4%
2024	2.75%	2.75%
2025	3.25%	3.0%
8-Year Average	2.3%	1.2%

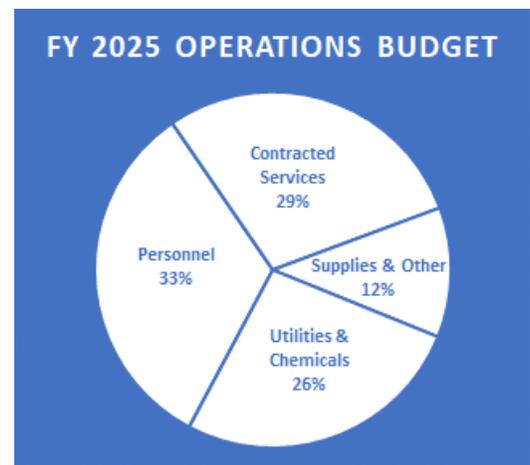
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The total budget for a water utility, like the Great Lakes Water Authority (GLWA), is referred to as the “*revenue requirement*.” It tells us *how much revenue / cash is required* to operate and maintain the systems for a given year. The total revenue requirement increased by \$35 million or 4 percent for FY 2025. Three major categories makeup the total revenue requirement of \$906 million.



Day-to-Day Operations includes the personnel, specialty contractual services, utilities, chemicals, and supplies to operate five water treatment plants, the largest single-site water resource recovery facility in North America and all of the systems, processes, and controls to manage the vast regional network. The total FY 2025 Operations & Maintenance Budget is \$399 million, up \$40 million over the previous year. This increase is driven by the economic impact/cost pressure on utilities, chemicals, contractual provisions, as well as filling many vacant positions.

Capital Program costs include making payments on bonded debt, balanced with cash funding, to prevent the utility from maxing out its borrowing capability for future generations. Because many of our assets are underground, it is hard to envision the scope of all capital needs. For perspective, consider that there are 797 miles of transmission main that move treated drinking water from five water treatment plants to the local systems’ distribution network and there are also 207 miles of trunk sewers and interceptors that return wastewater to the water resource recovery facility. The combined total of 1,004 miles equals the driving distance from Detroit to Jacksonville, Florida. Multiple years of significant cost increases in operating and construction costs have constrained funding for capital projects. In order to balance the budget, fewer funds are available annually for debt payments and pay-as-you-go cash funding. As a result, the FY 2025 Capital Program related revenue requirement is \$437 million, a decrease of \$11 million.



Other Legally Required costs of \$70 million include a \$50 million lease payment to the City of Detroit Water & Sewerage Department (DWSD) (restricted for DWSD for capital program needs), legacy pension commitments to the City of Detroit’s General Retirement System, a half of one percent of revenues for the Water Residential Assistant Program (WRAP), and a working capital reserve. The total net increase of \$6 million is largely driven by the increased reserve needs.

Revenue Required from charges is less than the total 4 percent as noted in the introduction. Controlling the system-wide increases to 3.25 percent for water and 3 percent for sewer is achieved with offsetting resources such as investment income.

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



The GLWA operations and maintenance budget accounts for 44% of the total revenue requirement budget for establishing the annual charges for services. Given the magnitude of this charge component, additional information may be of interest to stakeholders.

The remaining 56% of the FY 2025 budget of \$906 million represents financing and legal commitments: debt payments (44%), lease payments (6%), Water Residential Assistance Program (WRAP) (0.5%), legacy pension liabilities (1%) and capital program funding (4%).

Operations & Maintenance (O&M) expenses are \$399 million of the total budget for FY 2025. Compared to FY 2024, this is an increase of 11.2%.

Staffing & Personnel The staffing plan is at 1,356 (increase of 38), with Full-time Equivalents (FTE) at 1,203 (increase of 50). The increase in FTEs beyond the number of new positions reflects budgeting at a fractional percentage when a position has not been filled.

Water Operations – increase of \$11.9 million Driven by personnel (\$2.4 million) due to the filling of key positions (Water Engineering Life Cycle Project Managers, Water Quality Investigators, and apprentices within several Water Treatment Plants), there is an increase of nine FTEs. Other increases include electrical costs for Treatment Plant and Pump Stations (\$4.9 million); Supplies & Other (\$0.8 million); Contractual Services due to Mobile Dredging activities (\$0.9 million); Chemicals (\$1.3 million); All other categories decreased (\$0.2 million). Unallocated reserves increased (\$1.8 million) to accommodate for inflationary factors.

Wastewater Operations – increase of \$14.3 million Driven by contractual operating services (\$3.3 million) for a facilities maintenance contract and for residual solids disposal; chemicals (\$3.1 million based on price adjustments for chlorine-based products); utility costs (\$2.4 million); supplies & other (\$2.0 million) for reliability maintenance activities. An increase in personnel costs (\$2.7 million) for 11 new positions to insource capital program engineering services (six positions) and for the inclusion sewage conveyance and sewage pumping stations (five positions); unallocated reserve increased (\$1.2 million); offset by a decrease in other items (\$0.4 million).

Centralized Services¹ – increase \$10.1 million This is mainly driven by technology initiatives for new cloud-based Enterprise Resource Planning (ERP) and Enterprise Asset Management (EAM) system implementation costs (\$7.0 million). Systems Control increases include the Emerson Process Management contract (\$2.3 million). The Capital Planning group budget increased to build the Prism Portal and to increase staffing to replace work currently performed by outside vendors (\$0.6 million). Net other general categories increase of (\$0.2 million).

Administrative Services² – increase of \$3.7 million Increases in several areas including: Organizational Development due to training program costs (\$0.3 million); increased insurance premiums (\$2.0 million); CFO Services (\$0.7 million), and other general categories (\$0.7 million).

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

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

² Includes the Board of Directors, Chief Executive Officer, Chief Administrative & Compliance Officer (includes Risk Management & Safety), General Counsel, Public Affairs, Organizational Development, and Financial Services. Page 152

MAKING SENSE OF YOUR DOLLARS

Every dollar paid to GLWA for Water Services provides for...

FY 2025 Water System Budget Infographic

45.5% DEBT SERVICE

45.5¢ ON THE DOLLAR

Physical improvements to GLWA’s regional water system and its assets are financed with debt. Debt service principal, interest, and other required deposits are funded monthly.

44.0% OPERATIONS AND MAINTENANCE

44.0¢ ON THE DOLLAR

The cost for people, utilities, chemicals, and services to deliver water of unquestionable quality around-the-clock, every day of the year.

5.9% REGIONAL SYSTEM LEASE

5.9¢ ON THE DOLLAR

This money goes to the Detroit Water and Sewerage Department (DWSD) to pay for GLWA’s lease of the regional water system. DWSD uses those funds for improvements to the local system and to pay debt related to capital improvements.

1.9% REVENUE FINANCED CAPITAL

1.9¢ ON THE DOLLAR

To lower the debt burden, GLWA sets aside money each year from revenues to pay for capital improvements in future years. This pay-as-you-go approach eliminates the need to pay interest on debt in future years and improves financial resiliency.

1.6% RECEIVING FUND WORKING CAPITAL

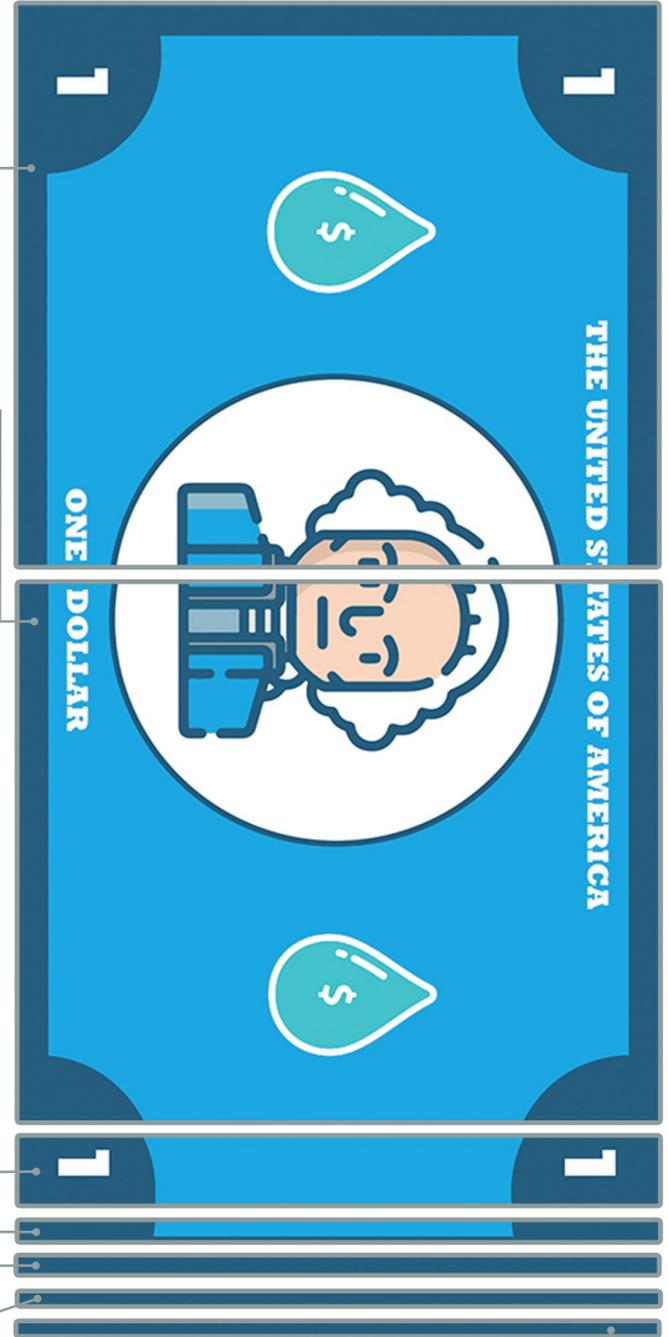
1.6¢ ON THE DOLLAR

The amount required to maintain sufficient liquidity in the Master Bond Ordinance Receiving Fund.

0.6% CLOSED PENSION

0.6¢ ON THE DOLLAR

GLWA inherited a portion of the city of Detroit’s pension plan expense for employees and retirees that maintained the water system before GLWA was formed. Over time, the annual payment will decrease.



0.5% WRAP (WATER RESIDENTIAL ASSISTANCE PROGRAM)

0.5¢ ON THE DOLLAR

Half a percent of GLWA’s revenue goes straight to funding WRAP, making it the only sustainably-funded assistance program in the country. WRAP provides not only financial assistance, but also conservation education and minor plumbing repairs and replacements.

Note: Percentages based on FY 2025 adopted budget.



MAKING SENSE OF YOUR DOLLARS

Every dollar paid to GLWA for **Wastewater Services** provides for...

FY 2025 Wastewater System Budget Infographic

44.0% OPERATIONS AND MAINTENANCE

44.0¢ ON THE DOLLAR

The cost for people, utilities, chemicals, and services to deliver effective and efficient wastewater services around-the-clock, every day of the year.

43.5% DEBT SERVICE

43.5¢ ON THE DOLLAR

Physical improvements to GLWA's regional wastewater system and its assets are financed with debt. Debt service principal, interest, and other required deposits are funded monthly.

5.4% REVENUE FINANCED CAPITAL

5.4¢ ON THE DOLLAR

To lower the debt burden, GLWA sets aside money each year from revenues to pay for capital improvements in future years. This pay-as-you-go approach eliminates the need to pay interest on debt in future years and improves financial resiliency.

5.3% REGIONAL SYSTEM LEASE

5.3¢ ON THE DOLLAR

This money goes to the Detroit Water and Sewerage Department (DWSD) to pay for GLWA's lease of the regional wastewater system. DWSD uses those funds for improvements to the local system and to pay debt related to capital improvements.

0.9% CLOSED PENSION

0.9¢ ON THE DOLLAR

GLWA inherited a portion of the city of Detroit's pension plan expense for employees and retirees that maintained the water system before GLWA was formed. Over time, the annual payment will decrease.

0.5% WRAP (WATER RESIDENTIAL ASSISTANCE PROGRAM)

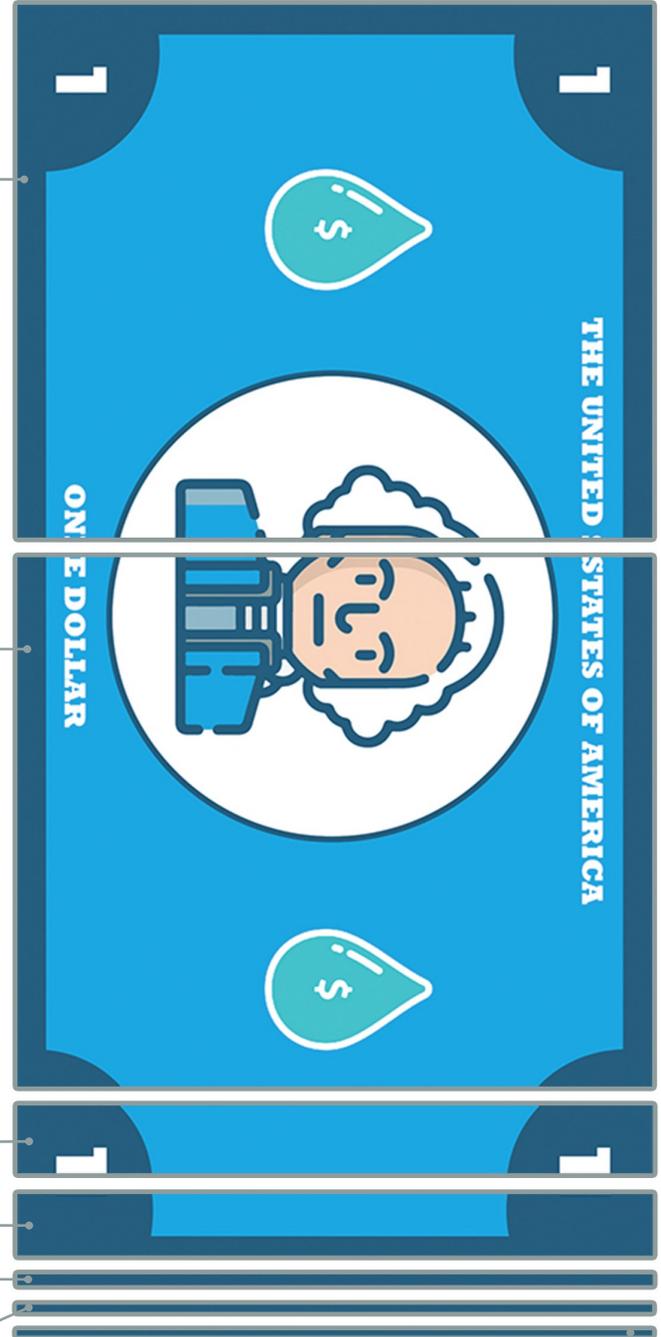
0.5¢ ON THE DOLLAR

Half a percent of GLWA's revenue goes straight to funding WRAP, making it the only sustainably-funded assistance program in the country. WRAP provides not only financial assistance, but also conservation education and minor plumbing repairs and replacements.

0.4% RECEIVING FUND WORKING CAPITAL

0.4¢ ON THE DOLLAR

The amount required to maintain sufficient liquidity in the Master Bond Ordinance Receiving Fund.



Note: Percentages based on FY 2025 adopted budget.



MAKING SENSE OF YOUR DOLLARS

Every dollar paid to GLWA for combined **Water and Wastewater Services** provides for...

FY 2025 Water and Wastewater Combined Budget Infographic

44.3% DEBT SERVICE

44.3¢ ON THE DOLLAR

Physical improvements to GLWA's regional water and wastewater system assets are financed with debt. Debt service principal, interest and other required deposits are funded monthly.

44.0% OPERATIONS AND MAINTENANCE

44.0¢ ON THE DOLLAR

The cost for people, utilities, chemicals, and services to deliver water of unquestionable quality and effective and efficient wastewater services around-the-clock, every day of the year.

5.5% REGIONAL SYSTEM LEASE

5.5¢ ON THE DOLLAR

This money goes to the Detroit Water and Sewerage Department (DWSD) to pay for GLWA's lease of the regional water and wastewater systems. DWSD uses those funds for improvements to the local system and to pay debt related to capital improvements.

3.9% REVENUE FINANCED CAPITAL

3.9¢ ON THE DOLLAR

To lower the debt burden, GLWA sets aside money each year from revenues to pay for capital improvements in future years. This pay-as-you-go approach eliminates the need to pay interest on debt in future years and improves financial resiliency.

1.0% RECEIVING FUND WORKING CAPITAL

1.0¢ ON THE DOLLAR

The amount required to maintain sufficient liquidity in the Master Bond Ordinance Receiving Fund.

0.8% CLOSED PENSION

0.8¢ ON THE DOLLAR

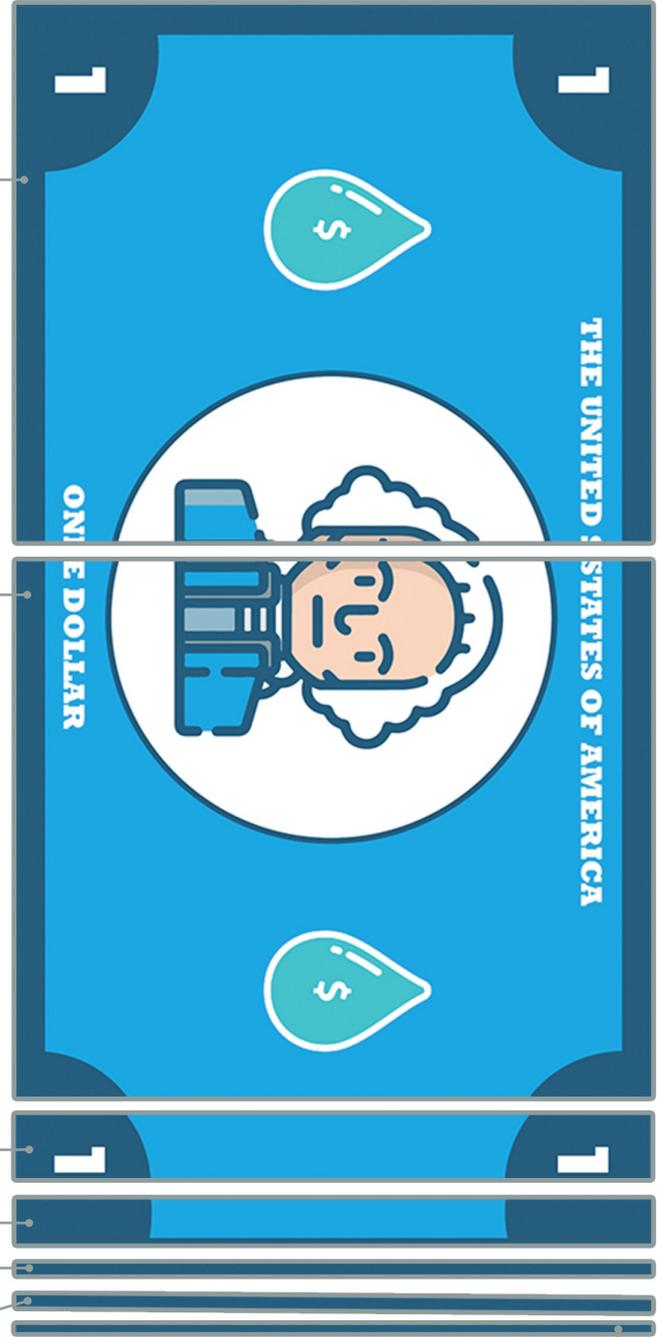
GLWA inherited a portion of the city of Detroit's pension plan expense for employees and retirees that maintained the water system before GLWA was formed. Over time, the annual payment will decrease.

0.5% WRAP (WATER RESIDENTIAL ASSISTANCE PROGRAM)

0.5¢ ON THE DOLLAR

Half a percent of GLWA's revenue goes straight to funding WRAP, making it the only sustainably-funded assistance program in the country. WRAP provides not only financial assistance, but also conservation education and minor plumbing repairs and replacements.

Note: Percentages based on FY 2025 adopted budget.



GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

December 2023

**Presented to the
Great Lakes Water Authority
Audit Committee on March 22, 2024**

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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. Staff reviews the need for budget amendments quarterly and requests necessary amendments when required based on the most current information available. First quarter budget amendments were approved by the Board of Directors January 24, 2024 and are reflected in this report.

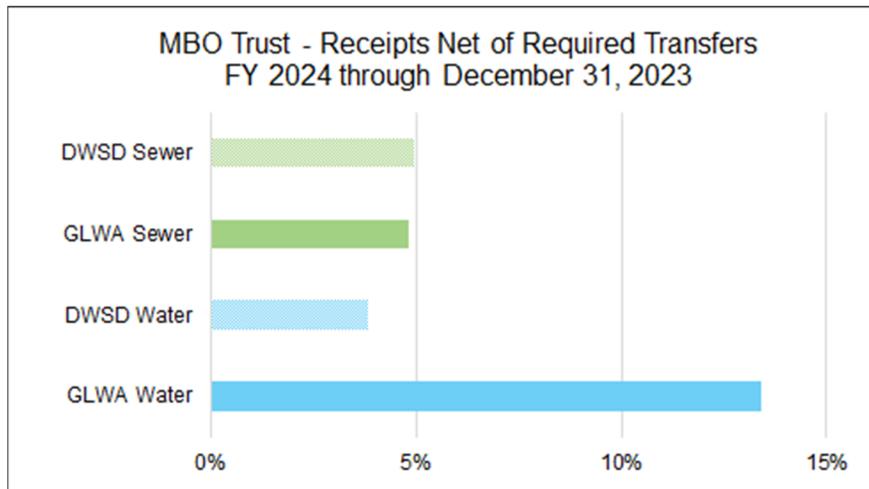
For the current year, water and sewer capital spend, and sewer O&M reflect variances to budget outside the normal range. Capital spend variances reflect evolving changes in timing that the Capital Improvement Planning group continues to monitor and review.

A bond transaction was completed in December 2023 for \$148.5 million to support water system improvements and \$96.8 million to support sewage disposal system improvements.

As of December 31, 2023					
Metric	FY 2024 Budget	FY 2024 Amended Budget	FY 2024 Actual	Variance from Financial Plan	Report Page Reference
Wholesale Water Billed Revenue (\$M)	\$178.8	\$174.8	\$174.0	0%	48
Wholesale Water Billed Usage (mcf)	7,264,000	6,807,000	6,796,000	0%	
Wholesale Sewer Billed Revenue (\$M)	\$141.0	\$141.0	\$141.0	0%	50
Wholesale Water Operations & Maintenance (\$M)	\$76.5	\$81.6	\$79.6	-2%	5
Wholesale Sewer Operations & Maintenance (\$M)	\$102.8	\$110.1	\$102.8	-7%	
Investment Income (\$M)	\$7.7	\$20.2	\$26.9	33%	37
Water Prorated Capital Spend w/SRA* (\$M)	\$119.6	\$112.3	\$83.1	-26%	28
Sewer Prorated Capital Spend w/SRA* (\$M)	\$99.5	\$82.5	\$57.6	-30%	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 53)



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 \$2.4 million and DWSD Sewer reports a surplus of \$7.6 million of net receipts over disbursements through December 2023.

All amounts are unaudited unless otherwise noted. 1 GLWA Audit Committee March 22, 2024

Budget to Actual Analysis (page 3)

- The FY 2024 information includes the first quarter FY 2024 budget amendments approved by the GLWA Board of Directors on January 24, 2024.
- The total Revenue Requirements are on target through December 2023.
- The total overall Operations & Maintenance expenses are at 47.6% of budget through December 2023. This positive variance equates to a dollar amount of \$9.2 million.

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 2023 is \$40.2 million for the Water fund (21.5% of total revenues) and \$60.2 million for the Sewer fund (24.5 % of total revenues).
- Water Net Position increased by \$ 5.0 million, and Sewage Disposal Net Position increased by \$ 14.5 million for the year to date through December 2023.

Capital Improvement Plan Financial Summary (page 27)

- Water system costs incurred to date are below the 94% Capital Spend Ratio assumption.
- Sewer system costs incurred to date are below the 82.9% Capital Spend Ratio assumption.

Master Bond Ordinance Transfers (page 30)

- For December, transfers of \$13.5 million and \$18.1 million were completed for the GLWA Water and Sewer funds, respectively.
- Also for December, transfers of \$5.6 million and \$6.9 million were completed for the DWSD Water and Sewer funds, respectively.

Cash Balances & Investment Income (page 37)

- Total cash & investments are \$651 million for Water and \$743 million in the Sewer fund.
- Total, combined, cumulative, FY 2024 investment income through December is \$26.9 million.

DWSD Retail Revenues, Receivables & Collections (page 41)

- Water revenue through December 31, 2023 is 102.68% and usage is 102.01% of budget.
- Sewer revenue through December 31, 2023 is 98.08% and usage is 99.35% of budget.
- Combined accounts receivable balances for the water and sewer funds report a decrease of \$17.6 million over the prior year.
- Past dues over 180 days make up of 62.6% the total accounts receivable balance. The current bad debt allowance covers over 96.2% of past dues over 60 days.

GLWA Wholesale Billing, Receivables & Collections (page 47)

- GLWA accounts receivable past due balance net of Highland Park is 14.09% 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 \$55.2 million. It includes \$40.5 million for wastewater treatment services, \$1.9 million for industrial waste control services, and \$12.7 million for water supply services. Highland Park made a catch-up payment of \$1.7 million on June 3, 2022 and has continued to make additional, monthly payments since that time totaling \$8.4 million as of December 31, 2023.
- On November 16, 2023, the GLWA Board of Directors outlined a plan to provide reimbursement credits to Member Partners upon implementation of the approved term sheet that represents a proposed agreement between GLWA, the city of Highland Park, and the state of Michigan. This monthly financial report will reflect the impacts of that term sheet and agreement moving forward as implementation steps occur.

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



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

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

The FY 2024 information presented in these sections includes the first quarter FY 2024 budget amendments approved by the GLWA Board of Directors on January 24, 2024.

Revenue Requirements Budget Basis Analysis

GLWA's annual revenue requirements represent 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 expenses are largely reported on an accrual basis. The primary difference between the revenue requirements budget basis to the financial reporting basis is the treatment of debt service, legacy pension obligations, and lease related activities. The Revenue Requirements Basis is foundational to GLWA's daily operations, financial plan, and of most interest to key stakeholders.

Table 1A – Water Revenue Requirements Budget and **Table 1B – Sewer Revenue Requirements Budget** presents a year-over-year budget to actual performance report. The revenue requirements budget is accounted for in the operations and maintenance fund for each system. Since this report is for December 2023, 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, total revenues for FY 2024 are slightly above the pro-rata benchmark; the *water* system is at 51.4% while the *sewer* system is at 50.4%. 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, 2023, these payments total \$3.2 million for FY 2024.

2. **Investment Earnings:** For both systems, investment earnings are above the pro-rata benchmark for FY 2024; the *water* system is at 70.8% while the *sewer* system is at 68.3%. 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 are slightly below the pro-rata benchmark for FY 2024 the *water* system is at 48.8% while the *sewer* system O&M expenses is at 46.7%.
5. **Debt Service:** For FY 2024, both systems are slightly below the pro-rata benchmark for debt service; the *water* system is at 49.0% while the *sewer* system is at 49.3%. 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. Funding levels are currently being evaluated to determine if additional transfers to this reserve will be required in FY 2024.
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 2023, DWSD ended the year with positive net cash flows for both the DWSD *water* system and the DWSD *sewer* system. For FY 2024, neither the DWSD *water* system nor the DWSD *sewer* system have a budgetary shortfall through December 31, 2023. GLWA and DWSD staff meet regularly to discuss steps to mitigate shortfalls, when they occur, 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* and *sewer* systems.
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 Requirements Budget (year-over-year) – (\$000)

	FY 2023 AMENDED BUDGET	FY 2023 ACTIVITY THRU 12/31/2022	Percent Year-to- Date at 12/31/2022	FY 2024 BOARD ADOPTED BUDGET	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 12/31/2023	Percent Year-to- Date at 12/31/2023
Water System							
Revenues							
Suburban Wholesale Customer Charges	\$ 333,856	\$ 173,031	51.8%	\$ 340,541	\$ 336,541	\$ 170,781	50.7%
Retail Service Charges	22,834	11,442	50.1%	25,537	25,537	12,769	50.0%
Investment Earnings	9,670	2,574	26.6%	4,062	12,062	8,542	70.8%
Other Revenues	995	830	83.4%	175	440	613	139.3%
Total Revenues	\$ 367,356	\$ 187,877	51.1%	\$ 370,315	\$ 374,580	\$ 192,705	51.4%
Revenue Requirements							
Operations & Maintenance Expense	\$ 156,748	\$ 76,174	48.6%	\$ 152,906	\$ 163,101	\$ 79,635	48.8%
General Retirement System Legacy Pension	6,048	3,024	50.0%	-	-	-	0.0%
Debt Service	150,055	76,397	50.9%	159,483	162,634	79,741	49.0%
General Retirement System Accelerated Pension	6,268	3,134	50.0%	3,396	1,506	1,698	112.8%
Extraordinary Repair & Replacement Deposit	200	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	1,771	885	50.0%	1,852	1,852	926	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	-	-	0.0%	-	-	-	0.0%
Receiving Fund Working Capital Requirement	-	-	0.0%	-	1,400	-	0.0%
Improvement & Extension Fund Transfer Pending	23,766	14,237	59.9%	30,178	21,588	13,862	64.2%
Total Revenue Requirements	\$ 367,356	\$ 185,101	50.4%	\$ 370,315	\$ 374,580	\$ 187,112	50.0%
Net Difference		\$ 2,777				\$ 5,592	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 4,199				\$ 5,415	
Revenue Requirement Variance		(1,423)				178	
Overall Variance		\$ 2,777				\$ 5,592	

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

	FY 2023 AMENDED BUDGET	FY 2023 ACTIVITY THRU 12/31/2022	Percent Year-to- Date at 12/31/2022	FY 2024 BOARD ADOPTED BUDGET	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 12/31/2023	Percent Year-to- Date at 12/31/2023
Sewer System							
Revenues							
Suburban Wholesale Customer Charges	\$ 274,907	\$ 137,723	50.1%	\$ 282,688	\$ 282,688	\$ 140,601	49.7%
Retail Service Charges	191,042	95,521	50.0%	196,570	196,570	98,285	50.0%
Industrial Waste Control Charges	8,420	4,186	49.7%	8,584	8,584	4,361	50.8%
Pollutant Surcharges	4,951	2,524	51.0%	5,328	5,328	2,164	40.6%
Investment Earnings	13,532	3,855	28.5%	7,057	16,057	10,962	68.3%
Other Revenues	2,355	961	40.8%	400	717	521	72.6%
Total Revenues	\$ 495,207	\$ 244,770	49.4%	\$ 500,627	\$ 509,944	\$ 256,893	50.4%
Revenue Requirements							
Operations & Maintenance Expense	\$ 204,123	\$ 99,279	48.6%	\$ 205,644	\$ 220,128	\$ 102,772	46.7%
General Retirement System Legacy Pension	10,824	5,412	50.0%	-	-	-	0.0%
Debt Service	212,509	106,058	49.9%	228,328	231,782	114,164	49.3%
General Retirement System Accelerated Pension	11,621	5,810	50.0%	6,479	3,097	3,240	104.6%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	2,394	1,197	50.0%	2,503	2,503	1,252	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	-	-	0.0%	-	-	-	0.0%
Improvement & Extension Fund Transfer Pending	26,237	14,037	53.5%	30,173	24,934	14,338	57.5%
Total Revenue Requirements	\$ 495,207	\$ 245,543	49.6%	\$ 500,627	\$ 509,944	\$ 249,515	48.9%
Net Difference		\$ (774)				\$ 7,378	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ (2,834)				\$ 1,921	
Revenue Requirement Variance		2,060				5,457	
Overall Variance		\$ (774)				\$ 7,378	

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of December 31, 2023, is 50.0% (six months). When comparing FY 2024 to FY 2023 in **Table 2 – Operations & Maintenance Budget – Major Budget Categories**, the overall spending is higher in FY 2024.

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 2023 AMENDED BUDGET	FY 2023 ACTIVITY THRU 12/31/2022	Percent Year-to- Date at 12/31/2022	FY 2024 BOARD ADOPTED BUDGET	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 12/31/2023	Percent Year-to- Date at 12/31/2023
Water	\$ 85,337	\$ 42,087	49.3%	\$ 82,733	\$ 87,738	\$ 42,683	48.6%
Sewer	136,348	67,180	49.3%	132,934	141,656	68,650	48.5%
Centralized	104,503	49,315	47.2%	106,901	116,537	53,142	45.6%
Administrative	34,682	16,870	48.6%	35,983	37,298	17,932	48.1%
Employee Benefits	-	-	0.0%	-	-	-	0.0%
Total O&M Budget	\$ 360,870	\$ 175,452	48.6%	\$ 358,550	\$ 383,229	\$ 182,407	47.6%

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 overall O&M expenses are at 47.6% which is slightly below the pro-rata benchmark of 50.0%. This positive variance equates to a dollar amount of \$9.2 million. The expense category commentary is provided below for items highlighted on Table 3.

Personnel Costs: The overall category is slightly above the pro-rata benchmark; coming in at 51.5% through December 2023.

Utilities: The overall category is slightly below the pro-rata benchmark; coming in at 49.8% through December 2023. Variances within this category, when they occur, are not unexpected as usage varies throughout the year.

- **Electric** is above the pro-rata benchmark, coming in at 54.9%. It should be noted that variances are not unexpected as usage varies throughout the year. 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. The budget for this category was amended for the first quarter of FY 2024 for the increase in kWh and continues to be monitored.
- **Gas** is coming in at 29.8% which is lower than the benchmark of 50.0%. Variances within this category are not unexpected as usage varies throughout the year. This category is under review.
- **Sewage service** is lower than the benchmark, coming in at 41.0%. This category is under review.
- **Water service** is slightly lower than the benchmark, coming in at 48.4%. As meters have been repaired or replaced at the WRRF, the billings that previously reported estimated readings have been replaced with actual readings. The actual readings have been coming in higher than the estimated billings. In addition, a new water billing structure was implemented in early FY 2023 which has resulted in an increase in the water billing rate. The budget for this category was amended for the first quarter of FY 2024 and continues to be monitored.

Chemicals: This category is lower than the benchmark; coming in at 42.0% through December 2023. The FY 2024 budget was amended for the increase in chemical costs. Variances within this category are not unexpected as usage varies throughout the year.

Supplies & Other: This category is lower than the pro-rata benchmark; coming in at 41.5% through December 2023. 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 lower than the pro-rata benchmark; coming in at 49.3% through December 2023. 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 are 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 28.0% through December 2023. The amount in the Capital Program Allocation account is shown as negative as this is a "contra" account which represents an offset to the Personnel Costs section of the Operations & Maintenance (O&M) budget. A review of this category is being conducted.

Shared Services: This category is higher than the benchmark; coming in at 72.3% through December 2023. 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 2024. 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 2023 AMENDED BUDGET	FY 2023 ACTIVITY THRU 12/31/2022	Percent Year-to- Date at 12/31/2022	FY 2023 ACTIVITY THRU 6/30/2023	Percent Year-to- Date at 6/30/2023	FY 2024			Percent Year-to- Date 12/31/2023	FY 2024 Prorated Amended Budget Less FY 2024 Activity
						FY 2024 AMENDED BUDGET	FY 2024 PRORATED BUDGET (6 MONTHS)	FY 2024 ACTIVITY THRU 12/31/2023		
Entity-wide										
Salaries & Wages	\$ 71,395	\$ 36,126	50.6%	\$ 70,114	51.5%	\$ 74,935	\$ 37,468	\$ 38,533	51.4%	\$ (1,065)
Workforce Development	1,326	637	48.0%	1,414	45.1%	1,392	696	943	67.8%	(247)
Overtime	8,411	4,106	48.8%	8,571	47.9%	7,453	3,727	4,318	57.9%	(592)
Employee Benefits	25,582	12,733	49.8%	24,790	51.4%	28,264	14,132	13,991	49.5%	141
Transition Services	9,432	4,806	51.0%	9,920	48.4%	9,129	4,564	4,651	50.9%	(86)
Employee Benefits Fund	-	-	0.0%	-	0.0%	-	-	-	0.0%	-
Personnel Costs	116,145	58,408	50.3%	114,808	50.9%	121,172	60,586	62,436	51.5%	(1,850)
Electric	47,963	22,961	47.9%	48,176	47.7%	46,769	23,385	25,692	54.9%	(2,307)
Gas	12,042	6,316	52.5%	10,821	58.4%	9,865	4,933	2,942	29.8%	1,990
Sewage Service	3,028	1,258	41.5%	3,052	41.2%	2,873	1,436	1,178	41.0%	259
Water Service	11,589	5,413	46.7%	15,228	35.5%	12,109	6,054	5,865	48.4%	189
Utilities	74,622	35,948	48.2%	77,277	46.5%	71,616	35,808	35,677	49.8%	130
Chemicals	29,525	14,880	50.4%	30,542	48.7%	33,109	16,554	13,913	42.0%	2,641
Supplies & Other	36,163	16,407	45.4%	35,766	45.9%	42,662	21,331	17,710	41.5%	3,621
Contractual Services	106,625	51,355	48.2%	108,725	47.2%	111,763	55,882	55,055	49.3%	827
Capital Program Allocation	(2,135)	(926)	43.4%	(2,190)	42.3%	(4,233)	(2,116)	(1,185)	28.0%	(931)
Shared Services	(1,571)	(620)	39.5%	(3,270)	19.0%	(1,656)	(828)	(1,198)	72.3%	370
Unallocated Reserve	1,497	-	0.0%	-	0.0%	8,796	4,398	-	0.0%	4,398
Total Expenses	\$ 360,870	\$ 175,452	48.6%	\$ 361,658	48.5%	\$ 383,229	\$ 191,614	\$ 182,407	47.6%	\$ 9,207
<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 2023 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, 2023
(\$000)**

	Water	Sewage Disposal	Total Business- type Activities	Comparative June 30, 2023
Assets				
Cash - unrestricted (a)	\$ 150,382	\$ 231,454	\$ 381,837	\$ 482,736
Cash - restricted (a)	290,633	257,676	548,309	470,204
Investments - unrestricted (a)	116,155	113,955	230,111	63,241
Investments - restricted (a)	76,648	152,894	229,541	177,998
Accounts Receivable	83,933	56,613	140,546	171,747
Due from (to) Other Funds (b)	11,561	(11,561)	-	-
Other Assets (c)	660,321	396,950	1,057,271	1,056,956
Cash held FBO DWSD Advance	-	-	-	-
Capital Assets, net of Depreciation	1,180,707	1,930,270	3,110,978	3,229,243
Land	293,617	126,816	420,433	420,433
Construction Work in Process (e)	462,856	326,922	789,778	668,326
Total assets	3,326,814	3,581,990	6,908,804	6,740,885
Deferred Outflows (f)	53,236	105,199	158,435	181,672
Liabilities				
Liabilities - Liabilities-ST	184,109	195,120	379,229	424,229
Due to (from) Other Funds (b)	-	-	-	-
Other Liabilities (h)	2,072	5,611	7,683	7,500
Cash Held FBO DWSD (d)	25,550	36,112	61,663	42,464
Liabilities - Long-Term (i)	3,232,399	3,472,244	6,704,643	6,598,619
Total liabilities	3,444,130	3,709,087	7,153,217	7,072,812
Deferred Inflows (f)	54,753	71,296	126,050	81,327
Total net position (j)	\$ (118,834)	\$ (93,194)	\$ (212,028)	\$ (231,582)

Totals may be off due to rounding

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* during the fiscal year are reported at book value. Investments at June 30, 2023 are reported at market value. The December 31, 2023 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 2023 Financial Report Binder. Prior year ending balances are provided in the June 30, 2023 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, 2023
(\$000)

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- Type Activities	Comparative June 30, 2023
Revenue						
Wholesale customer charges	\$ 174,016	92.9%	\$ 140,601	57.2%	\$ 314,617	\$ 616,511
Local system charges	12,769	6.8%	98,285	40.0%	111,053	213,877
Industrial waste charges		0.0%	4,361	1.8%	4,361	8,393
Pollutant surcharges		0.0%	2,164	0.9%	2,164	4,895
Other revenues	442	0.2%	350	0.1%	792	2,011
Total Revenues	187,227	100.0%	245,761	100.0%	432,988	845,686
Operating expenses						
Operations and Maintenance	78,820	42.1%	104,054	42.3%	182,875	366,823
Depreciation	66,453	35.5%	81,238	33.1%	147,691	289,957
Amortization of intangible assets	1,783	1.0%	220	0.1%	2,003	4,006
Total operating expenses	147,057	78.5%	185,512	75.5%	332,569	660,786
Operating Income	40,170	21.5%	60,248	24.5%	100,418	184,900
Total Nonoperating (revenue) expense	35,144	18.8%	45,720	18.6%	80,864	197,183
Increase/(Decrease) in Net Position	5,026	2.7%	14,528	5.9%	19,554	(12,283)
Net Position (deficit), beginning of year	(123,860)		(107,722)		(231,582)	(219,299)
Net position (deficit), end of year	\$ (118,834)		\$ (93,194)		\$ (212,028)	\$ (231,582)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is \$5.0 million.
- ✓ Wholesale water customer charges of \$174.0 million account for 92.9% of Water System revenues.
- ✓ Operating expenses of \$147.1 million represent 78.5% of total operating revenue. Depreciation is the largest operating expense at \$66.5 million or 45.2% of operating expense.
- ✓ Amortization of intangible assets represents activity for raw water rights.
- ✓ Operating income after operating expenses (including depreciation) equals \$40.2 million or 21.5% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$43.4 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 \$14.5 million.
- ✓ Wholesale customer charges of \$140.6 million account for 57.2% 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 \$98.3 million account for 40.0% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$185.5 million represent 75.5% of total operating revenue. Depreciation is the largest operating expense at \$81.2 million or 43.8% of total operating expense.
- ✓ Amortization of intangible assets represents activity for a warehouse lease.
- ✓ Operating income after operating expenses (including depreciation) equals \$60.2 million or 24.5% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$51.9 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 2023 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, 2023
(\$000)**

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- Type Activities	Percent of Total
Operating Expenses						
Personnel						
Salaries & Wages	14,257	18.1%	29,869	28.7%	44,127	24.1%
Overtime	2,696	3.4%	1,622	1.6%	4,318	2.4%
Benefits	10,045	12.7%	3,946	3.8%	13,991	7.7%
Total Personnel	\$ 26,998	34.3%	\$ 35,438	34.1%	\$ 62,436	34.1%
Utilities						
Electric	16,516	21.0%	9,176	8.8%	25,692	14.0%
Gas	332	0.4%	2,610	2.5%	2,942	1.6%
Sewage	182	0.2%	996	1.0%	1,178	0.6%
Water	1	0.0%	5,864	5.6%	5,865	3.2%
Total Utilities	\$ 17,032	21.6%	\$ 18,645	17.9%	\$ 35,677	19.5%
Chemicals	5,124	6.5%	8,789	8.4%	13,913	7.6%
Supplies and other	5,216	6.6%	12,220	11.7%	17,435	9.5%
Contractual services	27,237	34.6%	29,990	28.8%	57,226	31.3%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(631)	-0.8%	(554)	-0.5%	(1,185)	-0.6%
Intergovernmental Agreement	(1,338)	-1.7%	(92)	-0.1%	(1,430)	-0.8%
Shared services allocation	(816)	-1.0%	(381)	-0.4%	(1,198)	-0.7%
Operations and Maintenance Expenses	\$ 78,820	100.0%	\$ 104,054	100.0%	\$ 182,875	100.0%

Totals may be off due to rounding

- ✓ Core expenses for water and sewage disposal systems are utilities (19.5% of total O&M expenses) and chemicals (7.6% of total O&M expenses).
- ✓ Personnel costs (34.1% of total O&M expenses) include all salaries, wages, and benefits for employees as well as staff augmentation contracts that fill a vacant position (contractual transition services).
- ✓ Contractual services (31.3%) includes:
 - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately \$4.1 million);
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$8.9 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, 2023
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2023
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (12,055)	\$ (7,874)	\$ (19,929)	\$ (41,059)
Investment earnings	(11,854)	(15,113)	(26,967)	(35,344)
Net (incr) decr in fair value of invstmt	(1,305)	(2,617)	(3,921)	(2,257)
Other nonoperating revenue	(171)	(3,036)	(3,207)	(3,872)
Interest Expense				
Bonded debt	55,484	59,781	115,265	228,066
Lease obligation	8,306	10,152	18,459	37,319
Other obligations	2,100	801	2,901	5,906
Total interest expense	65,890	70,735	136,625	271,291
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	-
Capital Contribution	-	-	-	(2,176)
Amortization, issuance costs, debt	(6,528)	2,202	(4,326)	(3,998)
(Gain) loss on disposal of capital assets	(35)	(16)	(51)	2,119
Loss on impairment of capital assets	-	-	-	-
Discontinued Capital Projects	-	-	-	20,903
Water Residential Assistance Program	1,201	1,440	2,641	12,343
Legacy pension expense	-	-	-	(20,765)
Total Nonoperating (Revenue)/Expense	\$ 35,144	\$ 45,720	\$ 80,864	\$ 197,183

- ✓ 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.
- ✓ 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.
- ✓ Net (increase) decrease in fair value of investments consists of market value of investments and realized gain/loss on sale of investments. FY 2022 market value adjustments for Water and Sewer total \$2.8 million and \$3.9 million, respectively. FY 2023 market value adjustments for Water and Sewer total \$1.3 million and \$2.6 million, respectively. Any difference is due to realized gain or loss on investments.

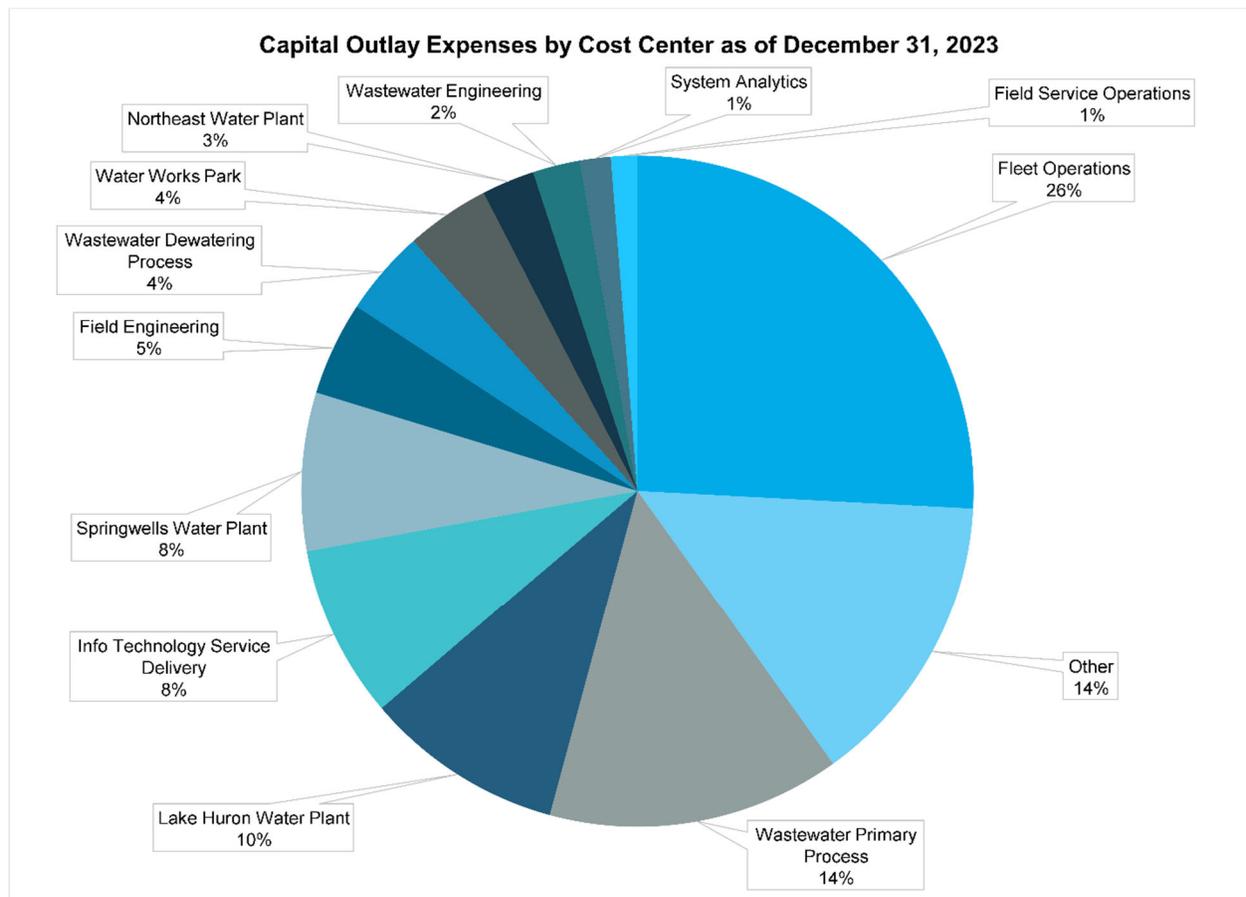
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:
 - Bonded debt;
 - Lease obligation for the regional assets from the City of Detroit; and
 - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to assumed DWSD liabilities; acquisition of raw water rights related to the KWA Pipeline.
- ✓ FY 2024 and FY 2023 other non-operating income primarily represents FEMA Covid-19 grant income for the Water and Sewage Disposal systems.
- ✓ The FY 2023 capital contribution in Nonoperating (revenue) expense represents funds from the Evergreen Farmington Sewer District for a maximum discharge capacity of 227 cubic feet per second (cfs) to the regional sewer system.
- ✓ FY 2023 Sewage Disposal loss on disposal of capital assets includes sale of McKinstry warehouse.
- ✓ For FY 2023, GLWA is recognizing non-operating pension revenue rather than expense as a result of improved investment earnings for the plan.
- ✓ The FY 2023 Discontinued capital projects represents the cancellation of three Water CIP projects to repurpose the Northeast Water Treatment Plant.

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, 2023, total capital outlay spend is \$9.8 million. Following this chart is a sample list of projects and purchases from the total spend of \$9.8 million:



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

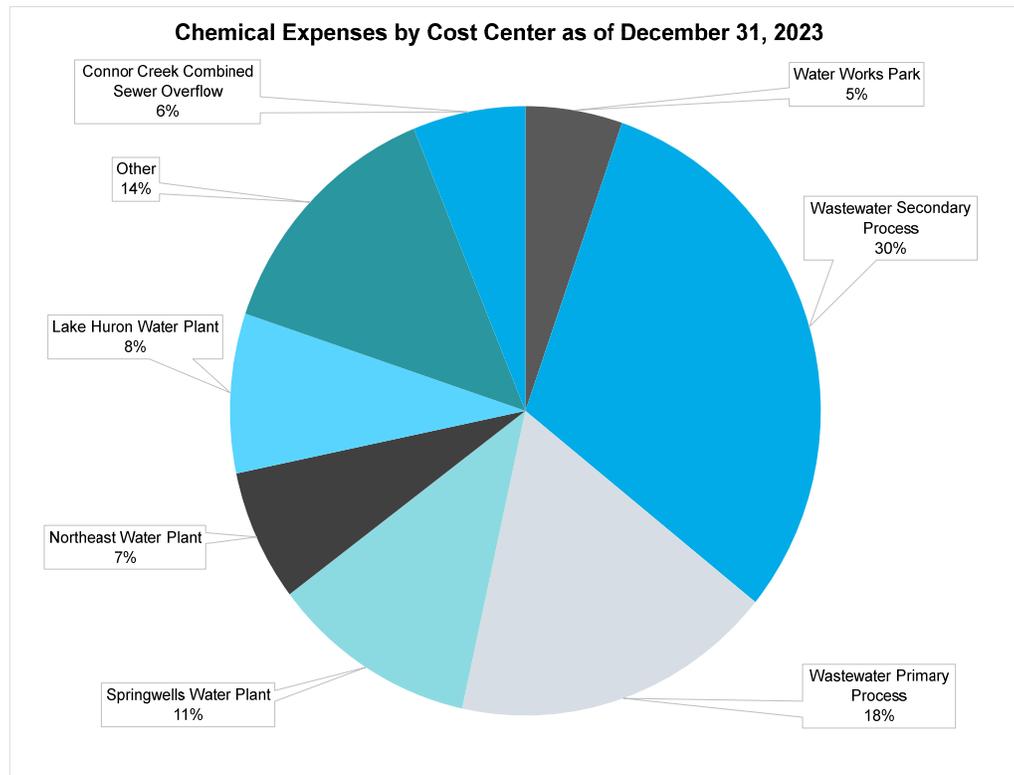
Water Operations: Ovation power supply upgrade (\$884k); Clarifier Drive (\$573k); Water Works Park build out (\$210k); Lake Huron doors and frames (\$210k); Springwells elevator repairs (\$89k); Ozone vessel refurbish (\$84k) and Northeast Water Treatment Plant annual work platform (\$73k).

Wastewater Operations: Magnetic Low Meter Replacement (\$1.0m); Twenty 4” grinders (\$284k); Complex A pump replacement (\$265k); Pump (\$162k); CSO’s system control center support (\$137k); Multiple CSO’s submersible motor (\$92k); STACO energy first line universal power supply (\$91k); Complex A sanitary and stormwater pump station (\$86k); WRRF EV charging stations (\$80k); Flow meter (\$80k); Chlorination scrubber pump (\$70k); Incineration C-11 Building freight elevator (\$70k); Submersible chopper pump (\$68k); 7 mile CSO influent slide gate replacement (\$59k) and multiple CSO actuator replacement (\$49k).

Centralized & Administrative Facilities: Trucks and vehicles (\$2.4m); Computer hardware and software (\$834k); Sewer meter support (\$111k); Forklift (\$86k); WRRF furniture and supplies (\$82k); Database support (\$63k); Probe (\$58k) and Water Board Building furniture and supplies (\$51k).

Chart 2 – Chemical Expenses – Water and Sewer System Combined

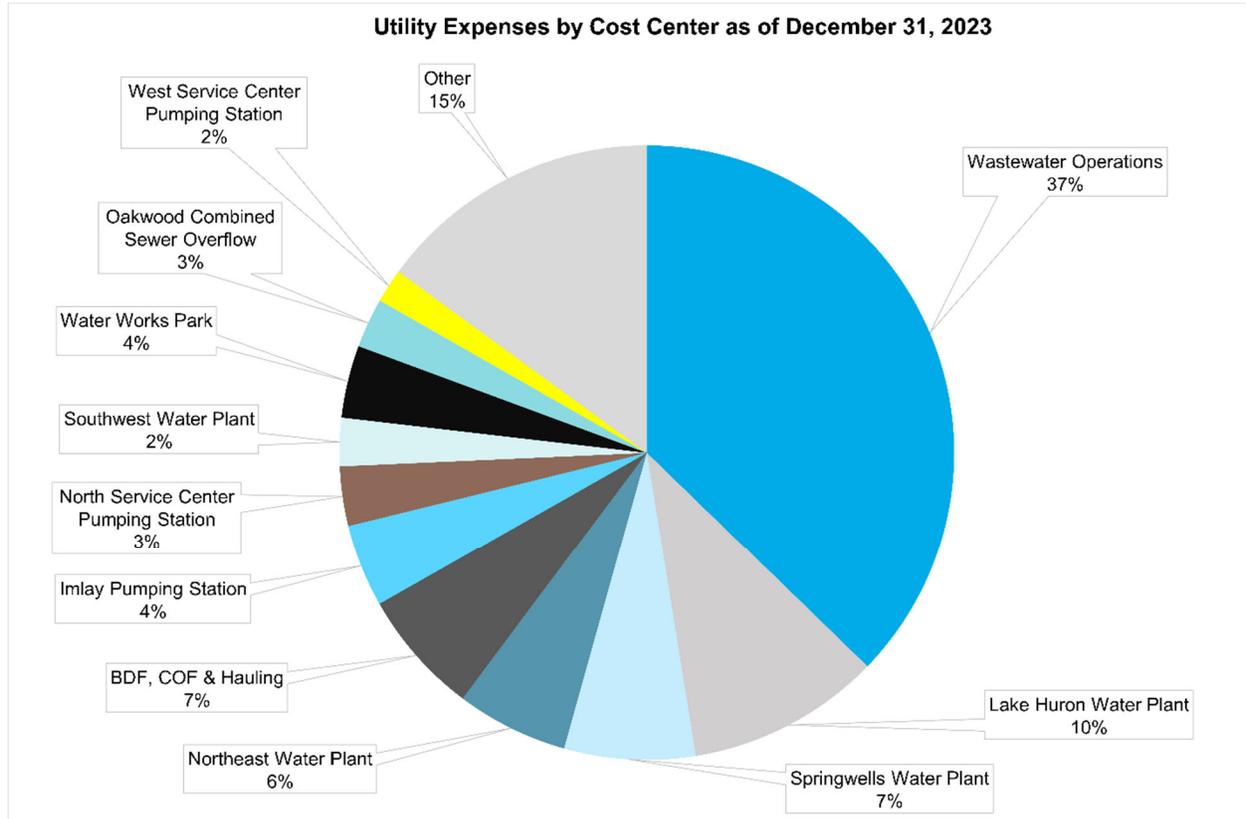
Chemical expenses are \$13.9 million through December 31, 2023. The allocation is shown in the chart below and remains consistent with prior periods.



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 \$35.7 million through December 31, 2023. 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, 2023 all reconciliations are up-to-date and complete.

There were 4 new accounts added in the general ledger since November 2023.

Chart 1 – Bank Reconciliation Completion Status

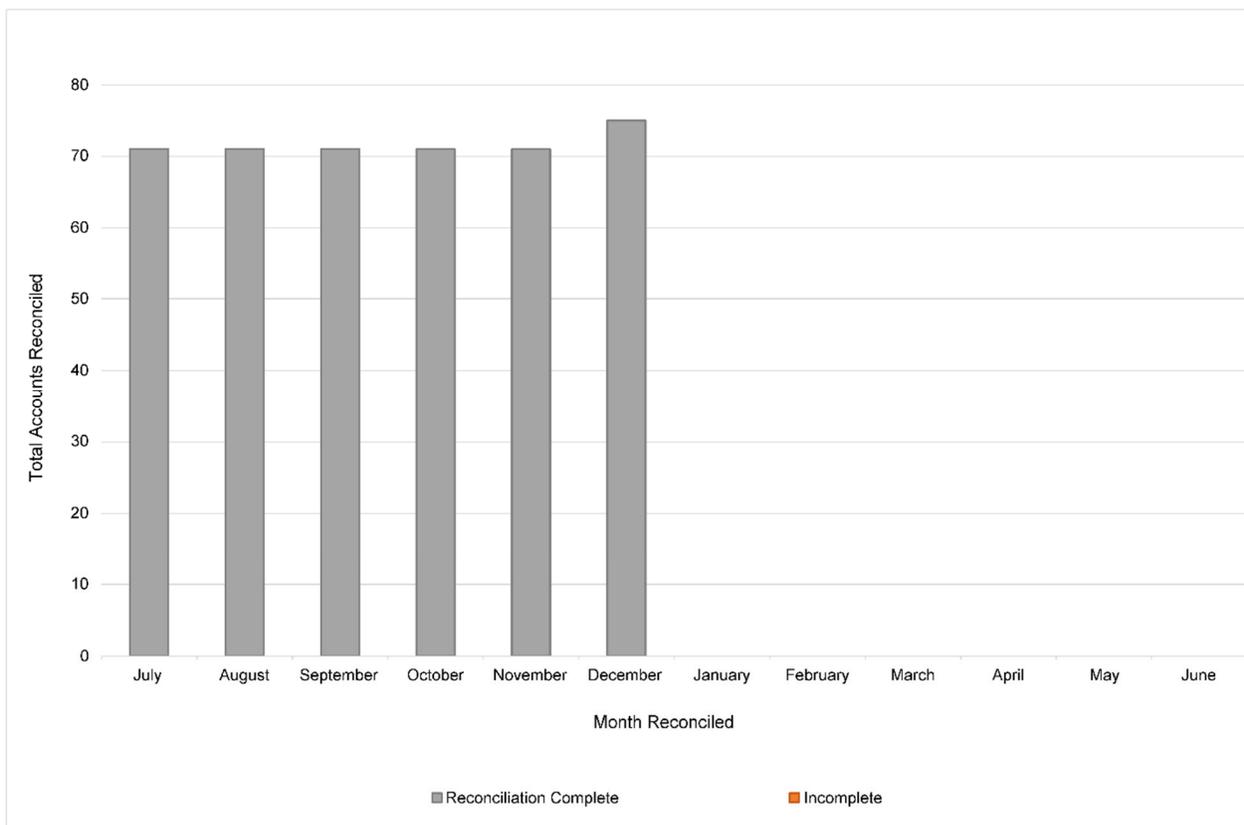


Table 1 – Fiscal Year 2024 GL Cash Account Rollforward

Total GL Cash accounts as of July 1, 2023	71
New GL Cash accounts	4
Inactivated GL Cash accounts	0
Total GL Cash accounts as of December 31, 2023	75

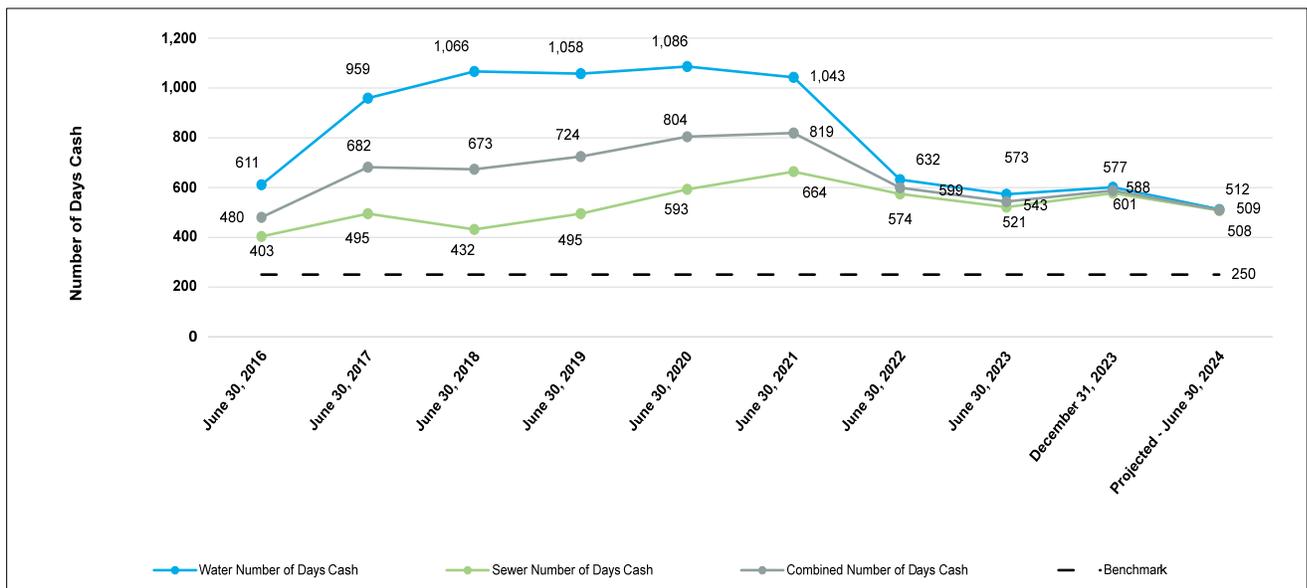


Financial Operations KPI - Liquidity

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 601 and Sewer at 577 days cash on hand as of December 31, 2023. These balances remain strong for the regional system but did decrease in FY 2022 as I&E funds were used as planned to fund capital improvement projects. A December 2023 revenue bond transaction replenished the construction bond funds and reduced the emphasis on I&E funding. The FY 2024 projection is calculated based on values from the GLWA FY 2024 – 2028 Budget & Five-Year Plan adjusted for 1st quarter budget amendments.

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, 2023</u>	<u>December 31, 2023</u>	<u>Projected June 30, 2024</u>
Water Fund			
Cash and Investments - Unrestricted	\$ 243,707,000	\$ 266,538,000	\$ 228,800,000
Operating Expense			
Operating Expense (a)	\$ 285,220,000	\$ 152,184,000	\$ 304,367,000
Less: Depreciation (a)	(126,486,000)	(68,850,000)	(137,700,000)
Less: Amortization of Intangible Asset (a)	(3,567,000)	(1,783,000)	(3,567,000)
Net Operating Expense	\$ 155,167,000	\$ 81,550,000	\$ 163,101,000
Operating Expense per Day	\$ 425,000	\$ 443,000	\$ 447,000
Days Cash			
Number of Days Cash	573	601	512
Sewage Disposal Fund			
Cash and Investments - Unrestricted	\$ 302,270,000	\$ 345,410,000	\$ 306,100,000
Operating Expense			
Operating Expense (a)	\$ 375,567,000	\$ 192,814,000	\$ 385,628,000
Less: Depreciation (a)	(163,471,000)	(82,750,000)	(165,500,000)
Less: Amortization of Intangible Asset (a)	(440,000)	-	-
Net Operating Expense	\$ 211,657,000	\$ 110,064,000	\$ 220,128,000
Operating Expense per Day	\$ 580,000	\$ 598,000	\$ 603,000
Days Cash			
Number of Days Cash	521	577	508
Combined			
Cash and Investments - Unrestricted	\$ 545,977,000	\$ 611,947,000	\$ 534,900,000
Operating Expense			
Operating Expense (a)	\$ 660,787,000	\$ 344,998,000	\$ 689,996,000
Less: Depreciation (a)	(289,957,000)	(151,600,000)	(303,200,000)
Less: Amortization of Intangible Asset (a)	(4,006,000)	(1,783,000)	(3,567,000)
Net Operating Expense	\$ 366,824,000	\$ 191,614,000	\$ 383,229,000
Operating Expense per Day	\$ 1,005,000	\$ 1,041,000	\$ 1,050,000
Days Cash			
Number of Days Cash	543	588	509
<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, 2023**

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 5,592	\$ 7,378	\$ 12,970
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	1,260	2,255	3,515
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	36,312	62,257	98,569
Accelerated pension B&C notes obligation portion (g)	107	241	348
Regional System lease (h)	2,944	3,598	6,542
GASB 87 & GASB 96 adjustments (h)	1,324	205	1,528
WRAP (i)	(275)	(188)	(463)
Extraordinary Repair & Replacement Fund transfers (j)	-	-	-
Improvement & Extension Fund transfers (j)	13,862	14,338	28,200
Nonbudgeted financial reporting categories adjustments			
Depreciation and amortization (k)	(68,236)	(81,458)	(149,694)
Amortization - debt related (k)	6,528	(2,202)	4,326
Other nonoperating income (k)	-	2,866	2,866
Other nonoperating expense (k)	-	-	-
Gain(loss) on disposal of capital assets (k)	35	16	51
Raw water rights obligation (l)	1,466	-	1,466
Investment earnings for construction fund (m)	3,311	4,149	7,460
Interest on DWSD note receivable (n)	-	-	-
Investment earnings unrealized gain/loss (o)	1,305	2,617	3,922
Improvement & extension fund operating expenses (p)	(509)	(1,544)	(2,053)
Capital Contribution (q)	-	-	-
Net Position Increase/(Decrease) per Financial Statements (b)	\$ 5,026	\$ 14,528	\$ 19,554

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) Payments for the warehouse lease and subscription-based information technology arrangements (SBITA) are expensed for budget purposes. For financial reporting purposes, the warehouse lease is recorded under GASB 87 and payments are treated as a reduction in the lease liability and interest expense (which is a nonoperating expense). The SBITA payments are recorded under GASB 96 and are treated as a prepaid subscription asset as the software is currently in the implemented phase.
- (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 Improvement & Extension Fund and Extraordinary Repair & Replacement Fund transfers are shown as an expense for budget purposes but not for financial reporting purposes.
- (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 for 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 purposes the Flint wholesale charges are recorded as 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 a 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. DWSD does not currently have a note receivable due to GLWA.
- (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) The Water Improvement and Extension fund and the Sewer Improvement and Extension fund reflect certain 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.



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 (Board) 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. For FY 2024 the original Board approved capital spend rate was 100%. The prorated CIP is calculated by dividing the total fiscal year 2024 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.

Capital spend reflects a noticeable variance from budgeted CIP for both the water and sewer funds. For the purposes of this metric, we compare actual spend with the Board-approved budget. For the purposes of managing the financial plan, budget amendments are made to align spending with resources available. First quarter FY 2024 budget amendments were approved by the Board of Directors January 24, 2024.

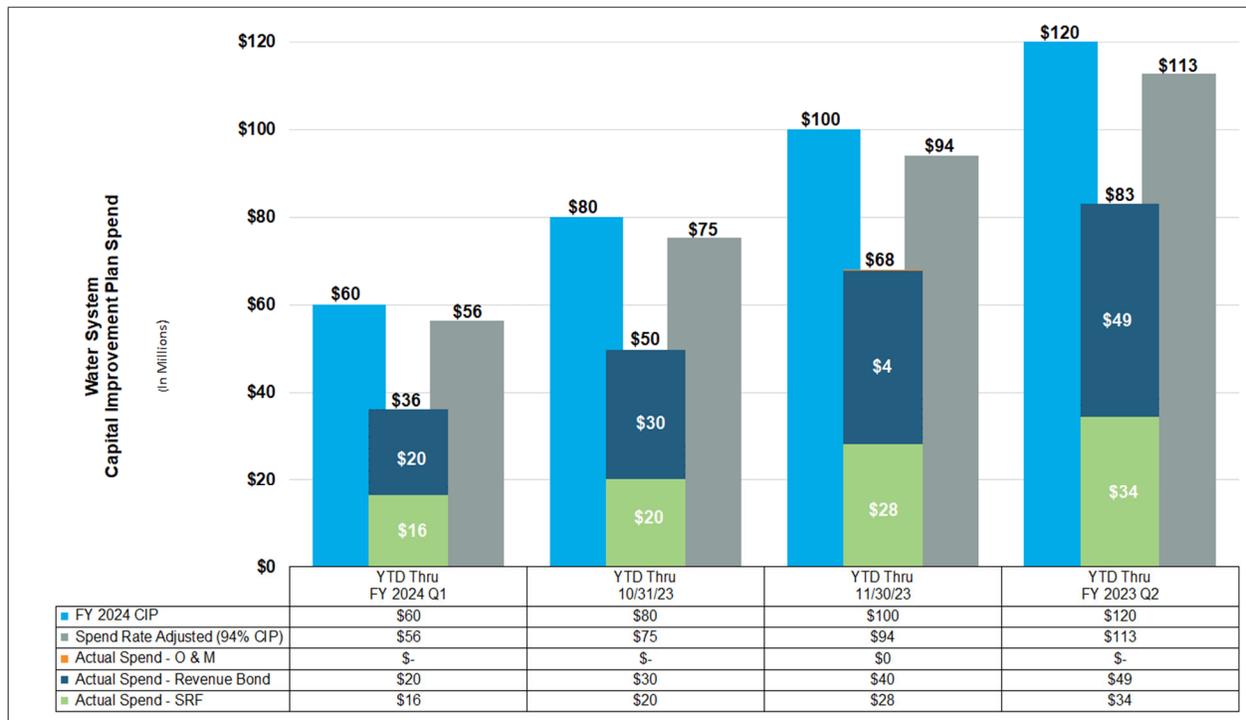
Chart 1 – Water System Capital Improvement Plan Spend Incurred to Date

As of December 2023, the water system incurred \$83 million of construction costs to date. This spend represents 69% of the original Board approved FY 2024 CIP plan and 74% of the spend rate adjusted.

Economic factors affecting the CIP spend are considered by the Board quarterly at which time the Board may amend the planned spend rate adjusted.

Effective December 2023, GLWA staff presented to the Audit Committee a recommendation to amend the spend rate adjusted for the water system from 100% to 94%. This recommended change was approved by the full Board of Directors in January 2024 and is reflected in Chart 1 below. Current water system spend represents 74% of that spend rate adjusted.

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



All amounts are unaudited unless otherwise noted.

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

As of December 2023, the Sewer system incurred \$58 million of construction costs to date. This spend represents 58% of the original Board approved FY 2024 CIP plan and 69% of the spend rate adjusted.

Economic factors affecting the CIP spend are considered by the Board quarterly at which time the Board may amend the planned spend rate adjusted.

Effective December 2023, GLWA staff presented to the Audit Committee a recommendation to amend the spend rate adjusted for the sewer system from 100% to 82.9%. This recommended change was approved by the full Board of Directors in January 2024 and is reflected in Chart 2 below. Current sewer system spend represents 69% of that Board approved spend rate adjusted.

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



All amounts are unaudited unless otherwise noted.



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. If there are transfers to the Extraordinary Repair & Replacement (ER&R) fund they would be completed annually based on budget and year-end fund status.

As of June 30, 2023, GLWA and DWSD have meet the requirements of the Plan of Adjustment requiring contributions to the Detroit General Retirement System (GRS) pension plan through Operational and Maintenance Pension sub-accounts. GLWA and DWSD staff monitor the remaining pension obligation closely. Budgeted, annual contributions toward that remaining obligation, at this time identified as limited administrative fee contributions, are transferred to the Pension Obligation Payment fund and reflected in the reported activity found here.

Table 1 – GLWA FY 2024 Water MBO Transfers reflects the required transfers for FY 2024 completed through December 2023. MBO transfers for water totaling \$80.7 million have been transferred to GLWA accounts.

Table 2 – GLWA FY 2024 Sewer MBO Transfers reflects the required transfers for FY 2024 completed through December 2023. MBO transfers for sewer totaling \$108.8 million have been transferred to GLWA accounts.

Table 3 – GLWA MBO Transfer History reflects historical transfers for FY 2016 through FY 2024 to date.

Table 1 – GLWA FY 2024 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 2024							
July 2023	\$ 12,742,200	\$ -	\$ 482,808	\$ 225,850	\$ -	\$ -	\$ 13,450,858
August 2023	12,742,200	-	482,808	225,841	-	-	13,450,849
September 2023	12,742,200	-	482,808	225,841	-	-	13,450,849
October 2023	12,742,200	-	482,808	225,841	-	-	13,450,849
November 2023	12,742,200	-	482,808	225,841	-	-	13,450,849
December 2023	12,742,200	-	482,808	225,841	-	-	13,450,849
January 2024							
February 2024							
March 2024							
April 2024							
May 2024							
June 2024							
Total FY 2024	\$ 76,453,200	\$ -	\$ 2,896,848	\$ 1,355,055	\$ -	\$ -	\$80,705,103

Table 2 – GLWA FY 2024 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 2024							
July 2023	\$ 17,136,975	\$ -	\$ 682,459	\$ 319,700	\$ -	\$ -	\$ 18,139,134
August 2023	17,136,975	-	682,459	319,700	-	-	18,139,134
September 2023	17,136,975	-	682,459	319,700	-	-	18,139,134
October 2023	17,136,975	-	682,459	319,700	-	-	18,139,134
November 2023	17,136,975	-	682,459	319,700	-	-	18,139,134
December 2023	17,136,975	-	682,459	319,700	-	-	18,139,134
January 2024							
February 2024							
March 2024							
April 2024							
May 2024							
June 2024							
Total FY 2024	\$ 102,821,850	-	\$4,094,754	\$1,918,200	\$ -	\$ -	\$108,834,804

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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	143,933,800	6,048,000	10,695,700	2,376,600	-	-	163,054,100
Total FY 2023	156,747,700	6,048,000	10,695,700	2,611,800	-	2,200,000	178,303,200
Total FY 2024 (year to date)	76,453,200	-	2,896,848	1,355,055	-	-	80,705,103
Life to Date	\$1,064,159,012	\$ 48,362,300	\$ 87,665,423	\$ 18,929,359	\$ 2,686,900	\$ 2,806,000	\$1,224,608,994

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	191,908,600	10,824,000	14,687,400	3,868,700	-	-	221,288,700
Total FY 2023	204,122,500	10,824,000	14,687,400	3,673,800	-	-	233,307,700
Total FY 2024 (year to date)	102,821,850	-	4,094,754	1,918,200	-	-	108,834,804
Life to Date	\$1,521,957,942	\$ 86,620,800	\$ 120,272,163	\$ 26,921,896	\$ 8,246,100	\$ 779,600	\$1,764,798,501

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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 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.

As of June 30, 2023, GLWA and DWSD have met the requirements of the Plan of Adjustment requiring contributions to the Detroit General Retirement System (GRS) pension plan through Operational and Maintenance Pension sub-accounts. GLWA and DWSD staff monitor the remaining pension obligation closely. Budgeted, annual contributions toward that remaining obligation, at this time identified as limited administrative fee contributions, are transferred to the Pension Obligation Payment fund and reflected in the reported activity found here.

Table 4 – DWSD FY 2024 Water MBO Transfers reflects the required transfers for FY 2024 completed through December 2023. MBO transfers for Water totaling \$33.6 million have been transferred to accounts held by DWSD.

Table 5 – DWSD FY 2024 Sewer MBO Transfers reflects the required transfers for FY 2024 completed through December 2023. MBO transfers for Sewer totaling \$41.6 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 2024 to date.

Table 7 – DWSD Sewer MBO and Lease Payment Transfer History reflects historical transfers for FY 2016 through FY 2024 to date.

Table 4 – DWSD FY 2024 Water MBO Transfers

WATER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Water</u>
FY 2024				
July 2023	\$ 3,731,400	\$ -	\$ 1,875,000	\$ 5,606,400
August 2023	3,731,400	-	1,875,000	5,606,400
September 2023	3,731,400	-	1,875,000	5,606,400
October 2023	3,731,400	-	1,875,000	5,606,400
November 2023	3,731,400	-	1,875,000	5,606,400
December 2023	3,731,400	-	1,875,000	5,606,400
January 2024				
February 2024				
March 2024				
April 2024				
May 2024				
June 2024				
Total FY 2024	\$ 22,388,400	-	\$ 11,250,000	\$ 33,638,400

Table 5 – DWSD FY 2024 Sewer MBO Transfers

SEWER				
	<u>Operations & Maintenance</u>	<u>Pension</u>	<u>Lease Payment (I&E Fund)</u>	<u>Total Sewer</u>
FY 2024				
July 2023	\$ 4,642,142	\$ -	\$ 2,291,667	\$ 6,933,809
August 2023	4,642,142	-	2,291,667	6,933,809
September 2023	4,642,142	-	2,291,667	6,933,809
October 2023	4,642,142	-	2,291,667	6,933,809
November 2023	4,642,142	-	2,291,667	6,933,809
December 2023	4,642,142	-	2,291,667	6,933,809
January 2024				
February 2024				
March 2024				
April 2024				
May 2024				
June 2024				
Total FY 2024	\$ 27,852,852	-	\$ 13,750,002	\$ 41,602,854

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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				
MBO/Lease Requirement	29,989,000	4,272,000	22,500,000	56,761,000
Offset to Debt Service	-	-	(8,925,400)	(8,925,400)
Net MBO Transfer	29,989,000	4,272,000	13,574,600	47,835,600
FY 2023				
MBO/Lease Requirement	42,581,600	4,272,000	22,500,000	69,353,600
Offset to Debt Service	-	-	(2,922,100)	(2,922,100)
Net MBO Transfer	42,581,600	4,272,000	19,577,900	66,431,500
FY 2024 (year to date)				
MBO/Lease Requirement	18,657,000	-	11,250,000	29,907,000
Offset to Debt Service	-	-	(1,875,000)	(1,875,000)
Net MBO Transfer	18,657,000	-	9,375,000	28,032,000
Life-to-Date				
MBO/Lease Requirement	292,049,904	34,157,100	191,250,000	517,457,004
Offsets	-	-	(33,722,900)	(33,722,900)
Total Water	292,049,904	34,157,100	157,527,100	483,734,104

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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				
MBO/Lease Requirement	61,301,000	2,856,000	27,500,000	90,735,453
Offset to Debt Service	-	-	(5,529,297)	(4,607,750)
Total MBO Transfer	61,301,000	2,856,000	21,970,703	86,127,703
FY 2023				
MBO/Lease Requirement	51,396,400	2,856,000	27,500,000	81,752,400
Offset to Debt Service	-	-	(4,388,300)	(4,388,300)
Total MBO Transfer	51,396,400	2,856,000	23,111,700	77,364,100
FY 2024 (year to date)				
MBO/Lease Requirement	23,210,710	-	11,458,335	34,669,045
Offset to Debt Service	-	-	-	-
Total MBO Transfer	23,210,710	-	11,458,335	34,669,045
Life-to-Date				
MBO/Lease Requirement	446,763,122	22,859,800	231,458,335	700,159,710
Offsets	(7,100,000)	-	(51,780,661)	(57,959,114)
Total Sewer	439,663,122	22,859,800	179,677,674	642,200,596

* 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

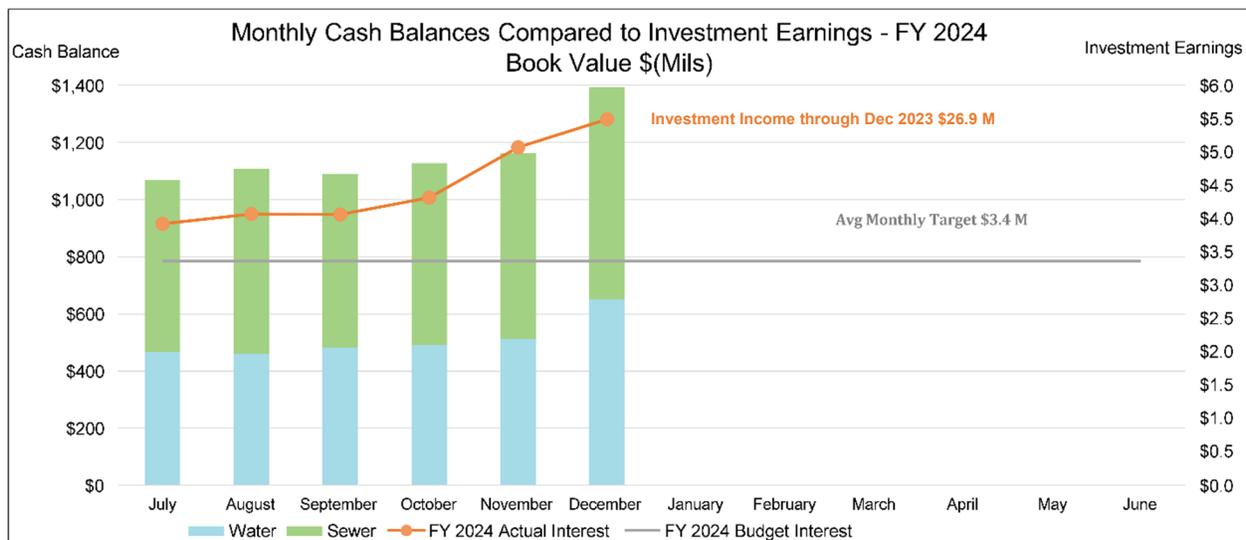
Monthly Cash Balances Compared to Investment Income

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 2023, GLWA earned investment income of \$5.5 million and cumulative FY 2024 earnings through December 2023 of \$26.9 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 2023



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$466	\$459	\$481	\$492	\$513	\$651	-	-	-	-	-	-
Sewer	\$602	\$649	\$609	\$635	\$650	\$743	-	-	-	-	-	-
Total	\$1,068	\$1,107	\$1,090	\$1,127	\$1,162	\$1,393	-	-	-	-	-	-
Investment Income	\$3.9	\$4.1	\$4.1	\$4.3	\$5.1	\$5.5	-	-	-	-	-	-

All amounts are unaudited unless otherwise noted.

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:

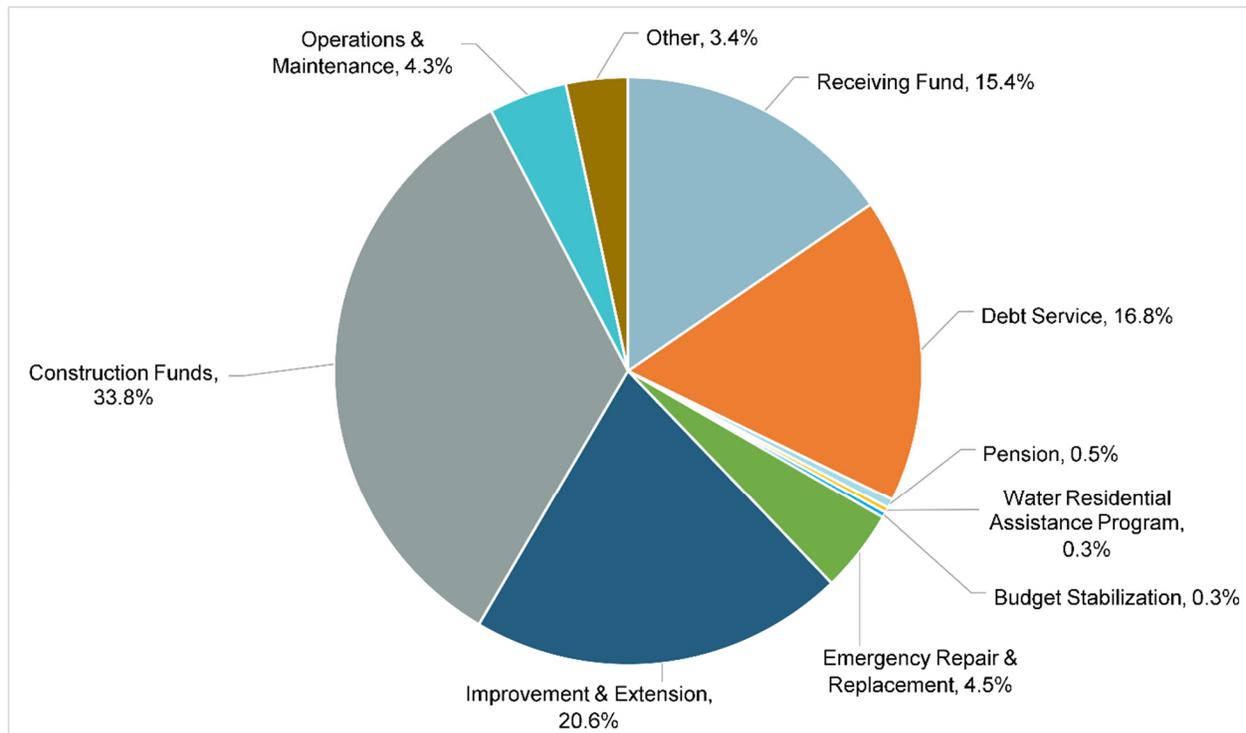
- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors, security deposit funds held on behalf of the City of Flint, and capital contribution funds provided by the Evergreen Farmington Sewer District recognized as related project work is completed

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 2023 - 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, 2023 is \$651 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.

GLWA completed a bond transaction of \$148.5 million in December 2023 to support water system improvements. These funds along with I&E and SRF low-interest loans are funding the capital program.

Chart 2 – Cash Balances - Water Funds as of December 2023

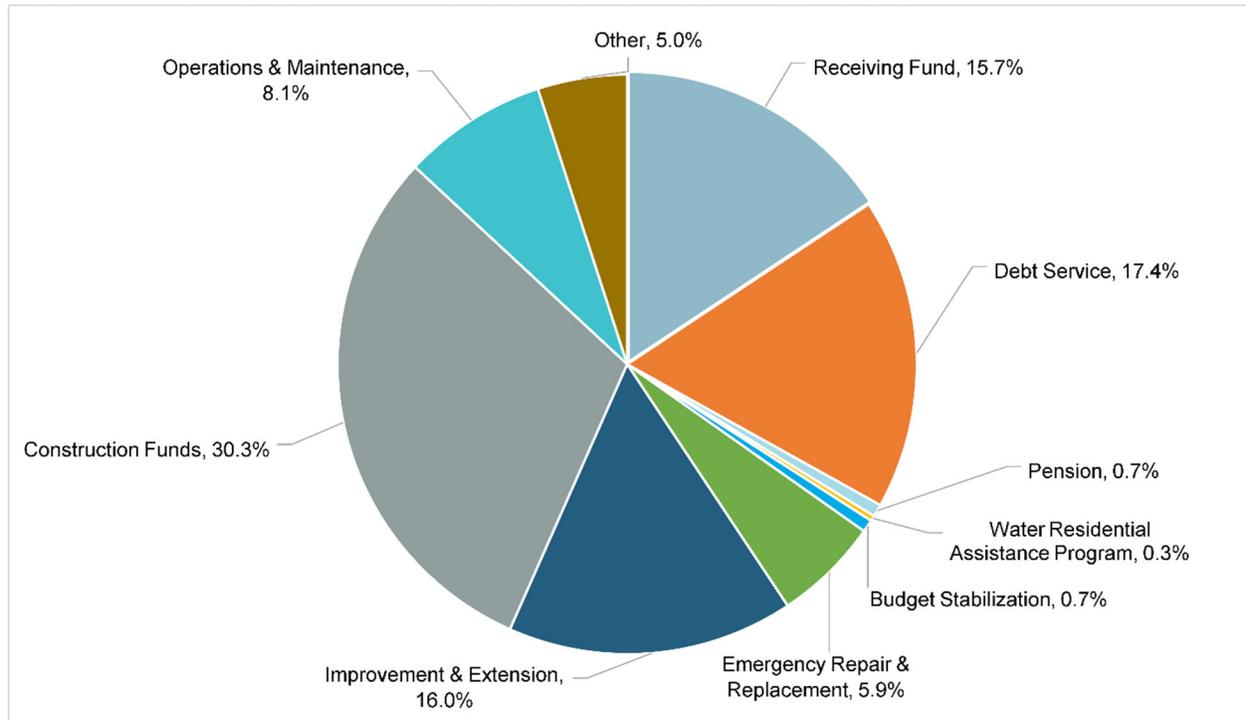


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of December 2023 - 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, 2023 is \$743 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.

In conjunction with the Water Fund transaction, GLWA completed a bond transaction of \$96.8 million in December 2023 to support sewage disposal system improvements. These funds along with I&E and SRF low-interest loans are currently funding the capital program.

Chart 3 – Cash Balances - Sewer Funds as of December 2023



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 2024 water usage and billed revenue which are provided by DWSD staff. As of December 31, 2023, the DWSD usage was at 102.01% of the budget and billed revenue was at 102.68% 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 2024 - Original Budget		FY 2024 - Actual		FY 2024 - Variance		FY 2023 - Actuals	
	Volume	Revenue	Volume	Revenue (2)	Volume	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	239,000	12,068,200	248,307	12,606,397	9,307	538,197	244,749	9,490,589
August	237,000	11,985,000	255,079	12,913,868	18,079	928,868	277,313	13,301,941
September	246,000	12,236,000	214,796	11,119,261	(31,204)	(1,116,739)	234,806	11,591,601
October	216,000	11,118,000	222,908	11,409,427	6,908	291,427	239,062	11,730,809
November	205,000	10,664,000	210,687	10,898,684	5,687	234,684	212,663	10,706,519
December	196,000	10,293,000	214,139	11,246,818	18,139	953,818	222,502	11,073,513
January	197,000	10,334,000					227,748	11,257,742
February	208,000	10,788,000					208,568	10,569,468
March	191,000	10,086,000					229,264	11,383,630
April	214,000	11,036,000					198,665	10,121,640
May	186,000	10,000,000					241,525	11,820,301
June	225,000	11,489,000					257,749	12,567,250
Total	2,560,000	132,097,200	1,365,916	70,194,455	26,916	1,830,255	2,794,614	135,615,003
Subtotals ytd	1,339,000	68,364,200	1,365,916	70,194,455	26,916	1,830,255		
Achievement of Budget			102.01%	102.68%				

(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	8,857,268	6,919,040	1,938,228	28.01%
February	8,244,713	10,156,126	(1,911,413)	-18.82%
March	10,417,832	11,093,125	(675,293)	-6.09%
April	9,417,449	7,431,900	1,985,549	26.72%
May	12,162,719	7,660,852	4,501,867	58.76%
June	13,467,858	9,123,179	4,344,679	47.62%
July	5,943,286	8,518,373	(2,575,087)	-30.23%
August	11,794,131	9,636,219	2,157,912	22.39%
September	9,790,065	5,082,383	4,707,682	92.63%
October	9,884,937	13,082,745	(3,197,808)	-24.44%
November	10,499,606	10,270,582	229,024	2.23%
December	13,663,688	11,630,994	2,032,694	17.48%
Rolling, 12-Month Total	124,143,551	110,605,518		
Rolling, 12-Month Average	10,345,296	9,217,127		

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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 2024 sewer billed revenue which are provided by DWSD staff. As of December 31, 2023, the DWSD usage was at 99.35% of the budget and billed revenue was at 98.08% 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 2024 - Original Budget		FY 2024 - Actual		FY 2024 - Variance		FY 2023 - Actuals	
	Volume	Revenue	Volume (2)	Revenue (3)	Volume	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	200,000	29,187,700	207,574	29,192,723	7,574	5,023	223,661	29,297,748
August	199,000	29,128,000	211,503	29,278,720	12,503	150,720	231,809	29,640,202
September	203,000	29,340,000	178,576	27,476,376	(24,424)	(1,863,624)	197,455	27,523,933
October	182,000	28,119,000	184,383	27,700,095	2,383	(418,905)	194,154	27,375,180
November	172,000	27,526,000	175,498	26,939,338	3,498	(586,662)	172,579	26,525,064
December	165,000	27,111,000	156,164	26,546,712	(8,836)	(564,288)	174,896	26,676,360
January	166,000	27,170,000					175,562	26,403,544
February	175,000	27,704,000					160,804	25,814,735
March	161,000	26,873,000					181,217	26,720,229
April	179,000	27,941,000					167,727	26,120,878
May	160,000	26,839,000					195,191	27,508,373
June	188,000	28,475,000					206,163	28,018,277
Total	2,150,000	335,413,700	1,113,698	167,133,964	(7,302)	(3,277,736)	2,281,218	327,624,524
Subtotals ytd	1,121,000	170,411,700	1,113,698	167,133,964	(7,302)	(3,277,736)		
Achievement of Budget/Goal			99.35%	98.08%				

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

(2) Reflects billed volume based on actual usage except for residential customers where the billed volume differs from actual usage due to residential sewer volume caps implemented in FY 2023.

(3) Retail Revenues include Miscellaneous Revenues and Penalties

Table 4 – DWSD Retail Sewer Collections

Sewer				
Month	Current Year	Prior Year	Variance	Ratio
January	23,760,629	23,020,491	740,138	3.22%
February	23,867,073	24,495,922	(628,849)	-2.57%
March	30,697,464	29,410,086	1,287,378	4.38%
April	21,542,671	22,115,076	(572,405)	-2.59%
May	24,419,561	20,952,592	3,466,969	16.55%
June	23,769,626	25,922,279	(2,152,653)	-8.30%
July	32,379,222	30,935,343	1,443,879	4.67%
August	25,391,891	26,064,896	(673,005)	-2.58%
September	23,489,448	15,261,467	8,227,981	53.91%
October	21,610,149	28,182,933	(6,572,784)	-23.32%
November	25,951,736	21,994,899	3,956,838	17.99%
December	23,249,973	23,756,153	(506,180)	-2.13%
Rolling 12-Month Total	300,129,445	292,112,137		
Rolling, 12-Month Average	25,010,787	24,342,678		

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 monthly sales, total receivables, bad debt allowance and net water and sewer receivables as of December 31, 2023 with comparative totals from June 30, 2023, June 30, 2022, and June 30, 2021. This table does not include past due accounts that have been transferred to the City of Detroit for collection as tax liens.

The table provides a comparison of days in accounts receivable calculated as net receivables divided by daily sales and confirms that over time days in AR is held in check overall due to a consistent practice of adjusting the allowance for doubtful accounts monthly. To the extent this allowance is adjusted, and bad debt expense is recognized in the DWSD budget, it does not impact GLWA.

Table 6 is a summary of the total, current and non-current water and sewer receivables by category as of December 31, 2023 with comparative totals from December 31, 2022. This table does not include past due accounts that have been transferred to the City of Detroit for collection as tax liens.

The total balance and total bad debt allowance as of December 31, 2023 are reflective of the values in both the Table 5 summary and Table 6 breakdown.

Table 5 – DWSD Retail Accounts Receivable Aging Report – Summary

Summary						
Period Ending	Monthly Sales	Receivables			Days in AR (1)	
		Total	Allowance	Net		
June 30, 2021	\$ 36,335,000	\$ 248,055,000	\$ (200,146,000)	\$ 47,909,000	40	
June 30, 2022	\$ 39,022,000	\$ 300,346,000	\$ (253,924,000)	\$ 46,422,000	36	
June 30, 2023	\$ 39,443,000	\$ 327,023,000	\$ (272,012,000)	\$ 55,011,000	42	
December 31, 2023 (2)	\$ 37,249,000	\$ 296,031,000	\$ (237,164,000)	\$ 58,867,000	47	

Totals may be off due to rounding

(1) Days in AR is calculated as net receivables divided by daily sales (monthly sales/30 days).

(2) The annual AR Tax Roll Transfer totaling \$22,892,000 was made in October 2023.

Table 6 – DWSD Retail Accounts Receivable Aging Report – Water & Sewer Combined

Sales Class	# of Accounts	Avg. Balance	Current	> 30 Days	> 60 Days	> 180 Days	A/R Balance
Residential	216,797	\$ 845.12	\$ 11,724,000 6.4%	\$ 11,375,000 6.2%	\$ 34,910,000 19.1%	\$ 125,210,000 68.3%	\$ 183,220,000 100.0%
Commercial	21,376	1,161.14	7,058,000 28.4%	2,388,000 9.6%	6,459,000 26.0%	8,916,000 35.9%	24,821,000 100.0%
Industrial	3,675	3,420.30	5,320,000 42.3%	943,000 7.5%	2,192,000 17.4%	4,114,000 32.7%	12,570,000 100.0%
Tax Exempt	3,791	627.16	562,000 23.6%	215,000 9.0%	528,000 22.2%	1,072,000 45.1%	2,378,000 100.0%
Government	47,740	417.52	4,346,000 21.8%	1,596,000 8.0%	2,573,000 12.9%	11,418,000 57.3%	19,932,000 100.0%
Drainage	45,146	555.93	2,345,000 9.3%	1,401,000 5.6%	4,363,000 17.4%	16,989,000 67.7%	25,098,000 100.0%
Subtotal - Active Accounts	338,525	\$ 791.72	\$ 31,354,000 11.7%	\$ 17,919,000 6.7%	\$ 51,024,000 19.0%	\$ 167,720,000 62.6%	\$ 268,018,000 100.0%
Inactive Accounts	344,950	81.21	121,000 0.4%	149,000 0.5%	1,202,000 4.3%	26,541,000 94.7%	28,013,000 100.0%
Total	683,475	\$ 433.13	\$ 31,476,000	\$ 18,068,000	\$ 52,225,000	\$ 194,262,000	\$ 296,031,000
<i>% of Total A/R</i>			10.6%	6.1%	17.6%	65.6%	100.0%
Water Fund	254,309	226.31	\$ 5,483,000	\$ 4,634,000	\$ 13,456,000	\$ 33,980,000	\$ 57,552,000
Sewer Fund	287,427	829.70	\$ 25,993,000	\$ 13,435,000	\$ 38,770,000	\$ 160,281,000	\$ 238,478,000
Total December 31, 2023 (a)	683,475	\$ 433.13	\$ 31,476,000	\$ 18,068,000	\$ 52,225,000	\$ 194,262,000	\$ 296,031,000
Water Fund- Allowance							\$ (44,935,000)
Sewer Fund- Allowance							\$ (192,229,000)
Total Bad Debt Allowance							\$ (237,164,000)
Comparative - December 2022 (b)	659,101	\$ 475.84	\$ 32,457,000	\$ 18,032,000	\$ 47,552,000	\$ 215,586,000	\$ 313,627,000
Difference (a) - (b)	24,374		\$ (981,000)	\$ 37,000	\$ 4,673,000	\$ (21,324,000)	\$ (17,596,000)

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024



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	84
Emergency	1
Older Contracts	<u>2</u>
Total	<u>87</u>

Note: Services are provided to the Detroit Water & Sewerage Department (DWSD) via a Water and Sewer Services Agreement (WSSA). See the “Retail Revenues, Receivables, and Collections Report” section of this monthly report.

Wholesale Water Billing Basis: Beginning with FY 2016, wholesale water charges were restructured to create a more stable revenue stream by using a historical rolling average to project customer volumes which accounts for 40% of the monthly charges and 60% of the annual customer revenue requirement as a monthly fixed charge.

Table 1 - Wholesale Water Billings shows the FY 2024 water billed usage and revenues. As of December 31, 2023, the billed usage was at 93.56% of the original plan and billed revenue at 97.34% of the original plan. Billings and usage from the City of Flint are included as they were assumed in the FY 2024 Budget.

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

Table 2 - Wholesale Water Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods. Current year collections are trending below the prior year for the twelve-month period ending December 31, 2023.



Table 1 – FY 2024 Wholesale Water Billings Report

WHOLESALE WATER CHARGES								
Month (1)	FY 2024 Charges (2)		FY 2024 Actual		FY 2024 Variance		FY 2023 Actuals	
	Volume	Revenue	Volume	Revenue (4)	Volume	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	1,607,433	34,283,300	1,396,012	31,956,320	(211,421)	(2,326,980)	1,664,936	34,349,872
August	1,469,739	32,797,900	1,295,617	30,947,078	(174,122)	(1,850,822)	1,418,347	31,555,444
September	1,284,305	30,543,500	1,212,814	29,862,077	(71,491)	(681,423)	1,308,481	30,306,713
October	1,037,450	27,748,500	1,043,901	27,856,141	6,451	107,641	1,055,245	27,391,089
November	898,776	26,395,000	899,934	26,481,380	1,158	86,380	906,669	25,911,801
December	966,122	26,990,700	947,841	26,904,465	(18,281)	(86,235)	990,177	26,652,607
January	963,772	27,002,600	-	-	-	-	979,573	26,536,118
February	874,396	26,142,700	-	-	-	-	869,843	25,535,320
March	960,207	26,930,300	-	-	-	-	961,541	26,356,490
April	917,893	26,581,600	-	-	-	-	917,599	25,997,955
May	1,136,342	29,098,000	-	-	-	-	1,169,448	28,895,975
June	1,460,066	32,678,300	-	-	-	-	1,570,958	33,407,419
Total	13,576,500	347,192,400	6,796,119	174,007,461	(467,706)	(4,751,439)	13,812,817	342,896,802
Subtotals ytd	7,263,825	178,758,900	6,796,119	174,007,461	(467,706)	(4,751,439)		
Achievement of Original Plan			93.56%	97.34%				
Billing Adjustments (5)			8,009	109,342				
			6,804,128	174,116,803				
			99.96%	99.63%				

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.
 (2) Charges are based on the approved FY 2024 water supply system charge schedule.
 (3) Reflects approved budget amendments related to commodity usage
 (4) 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
 (5) Reflects prior period adjustments made in the current year for Madison Heights.

Table 2 - Wholesale Water Collections

Water				
Month	Current Year	Prior Year	Variance	Ratio
January	19,182,054	31,280,599	(31,280,599)	-100.00%
February	26,553,529	24,919,847	1,633,682	6.56%
March	26,074,213	22,123,572	3,950,641	17.86%
April	20,940,451	21,726,941	(786,490)	-3.62%
May	29,265,308	27,717,969	1,547,339	5.58%
June	29,370,704	26,379,503	2,991,201	11.34%
July	22,645,008	14,435,092	8,209,916	56.87%
August	36,275,672	41,154,992	(4,879,320)	-11.86%
September	29,955,755	21,887,632	8,068,123	36.86%
October	26,617,271	38,029,648	(11,412,377)	-30.01%
November	35,490,010	30,903,329	4,586,681	14.84%
December	28,246,829	34,298,469	(6,051,640)	-17.64%
Rolling 12-Month Total	330,616,805	334,857,592		
Rolling, 12-Month Average	27,551,400	27,904,799		

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	12
Emergency	0
Older Contracts	<u>6</u>
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 2024 sewer billed revenue. As of December 31, 2023 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 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. Current year collections are trending slightly above the twelve-month period ending December 31, 2023.

Table 3 – FY 2024 Wholesale Sewer Billings Report

WHOLESALE SEWER CHARGES								
Month (1)	FY 2024 Charges		FY 2024 - Actual		FY 2024 - Variance		FY 2023 - Actuals	
	Volume (2)	Revenue	Volume (2)	Revenue	Volume (2)	Revenue	Volume	Revenue
	Mcf	\$	Mcf	\$	Mcf	\$	Mcf	\$
July	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
August	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
September	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
October	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
November	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
December	N/A	23,494,800	N/A	23,494,800	N/A	-	N/A	22,888,100
January	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
February	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
March	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
April	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
May	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
June	N/A	23,494,800	N/A	0	N/A	0	N/A	22,888,100
Total		281,937,600		140,968,800		-		274,657,200
Subtotals ytd		140,968,800		140,968,800		-		
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	17,636,972	26,436,258	(8,799,286)	-33.28%
February	33,102,769	23,937,258	9,165,511	38.29%
March	23,746,469	24,713,158	(966,689)	-3.91%
April	17,769,710	19,937,558	(2,167,848)	-10.87%
May	18,213,966	10,226,700	7,987,266	78.10%
June	38,287,549	29,659,245	8,628,304	29.09%
July	22,331,831	28,223,515	(5,891,684)	-20.88%
August	22,377,366	21,036,661	1,340,705	6.37%
September	18,770,419	22,244,437	(3,474,018)	-15.62%
October	23,107,016	24,707,249	(1,600,233)	-6.48%
November	27,958,885	19,882,939	8,075,946	40.62%
December	21,351,498	18,314,222	3,037,276	16.58%
Rolling 12-Month Total	284,654,451	269,319,200		
Rolling, 12-Month Average	23,721,204	22,443,267		

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. On November 16, 2023, the GLWA Board of Directors outlined a plan to provide reimbursement credits to Member Partners upon implementation of the approved term sheet that represents a proposed agreement between GLWA, the city of Highland Park, and the state of Michigan. This monthly financial report will reflect the impacts of that term sheet and agreement moving forward as implementation steps occur.

As of December 31, 2023, Highland Park had a delinquent balance of \$55.2 million, including \$40.5 million for wastewater treatment services, \$1.9 million for industrial waste control services, and \$12.7 million for water supply services.

Table 5 - City of Highland Park Billings and Collections provides a life-to-date balance summary of the billing and collection history for Highland Park with detail provided for fiscal year 2024 through December 31, 2023. 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

Service Month	Water	Sewer	IWC	Total
December 31, 2022 Balance	11,587,242	41,679,514	1,842,271	55,109,027
January 2023 Billing	99,260	451,700	3,997	554,957
January 2023 Payments	-	(1,341,522)	-	(1,341,522)
January 31, 2023 Balance	11,686,502	40,789,692	1,846,268	54,322,462
February 2023 Billing	106,448	451,700	3,998	562,146
February 2023 Payments	-	(434,682)	-	(434,682)
February 28, 2023 Balance	11,792,950	40,806,710	1,850,266	54,449,926
March 2023 Billing	99,164	451,700	3,889	554,753
March 2023 Payments	-	(347,442)	-	(347,442)
March 31, 2023 Balance	11,892,114	40,910,969	1,854,155	54,657,238
April 2023 Billing	101,068	451,700	3,897	556,665
April 2023 Payments	-	(358,010)	-	(358,010)
April 30, 2023 Balance	11,993,182	41,004,659	1,858,052	54,855,893
May 2023 Billing	98,870	451,700	3,906	554,476
May 2023 Payments	-	(349,566)	-	(349,566)
May 31, 2023 Balance	12,092,052	41,106,793	1,861,958	55,060,803
June 2023 Billing	103,555	451,700	3,906	559,161
June 2023 Payments	(126,000)	(1,261,249)	-	(1,387,249)
June 30, 2023 Balance	12,069,607	40,297,244	1,865,864	54,232,714
July 2023 Billing	107,088	451,700	3,906	562,694
July 2023 Payments	-	(386,031)	-	(386,031)
July 31, 2023 Balance	12,176,695	40,362,913	1,869,769	54,409,377
August 2023 Billing	115,273	445,700	3,964	564,937
August 2023 Payments	-	(387,766)	-	(387,766)
August 31, 2023 Balance	12,291,968	40,420,847	1,873,733	54,586,548
September 2023 Billing	116,724	464,200	3,964	584,888
September 2023 Payments	-	(395,119)	-	(395,119)
September 30, 2023 Balance	12,408,692	40,489,928	1,877,697	54,776,316
October 2023 Billing	116,104	464,200	4,028	584,332
October 2023 Payments	-	(452,616)	-	(452,616)
October 31, 2023 Balance	12,524,796	40,501,512	1,881,725	54,908,032
November 2023 Billing	109,304	464,200	4,028	577,532
November 2023 Payments	-	(503,685)	-	(503,685)
November 30, 2023 Balance	12,634,099	40,462,026	1,885,753	54,981,878
December 2023 Billing	106,653	464,200	3,989	574,842
December 2023 Payments	-	(382,098)	-	(382,098)
December 31, 2023 Balance	12,740,752	40,544,128	1,889,742	55,174,622

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

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, 2023.

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

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and Dearborn is the same summary *without* the past due balances for the City of Highland Park and Dearborn. Three water accounts comprise the past due balances over 46 days. One account reports a past due balance of \$161 thousand which was subsequently paid in January. An additional account reports a past due of \$346 thousand, with this balance being paid in February. The remaining past due account is under review.

The Sewer past due account was paid in full January. The IWC past due balance includes two accounts that were fully paid in January. The Pollutant Surcharge past due balance consists of smaller account holders that GLWA staff continue to communicate with.

Table 6 - Wholesale Accounts Receivable Aging Report Summary

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 53,534,835.01	\$ 33,559,430.83	\$ 1,695,007.58	\$ 952,852.75	\$ 17,327,543.85
Sewer	\$ 56,827,776.59	\$ 16,055,648.60	\$ 810,300.00	\$ 810,300.00	\$ 39,151,527.99
IWC	\$ 2,450,375.05	\$ 559,280.72	\$ -	\$ 17,360.98	\$ 1,873,733.35
Pollutant Surcharge	\$ 357,084.15	\$ 338,669.34	\$ 11,818.57	\$ 2,395.22	\$ 4,201.02
Total	\$ 113,170,070.80	\$ 50,513,029.49	\$ 2,517,126.15	\$ 1,782,908.95	\$ 58,357,006.21
	100.00%	44.63%	2.22%	1.58%	51.57%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 40,794,082.11	\$ 33,343,474.04	\$ 1,578,903.28	\$ 836,129.08	\$ 5,035,575.71
Sewer	\$ 16,283,648.60	\$ 15,591,448.60	\$ 346,100.00	\$ 346,100.00	\$ -
IWC	\$ 560,632.98	\$ 551,263.62	\$ -	\$ 9,369.36	\$ -
Pollutant Surcharge	\$ 357,084.15	\$ 338,669.34	\$ 11,818.57	\$ 2,395.22	\$ 4,201.02
Total	\$ 57,995,447.84	\$ 49,824,855.60	\$ 1,936,821.85	\$ 1,193,993.66	\$ 5,039,776.73
	100.00%	85.91%	3.34%	2.06%	8.69%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 31,953,705.32	\$ 31,401,142.91	\$ 471,307.85	\$ 81,254.56	\$ -
Sewer	\$ 16,283,648.60	\$ 15,591,448.60	\$ 346,100.00	\$ 346,100.00	\$ -
IWC	\$ 560,632.98	\$ 551,263.62	\$ -	\$ 9,369.36	\$ -
Pollutant Surcharge	\$ 357,084.15	\$ 338,669.34	\$ 11,818.57	\$ 2,395.22	\$ 4,201.02
Total	\$ 49,155,071.05	\$ 47,882,524.47	\$ 829,226.42	\$ 439,119.14	\$ 4,201.02
	100.00%	97.41%	1.69%	0.89%	0.01%

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 2024 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 15% through December 31, 2023 compared to the four-year historical average ratio of required receipts exceeding disbursements by 10% since July 1, 2019.

Sewer fund receipts exceeded required disbursements by 5% through December 31, 2023 in line with the four-year historical average ratio of required receipts exceeding disbursements by 7% since July 1, 2019.

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 2020	FY 2021	FY 2022	FY 2023	FY 2024 Thru Dec 31
Water					
1 Receipts	\$ 332,606,196	\$ 336,642,021	\$ 338,117,694	\$ 363,335,474	\$ 198,652,462
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	332,606,196	336,642,021	338,117,694	363,335,474	198,652,462
4 Disbursements	(296,190,425)	(308,713,407)	(316,495,360)	(349,186,375)	(172,047,502)
5 Receipts Net of Required Transfers	36,415,771	27,928,614	21,622,334	14,149,099	26,604,960
6 I&E Transfer	(25,719,751)	(31,991,687)	(26,622,862)	(9,898,100)	(17,824,500)
7 Net Receipts	\$ 10,696,020	\$ (4,063,073)	\$ (5,000,528)	\$ 4,250,999	\$ 8,780,460
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	112%	109%	107%	104%	115%
Sewer					
9 Receipts	\$ 490,461,356	\$ 472,871,853	\$ 471,979,297	\$ 498,888,416	\$ 249,964,937
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	490,461,356	472,871,853	471,979,297	498,888,416	249,964,937
12 Disbursements	(445,604,952)	(436,600,883)	(450,701,751)	(473,516,238)	(237,927,664)
13 Receipts Net of Required Transfers	44,856,404	36,270,970	21,277,546	25,372,178	12,037,273
14 I&E Transfer	(19,096,200)	(40,504,727)	(37,651,788)	(26,766,200)	-
15 DWSD Shortfall Advance	-	-	-	-	-
16 Shortfall Repayment (principal)	17,542,669	18,206,431	8,296,578	-	-
17 Net Receipts	\$ 43,302,873	\$ 13,972,674	\$ (8,077,664)	\$ (1,394,022)	\$ 12,037,273
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	110%	108%	105%	105%	105%
Combined					
19 Receipts	\$ 823,067,552	\$ 809,513,874	\$ 810,096,991	\$ 862,223,890	\$ 448,617,399
20 MOU Adjustments	-	-	-	-	-
21 Adjusted Receipts	823,067,552	809,513,874	810,096,991	862,223,890	448,617,399
22 Disbursements	(741,795,377)	(745,314,290)	(767,197,111)	(822,702,613)	(409,975,166)
23 Receipts Net of Required Transfers	81,272,175	64,199,584	42,899,880	39,521,277	38,642,233
24 I&E Transfer	(44,815,951)	(72,496,414)	(64,274,650)	(36,664,300)	(17,824,500)
25 Shortfall Advance	-	-	-	-	-
26 Shortfall Repayment	17,542,669	18,206,431	8,296,578	-	-
27 Net Receipts	\$ 53,998,893	\$ 9,909,601	\$ (13,078,192)	\$ 2,856,977	\$ 20,817,733
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	111%	109%	106%	105%	109%

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

Chart 1 – GLWA 12-Month Net Receipts – Water

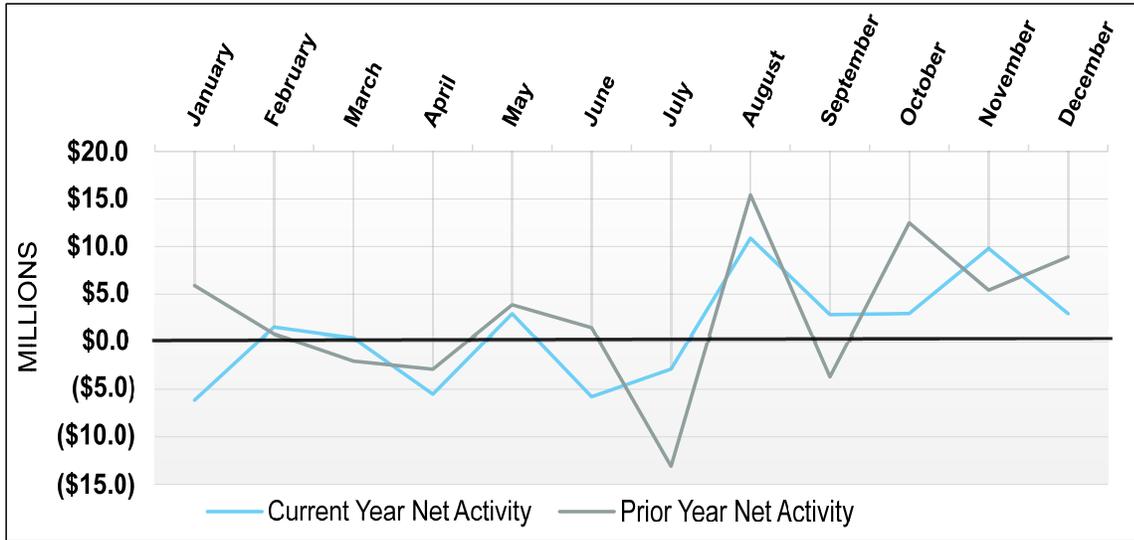
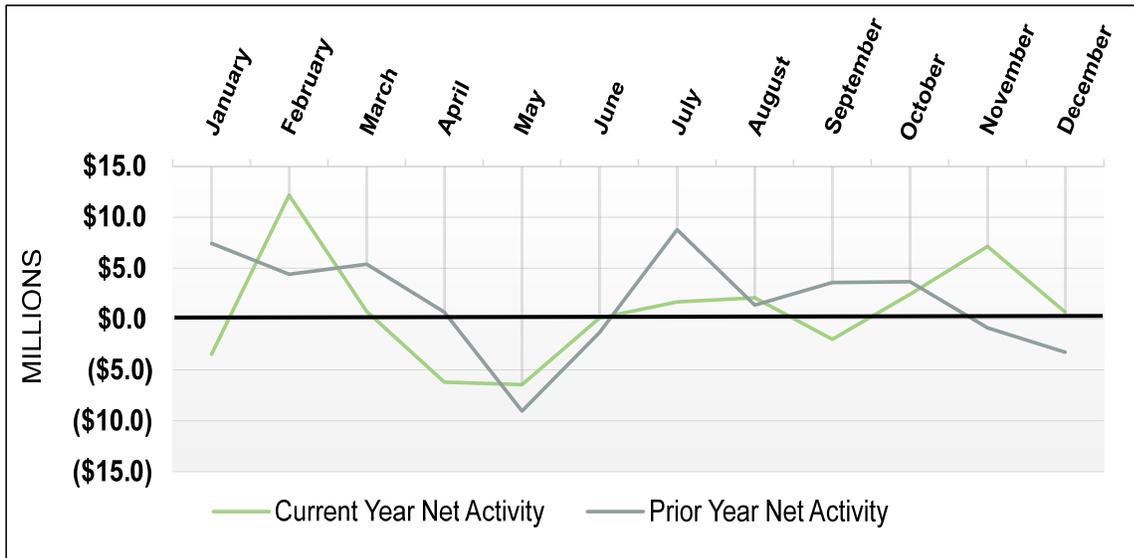


Chart 2 – GLWA 12-Month Net Receipts – Sewer



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 2024 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 4% through December 31, 2023 compared to the four-year historical average ratio of required receipts exceeding disbursements by 3% since July 1, 2019.

Sewer fund receipts exceeded required disbursements by 5% through December 31, 2023 compared to the four-year historical average of required receipts exceeding disbursements by 3% since July 1, 2019.

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

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 Thru Dec 31
Water					
1 Receipts	\$ 96,885,723	\$ 102,067,423	\$ 101,964,963	\$ 123,766,624	\$ 61,602,863
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	96,885,723	102,067,423	101,964,963	123,766,624	61,602,863
4 Disbursements	(97,823,097)	(100,707,200)	(94,495,601)	(117,666,100)	(59,252,100)
5 Receipts Net of Required Transfers	(937,374)	1,360,223	7,469,362	6,100,524	2,350,763
6 I&E Transfer	-	-	-	-	-
7 Net Receipts	\$ (937,374)	\$ 1,360,223	\$ 7,469,362	\$ 6,100,524	\$ 2,350,763
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	99%	101%	108%	105%	104%
Sewer					
9 Receipts	\$ 264,689,559	\$ 308,210,767	\$ 291,280,896	\$ 298,896,942	\$ 152,140,367
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	264,689,559	308,210,767	291,280,896	298,896,942	152,140,367
12 Disbursements	(275,507,374)	(295,100,771)	(285,256,000)	(283,095,100)	(144,577,008)
13 Receipts Net of Required Transfers	(10,817,815)	13,109,996	6,024,896	15,801,842	7,563,359
14 I&E Transfer	-	-	-	-	-
15 Shortfall Advance from GLWA	-	-	-	-	-
16 Net Receipts	\$ (10,817,815)	\$ 13,109,996	\$ 6,024,896	\$ 15,801,842	\$ 7,563,359
17 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	96%	104%	102%	106%	105%
Combined					
18 Receipts	\$ 361,575,282	\$ 410,278,190	\$ 393,245,859	\$ 422,663,566	\$ 213,743,230
19 MOU Adjustments	-	-	-	-	-
20 Adjusted Receipts	361,575,282	410,278,190	393,245,859	422,663,566	213,743,230
21 Disbursements	(373,330,471)	(395,807,971)	(379,751,601)	(400,761,200)	(203,829,108)
22 Receipts Net of Required Transfers	(11,755,189)	14,470,219	13,494,258	21,902,366	9,914,122
23 I&E Transfer	-	-	-	-	-
24 Shortfall Advance from GLWA	-	-	-	-	-
25 Net Receipts	\$ (11,755,189)	\$ 14,470,219	\$ 13,494,258	\$ 21,902,366	\$ 9,914,122
26 <i>Ratio of Receipts to Required Disbursements (Line 20/Line 21)</i>	97%	104%	104%	105%	105%

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.

Chart 3 – DWSD 12-Month Net Receipts – Water

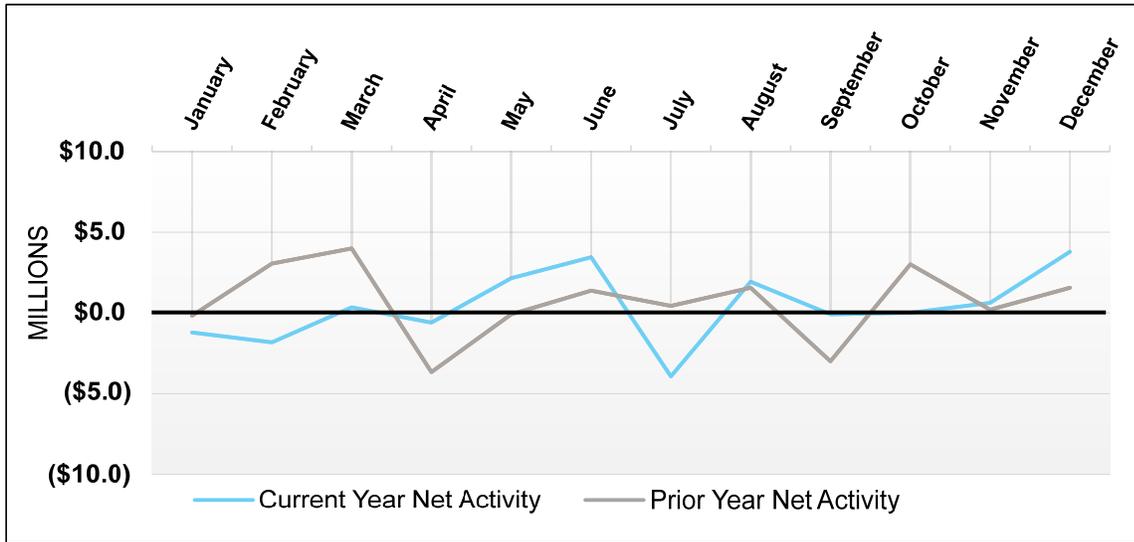


Chart 4 – DWSD 12-Month Net Receipts – Sewer



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 3 – Combined Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year. Fiscal year 2024 reflects six months of activity to date.

Water fund net receipts exceeded required disbursements by 13% through December 31, 2023 compared to the four-year historical average ratio of required receipts exceeding disbursements by 8% since July 1, 2019.

Sewer fund receipts exceeded required disbursements by 5% through December 31, 2023 compared to the four-year historical average ratio of required receipts exceeding disbursements by 5% since July 1, 2019.

Table 3 – Combined Net Cash Flows from Trust Receipts & Disbursements

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 Thru Dec 31
Water					
1 Receipts	\$ 429,491,919	\$ 438,709,444	\$ 440,082,657	\$ 487,102,098	\$ 260,255,325
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	429,491,919	438,709,444	440,082,657	487,102,098	260,255,325
4 Disbursements	(394,013,522)	(409,420,607)	(410,990,961)	(466,852,475)	(231,299,602)
5 Receipts Net of Required Transfers	35,478,397	29,288,837	29,091,696	20,249,623	28,955,723
6 I&E Transfer	(25,719,751)	(31,991,687)	(26,622,862)	(9,898,100)	(17,824,500)
7 Net Receipts	\$ 9,758,646	\$ (2,702,850)	\$ 2,468,834	\$ 10,351,523	\$ 11,131,223
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	109%	107%	107%	104%	113%
Sewer					
9 Receipts	\$ 755,150,915	\$ 781,082,620	\$ 763,260,193	\$ 797,785,358	\$ 402,105,304
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	755,150,915	781,082,620	763,260,193	797,785,358	402,105,304
12 Disbursements	(721,112,326)	(731,701,654)	(735,957,751)	(756,611,338)	(382,504,672)
13 Receipts Net of Required Transfers	34,038,589	49,380,966	27,302,442	41,174,020	19,600,632
14 I&E Transfer	(19,096,200)	(40,504,727)	(37,651,788)	(26,766,200)	-
15 Shortfall Advance	-	-	-	-	-
16 Shortfall Repayment (principal)	17,542,669	18,206,431	8,296,578	-	-
17 Net Receipts	\$ 32,485,058	\$ 27,082,670	\$ (2,052,768)	\$ 14,407,820	\$ 19,600,632
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	105%	107%	104%	105%	105%
Combined					
19 Receipts	\$ 1,184,642,834	\$ 1,219,792,064	\$ 1,203,342,850	\$ 1,284,887,456	\$ 662,360,629
20 MOU Adjustments	-	-	-	-	-
21 Adjusted Receipts	1,184,642,834	1,219,792,064	1,203,342,850	1,284,887,456	662,360,629
22 Disbursements	(1,115,125,848)	(1,141,122,261)	(1,146,948,712)	(1,223,463,813)	(613,804,274)
23 Receipts Net of Required Transfers	69,516,986	78,669,803	56,394,138	61,423,643	48,556,355
24 I&E Transfer	(44,815,951)	(72,496,414)	(64,274,650)	(36,664,300)	(17,824,500)
25 Shortfall Advance	-	-	-	-	-
26 Shortfall Repayment	17,542,669	18,206,431	8,296,578	-	-
27 Net Receipts	\$ 42,243,704	\$ 24,379,820	\$ 416,066	\$ 24,759,343	\$ 30,731,855
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	106%	107%	105%	105%	108%

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee March 22, 2024

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$200,821.86	\$200,821.86	\$0.00	\$0.00	\$0.00
ALMONT VILLAGE	\$21,097.95	\$21,097.95	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$70,998.70	\$70,998.70	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$28,546.42	\$28,546.42	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$60,833.74	\$60,833.74	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$323,077.05	\$323,077.05	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$22,941.39	\$22,941.39	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$36,833.11	\$36,833.11	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$1,048,535.05	\$1,048,535.05	\$0.00	\$0.00	\$0.00
CENTER LINE	\$88,596.63	\$88,596.63	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$399,682.56	\$399,682.56	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$659,105.68	\$659,105.68	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$586,885.85	\$586,885.85	\$0.00	\$0.00	\$0.00
DEARBORN	\$8,840,376.79	\$1,942,331.13	\$1,107,595.43	\$754,874.52	\$5,035,575.71
DEARBORN HEIGHTS	\$1,013,913.93	\$667,853.15	\$346,060.78	\$0.00	\$0.00
EASTPOINTE	\$151,986.51	\$151,986.51	\$0.00	\$0.00	\$0.00
ECORSE	\$102,125.01	\$102,125.01	\$0.00	\$0.00	\$0.00
FARMINGTON	\$86,767.66	\$86,767.66	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$1,547,206.23	\$1,547,206.23	\$0.00	\$0.00	\$0.00
FERNDALE	\$97,497.30	\$97,497.30	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$128,857.18	\$128,857.18	\$0.00	\$0.00	\$0.00
FLINT	\$395,019.66	\$395,019.66	\$0.00	\$0.00	\$0.00
FRASER	\$111,743.22	\$111,743.22	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GARDEN CITY	\$155,540.84	\$155,540.84	\$0.00	\$0.00	\$0.00
GENESEE COUNTY DRAIN COMM	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GIBRALTAR	\$30,954.96	\$30,954.96	\$0.00	\$0.00	\$0.00
GREATER LAPEER CUA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GREENWOOD TWP. (DTE)	\$84,134.89	\$84,134.89	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$103,574.00	\$103,574.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$113,360.02	\$113,360.02	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$48,798.38	\$48,798.38	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$107,976.95	\$107,976.95	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$315,037.46	\$153,520.61	\$80,262.29	\$81,254.56	\$0.00
HARPER WOODS	\$77,432.05	\$77,432.05	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$149,056.68	\$149,056.68	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$137,662.94	\$137,662.94	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$12,740,752.90	\$215,956.79	\$116,104.30	\$116,723.67	\$12,291,968.14
HURON TOWNSHIP	\$181,039.86	\$181,039.86	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$126,705.03	\$126,705.03	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP (CHAMPION BUS	\$926.42	\$926.42	\$0.00	\$0.00	\$0.00
INKSTER	\$237,321.77	\$237,321.77	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$26,209.52	\$26,209.52	\$0.00	\$0.00	\$0.00
LAPEER	\$142,258.51	\$142,258.51	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$30,077.79	\$30,077.79	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
LINCOLN PARK	\$213,197.33	\$213,197.33	\$0.00	\$0.00	\$0.00
LIVONIA	\$996,337.98	\$996,337.98	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$1,068,972.27	\$1,068,972.27	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$182,259.10	\$182,259.10	\$0.00	\$0.00	\$0.00
MAYFIELD TOWNSHIP (KAMAX)	\$4,187.36	\$4,187.36	\$0.00	\$0.00	\$0.00
MELVINDALE	\$60,424.51	\$60,424.51	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$40,148.06	\$40,148.06	\$0.00	\$0.00	\$0.00
NOCWA	\$1,881,738.80	\$1,881,738.80	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$64,884.70	\$64,884.70	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$452,034.43	\$452,034.43	\$0.00	\$0.00	\$0.00
NOVI	\$781,124.35	\$781,124.35	\$0.00	\$0.00	\$0.00
OAK PARK	\$129,857.23	\$129,857.23	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$6,260.85	\$6,260.85	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$195,853.78	\$195,853.78	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$389,581.80	\$389,581.80	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$297,893.42	\$297,893.42	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$44,627.76	\$44,627.76	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$76,948.18	\$76,948.18	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$45,290.76	\$45,290.76	\$0.00	\$0.00	\$0.00
ROMEO	\$36,977.93	\$36,977.93	\$0.00	\$0.00	\$0.00
ROMULUS	\$331,991.98	\$331,991.98	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$479,238.37	\$479,238.37	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$18,608.47	\$18,608.47	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SHELBY TOWNSHIP	\$937,325.32	\$937,325.32	\$0.00	\$0.00	\$0.00
SOCWA	\$4,123,115.59	\$4,078,130.81	\$44,984.78	\$0.00	\$0.00
SOUTH ROCKWOOD	\$10,753.91	\$10,753.91	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$188,051.44	\$188,051.44	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$277,882.82	\$277,882.82	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$1,293,549.12	\$1,293,549.12	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$64,888.97	\$64,888.97	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$20,194.23	\$20,194.23	\$0.00	\$0.00	\$0.00
TAYLOR	\$443,900.19	\$443,900.19	\$0.00	\$0.00	\$0.00
TRENTON	\$158,978.72	\$158,978.72	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,163,120.42	\$1,163,120.42	\$0.00	\$0.00	\$0.00
UTICA	\$52,541.04	\$52,541.04	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$293,096.63	\$293,096.63	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$70,234.36	\$70,234.36	\$0.00	\$0.00	\$0.00
WARREN	\$854,732.08	\$854,732.08	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$191,983.93	\$191,983.93	\$0.00	\$0.00	\$0.00
WAYNE	\$165,919.69	\$165,919.69	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,870,593.39	\$1,870,593.39	\$0.00	\$0.00	\$0.00
WESTLAND	\$537,208.32	\$537,208.32	\$0.00	\$0.00	\$0.00
WIXOM	\$181,758.16	\$181,758.16	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$125,947.08	\$125,947.08	\$0.00	\$0.00	\$0.00
YCUA	\$1,878,349.73	\$1,878,349.73	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL WATER ACCOUNTS	\$53,534,835.01	\$33,559,430.83	\$1,695,007.58	\$952,852.75	\$17,327,543.85

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CENTER LINE	\$89,299.50	\$89,299.50	\$0.00	\$0.00	\$0.00
DEARBORN	\$1,738,200.00	\$1,738,200.00	\$0.00	\$0.00	\$0.00
EVERGREEN-FARMINGTON	\$3,099,400.00	\$3,099,400.00	\$0.00	\$0.00	\$0.00
FARMINGTON	\$102,700.00	\$102,700.00	\$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	\$1,038,300.00	\$346,100.00	\$346,100.00	\$346,100.00	\$0.00
HARPER WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$40,544,127.99	\$464,200.00	\$464,200.00	\$464,200.00	\$39,151,527.99
MELVINDALE	\$134,700.00	\$134,700.00	\$0.00	\$0.00	\$0.00
OAKLAND COUNTY GWK DD	\$3,971,300.00	\$3,971,300.00	\$0.00	\$0.00	\$0.00
OMID	\$6,109,749.10	\$6,109,749.10	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROUGE VALLEY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SOUTHEAST MACOMB SANITATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$56,827,776.59	\$16,055,648.60	\$810,300.00	\$810,300.00	\$39,151,527.99

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$1,650.74	\$1,650.74	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O)	\$11,711.70	\$11,711.70	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O) ADMIN	\$1,980.29	\$1,980.29	\$0.00	\$0.00	\$0.00
AUBURN HILLS (E-F)	\$404.04	\$404.04	\$0.00	\$0.00	\$0.00
BERKLEY	\$3,235.96	\$3,235.96	\$0.00	\$0.00	\$0.00
BEVERLY HILLS	\$1,022.84	\$1,022.84	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$1,106.56	\$1,106.56	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$2,449.72	\$2,449.72	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$5,824.00	\$5,824.00	\$0.00	\$0.00	\$0.00
BLOOMFIELD HILLS	\$1,729.00	\$1,729.00	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$174.72	\$174.72	\$0.00	\$0.00	\$0.00
CENTER LINE	\$5,354.44	\$5,354.44	\$0.00	\$0.00	\$0.00
CHARTER TOWNSHIP OF INDEPENI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$13,407.94	\$13,407.94	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$9,118.20	\$9,118.20	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON (C-O) ADMIN	\$(0.60)	\$(0.60)	\$0.00	\$0.00	\$0.00
CLAWSON	\$6,340.89	\$6,340.89	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$27,853.28	\$27,853.28	\$0.00	\$0.00	\$0.00
DEARBORN	\$37,695.84	\$37,695.84	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
DEARBORN HEIGHTS	\$13,164.29	\$13,164.29	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$109.20	\$109.20	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$13,100.63	\$13,100.63	\$0.00	\$0.00	\$0.00
FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$25,671.10	\$25,671.10	\$0.00	\$0.00	\$0.00
FRASER	\$5,077.80	\$5,077.80	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$5,034.12	\$5,034.12	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$1,617.98	\$1,617.98	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$1,210.30	\$1,210.30	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$17,093.44	\$8,546.72	\$0.00	\$8,546.72	\$0.00
HARPER WOODS	\$1,838.20	\$1,838.20	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$2,904.72	\$2,904.72	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$3,470.74	\$3,470.74	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,889,742.07	\$8,017.10	\$0.00	\$7,991.62	\$1,873,733.35
HUNTINGTON WOODS	\$293.02	\$293.02	\$0.00	\$0.00	\$0.00
INDEPENDENCE (C-O) ADMIN	\$1,330.22	\$1,330.22	\$0.00	\$0.00	\$0.00
INKSTER	\$5,880.64	\$5,880.64	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$1,433.17	\$1,433.17	\$0.00	\$0.00	\$0.00
LATHRUP	\$1,439.62	\$1,439.62	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
LENOX TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LIVONIA	\$42,284.06	\$42,284.06	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$211.12	\$211.12	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELVINDALE	\$3,599.96	\$3,599.96	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$629.72	\$629.72	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$2,387.84	\$2,387.84	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NOVI	\$18,327.40	\$18,327.40	\$0.00	\$0.00	\$0.00
OAK PARK	\$7,154.42	\$7,154.42	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$465.92	\$465.92	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$387.66	\$387.66	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$4,531.80	\$4,531.80	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O) ADMIN	\$532.32	\$532.32	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$1,088.36	\$1,088.36	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$280.28	\$280.28	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$7,986.16	\$7,986.16	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$140.14	\$140.14	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCHESTER HILLS	\$19,555.90	\$19,555.90	\$0.00	\$0.00	\$0.00
ROMULUS	\$1,601.60	\$1,601.60	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$15,096.90	\$15,096.90	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ROYAL OAK	\$14,030.38	\$14,030.38	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$984.62	\$984.62	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$15,313.48	\$15,313.48	\$0.00	\$0.00	\$0.00
SOUTHFIELD (E-F)	\$29,431.22	\$29,431.22	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$3,434.34	\$3,434.34	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$24,782.94	\$24,782.94	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$33,025.72	\$33,025.72	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$393.12	\$393.12	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$38,927.98	\$38,927.98	\$0.00	\$0.00	\$0.00
UTICA	\$3,126.76	\$3,126.76	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$4,899.44	\$4,899.44	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$67.34	\$67.34	\$0.00	\$0.00	\$0.00
VILLAGE OF LAKE ORION	\$2,467.92	\$1,645.28	\$0.00	\$822.64	\$0.00
WASHINGTON TOWNSHIP	\$1,756.30	\$1,756.30	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP DPW	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP DPW (ADMI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WAYNE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$6,201.71	\$6,201.71	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP. (C-O) A	\$241.32	\$241.32	\$0.00	\$0.00	\$0.00
WESTLAND	\$23,558.08	\$23,558.08	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL IWC ACCOUNTS	\$2,450,375.05	\$559,280.72	\$0.00	\$17,360.98	\$1,873,733.35

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
3M COMPANY (MINNESOTA MINING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
A & R PACKING CO., LLC	\$2,450.88	\$2,450.88	\$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	\$121.48	\$88.21	\$33.27	\$0.00	\$0.00
ADORING PET FUNERAL HOME	\$81.01	\$81.01	\$0.00	\$0.00	\$0.00
ADVANCE ENGINEERING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AEVITAS SPECIALITY SERVICES	\$632.06	\$632.06	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
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 MANUFACTURING LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMERITI MFG. CO.	\$15,532.75	\$11,892.93	\$3,639.82	\$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 & F SEPTIC INC.	\$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	\$127.18	\$0.00	\$127.18	\$0.00	\$0.00
BARON INDUSTRIES	\$ (20.00)	\$0.00	\$0.00	\$0.00	\$ (20.00)

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BARTZ BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BAYS MICHIGAN CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BEIRUT BAKERY, INC.	\$37.00	\$0.00	\$0.00	\$0.00	\$37.00
BETTER MADE SNACK FOOD	\$35,898.56	\$35,898.56	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$61.25	\$0.00	\$0.00	\$0.00	\$61.25
BOZEK'S MARKET	\$ (992.76)	\$0.00	\$0.00	\$0.00	\$ (992.76)
BREW DETROIT	\$9,345.04	\$6,361.24	\$2,983.80	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROOKS BREWING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
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
CAPITOL REPRODUCTIONS	\$4.09	\$1.86	\$0.00	\$0.00	\$2.23
CF BURGER CREAMERY	\$27,420.13	\$27,420.13	\$0.00	\$0.00	\$0.00
CHARTER TOWNSHIP OF CLINTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CHIEFTAN COATING, LLC.	\$5,121.06	\$5,121.06	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$255.00	\$31.93	\$13.01	\$15.37	\$194.69
CINTAS CORP. - MACOMB TWP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$12,089.59	\$12,089.59	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$4,645.71	\$4,645.71	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
CITY LAUNDRY, INC.	\$6.31	\$6.31	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLEAN EARTH OF MICHIGAN, LLC	\$53.09	\$53.09	\$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
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.	\$ (233.79)	\$0.00	\$0.00	\$0.00	\$ (233.79)
DANA CONTAINER, INC.	\$629.93	\$629.93	\$0.00	\$0.00	\$0.00
DARLING INGREDIENTS, INC.	\$5,394.43	\$5,394.43	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$30.71	\$0.00	\$30.71	\$0.00	\$0.00
DEARBORN SAUSAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT BEER CO.	\$67.06	\$0.00	\$67.06	\$0.00	\$0.00
DETROIT LINEN SERVICE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT RIVERTOWN BREWERY CC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$ (4.62)	\$ (4.62)	\$0.00	\$0.00	\$0.00
DETRONIC INDUSTRIES, INC.	\$21.51	\$21.51	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
DIVERSIFIED CHEM TECH. INC.	\$232.80	\$232.80	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$5,529.06	\$5,529.06	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$2,910.29	\$2,910.29	\$0.00	\$0.00	\$0.00
DOWNEY BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DUBOIS CHEMICALS, INC.	\$ (93.40)	\$0.00	\$0.00	\$ (93.40)	\$0.00
E & E MANUFACTURING CO, PLAN	\$270.49	\$175.98	\$92.69	\$1.82	\$0.00
E & E MANUFACTURING CO, PLAN	\$127.75	\$127.75	\$0.00	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$4,115.58	\$4,115.58	\$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.	\$645.85	\$645.85	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$1,683.67	\$1,683.67	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$57.00	\$57.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$ (0.01)	\$0.00	\$0.00	\$0.00	\$ (0.01)
ETON ST BREWERY- GRIFFIN CL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$0.00	\$0.00	\$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.	\$3,891.73	\$3,891.73	\$0.00	\$0.00	\$0.00
FITZGERALD FINISHING LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FIVES CINETIC CORP.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FORD MOTOR CO- STERLING PLAN	\$1,369.94	\$1,369.94	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
FORD NEW MODEL PROGRAM	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FOUNDERS BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$261.75	\$261.75	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$4,383.42	\$4,383.42	\$0.00	\$0.00	\$0.00
GENERAL MOTORS, LLC ROMULUS	\$1,276.51	\$1,276.51	\$0.00	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$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	\$126.20	\$126.20	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$803.87	\$803.87	\$0.00	\$0.00	\$0.00
HENKEL CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HENRY FORD MACOMB HOSPITAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOME STYLE FOOD INC.	\$6,002.33	\$2,586.48	\$1,293.23	\$1,265.33	\$857.29
HOMEGROWN BREWING COMPANY	\$44.18	\$0.00	\$44.18	\$0.00	\$0.00
HOODS CLEANERS	\$211.33	\$0.00	\$0.00	\$0.00	\$211.33
HUNTINGTON CLEANERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
IDP, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDUSTRIAL METAL COATING	\$122.39	\$122.39	\$0.00	\$0.00	\$0.00
INTRASTATE DISTRIBUTORS	\$112.75	\$112.75	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$210.43	\$210.43	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ITALIAN BUTTER BREAD STICKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
JAMEX BREWING CO.	\$24.66	\$0.00	\$24.66	\$0.00	\$0.00
JELD-WEN, INC.	\$877.69	\$484.77	\$392.92	\$0.00	\$0.00
KAR NUT PRODUCTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$2,512.44	\$1,276.95	\$602.86	\$632.63	\$0.00
KUHNHENN BREWING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$332.79	\$332.79	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$83.21	\$83.21	\$0.00	\$0.00	\$0.00
LEAR CORPORATION DBA EAGLE C	\$297.99	\$297.99	\$0.00	\$0.00	\$0.00
LIBERTY STREET PROD. BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LILY'S SEAFOOD GRILL & BREWE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LIQUID ENVIRONMENTAL OF ILLI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LIQUID ENVIRONMENTAL SOLUTIC	\$ (74.46)	\$0.00	\$0.00	\$0.00	\$ (74.46)
MACDERMID, INC.	\$402.42	\$402.42	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$539.04	\$539.04	\$0.00	\$0.00	\$0.00
MCGEAN CHEMICALS	\$155.43	\$155.43	\$0.00	\$0.00	\$0.00
MCNICHOLS POLISHING & ANODIZ	\$ (31.54)	\$0.00	\$0.00	\$0.00	\$ (31.54)
MELLO MEATS INC, - KUBISCH S	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$1,996.29	\$1,000.51	\$500.26	\$495.52	\$0.00
MIBA HYDRAMECHANICA CORP.	\$766.70	\$766.70	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$92,414.17	\$92,414.17	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
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	\$321.68	\$321.68	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MISTER UNIFORM & MAT RENTALS	\$ (5.57)	\$0.00	\$0.00	\$0.00	\$ (5.57)
MOTOR CITY BREWING WORKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ND INDUSTRIES, INC.	\$897.36	\$0.00	\$897.36	\$0.00	\$0.00
NEAPCO DRIVELINES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTH CENTER BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHERN LAKES SEAFOOD & MEAT	\$ (134.94)	\$0.00	\$ (134.94)	\$0.00	\$0.00
OAKWOOD BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OLIVER HATCH CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PACKAGING CORPORATION OF AME	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PARKEDALE PHARMACEUTICALS/PE	\$179.77	\$179.77	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$61.51	\$0.00	\$61.51	\$0.00	\$0.00
PELLERITO FOODS INC.	\$31.46	\$31.46	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$5,693.21	\$5,693.21	\$0.00	\$0.00	\$0.00
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

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

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
PERSONAL UNIFORM SERVICE, IN	\$ (18.19)	\$0.00	\$0.00	\$0.00	\$ (18.19)
PETRO ENVIRON TECH, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PINE TREE ACRES, INC.	\$21,354.52	\$21,354.52	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$324.62	\$324.62	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$533.61	\$533.61	\$0.00	\$0.00	\$0.00
PREMIER PLATING- STERLING HE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
QUAKER HOUGHTON - PLANT #2	\$131.95	\$131.95	\$0.00	\$0.00	\$0.00
QUAKER HOUGHTON - PLANT #2	\$ (348.01)	\$0.00	\$0.00	\$0.00	\$ (348.01)
QUAKER HOUGHTON - PLANT #2	\$1,484.94	\$1,484.94	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$32.71	\$32.71	\$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
ROAK BREWING CO. LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS BEER COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS PROD BREWERY	\$4,178.79	\$0.00	\$723.64	\$0.00	\$3,455.15
ROYAL OAK BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RTT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SEAFARE FOODS, INC.	\$200.54	\$160.01	\$40.53	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
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.- MADISON HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$14.52	\$0.00	\$0.00	\$0.00	\$14.52
SUPERNATURAL SPIRITS & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$817.18	\$122.79	\$63.00	\$77.95	\$553.44
THE CROWN GROUP-LIVONIA PLANT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE DEBURRING COMPANY	\$ (15.23)	\$0.00	\$0.00	\$0.00	\$ (15.23)
THERMO FISHER SCIENTIFIC	\$22,764.38	\$22,764.08	\$0.30	\$0.00	\$0.00
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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$283.41	\$283.41	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$24,611.97	\$24,611.97	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$1,781.57	\$1,781.57	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$1.08	\$1.08	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$335.75	\$335.75	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
URBANREST BREWING COMPANY	\$109.76	\$0.00	\$109.76	\$0.00	\$0.00
US ECOLOGY MICHIGAN	\$932.14	\$932.14	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$1,079.98	\$1,079.98	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 12/31/23

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
USHER OIL SERVICES	\$542.78	\$542.78	\$0.00	\$0.00	\$0.00
VALICOR ENVIROMENTAL SERVICE	\$491.71	\$491.71	\$0.00	\$0.00	\$0.00
VALICOR ENVIRONMENTAL SERVIC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VAUGHAN INDUSTRIES, INC.	\$25.50	\$25.50	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$6,100.01	\$6,100.01	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$332.68	\$332.68	\$0.00	\$0.00	\$0.00
WIGLEY'S MEAT PROCESS	\$679.03	\$467.27	\$211.76	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$308.93	\$308.93	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$157.99	\$157.99	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$1,755.75	\$1,755.75	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$1,997.94	\$1,997.94	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO., PLANT	\$3,134.28	\$3,134.28	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$144.24	\$0.00	\$0.00	\$0.00	\$144.24
X-R-I TESTING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$357,084.15	\$338,669.34	\$11,818.57	\$2,395.22	\$4,201.02

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	1,222,260	5,389,300	48,322	6,659,882
FY 2022 Payments	<u>-</u>	<u>(1,788,828)</u>	<u>-</u>	<u>(1,788,828)</u>
June 30, 2022 Balance	\$ 10,941,450	\$ 40,631,047	\$ 1,818,085	\$ 53,390,582
FY 2023 Billings	1,254,157	5,415,100	47,779	6,717,035
FY 2023 Payments	<u>(126,000)</u>	<u>(5,748,903)</u>	<u>-</u>	<u>(5,874,903)</u>
June 30, 2023 Balance	\$ 12,069,607	\$ 40,297,243	\$ 1,865,863	\$ 54,232,714
FY 2024 Billings (6 Months)	671,145	2,754,200	23,878	3,449,224
FY 2024 Payments (6 Months)	<u>-</u>	<u>(2,507,316)</u>	<u>-</u>	<u>(2,507,316)</u>
Balance as of December 31, 2023	<u>\$ 12,740,753</u>	<u>\$ 40,544,128</u>	<u>\$ 1,889,742</u>	<u>\$ 55,174,622</u>



Annual Procurement Report for FY 2023 includes the following:

1. Report Highlights
2. Key Terms & Assumptions
3. Fiscal Year analysis of awarded Purchase Orders executed in FY 2023
4. Fiscal Year analysis of invoices processed for payment in FY 2023
5. Detailed Appendices

Pursuant to the Great Lakes Water Authority By-Laws Article XII, Section 4, GLWA Procurement provides an annual report summarizing all spend awarded (Purchase Orders) by the GLWA in the previous fiscal year. In addition, this report provides statistics and analysis based on actual invoice spend for FY 2023.

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 financial system (the primary source for these reports) 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.

It should also be noted that GLWA's [vendor contracts](#) are available online in a searchable database.

Report Highlights

GLWA Procurement Team Objectives Met

- ✓ Setting the bar for transparency in public procurement with the third annual procurement report providing a high level of information for stakeholders and other parties.
- ✓ All purchases (requisitions, purchase orders and contracts) were in alignment with approved procurement processes.
- ✓ Optimized the percentage of awards at 93% which are associated with a contract to improve procurement cycle efficiency and the performance expectations for both GLWA and the vendor community.
- ✓ Strategically identify, procure, and manage supplier relationship and key contracts.

Procurement Key Data Points: Purchase Order (Awarded by Procurement) Totals

- ✓ Procurements awarded for FY 2023 totaled \$594.9 million.
- ✓ Procurement processed a total of 4,904 requisitions including execution of 4,036 new purchase orders and amending 717 existing purchase orders.
- ✓ Procurement executed 258 purchase orders tied to a formal contract.
- ✓ 93 percent of all awarded purchases were connected to a formal contract.

Spending Key Data Points: Invoice (Accounts Payable) Totals

- ✓ Total combined spend by invoice for FY 2023 totaled \$566.3 million.
- ✓ Accounts Payable processed over 25,000 invoices including payments relating to 4,750 purchase orders.
- ✓ Invoice payments directly attributable to a purchase order totaled \$475.0 million.

Key Terms & Assumptions

Following are key terms that will assist the reader in interpreting the data 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 extending 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, repairs, and part replacements to extend the 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.
- **BS&A:** GLWA's financial software specializing in municipal accounting and finance.

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 was posted to the general ledger for accounting purposes.
- Purchase order amounts do not remain static, unlike invoice totals.
- Counts are unique counts unless otherwise noted.
- Procurement continually processes amendments (including renewals) and change orders that can decrease or more often increase the purchase order total. These changes impact the original fiscal year totals.
- For the purposes of this report, amended purchase orders include change orders, construction change directives, and task orders.

Fiscal Year Award Analysis

The following tables and charts highlight GLWA Procurement activity including **purchase orders awarded and executed in FY 2023**.

Table 1 – GLWA FY 2023 Total Combined Contract/Purchase Order Awards. This chart identifies the total contracts/purchase orders administered by Procurement. Procurement processed 4,036 purchase orders totaling \$594.9 million in FY 2023.

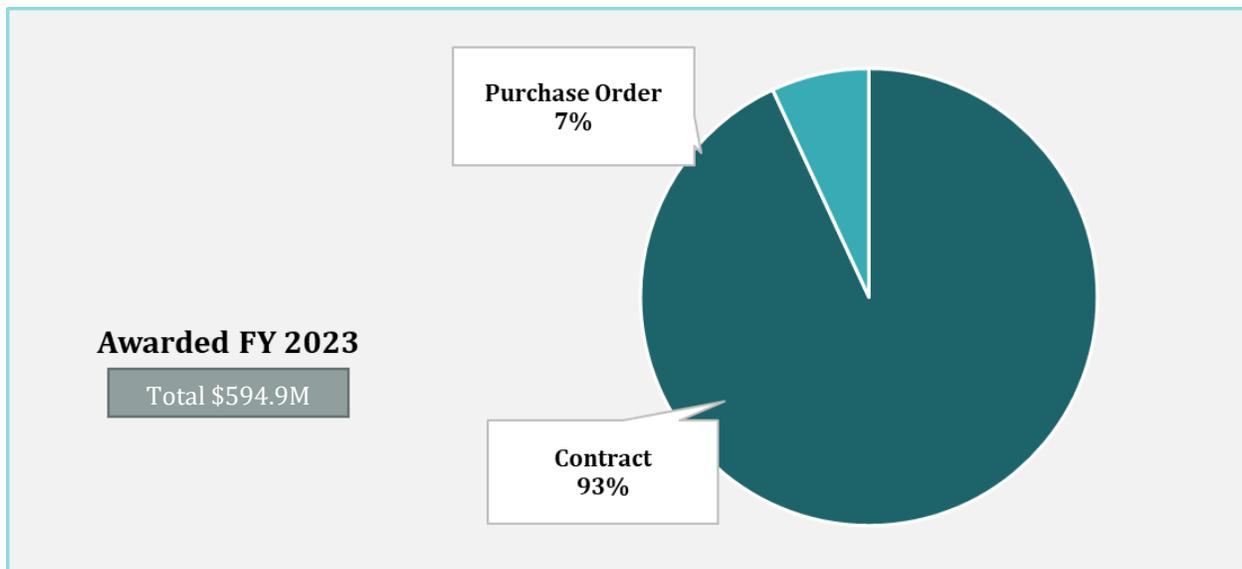
Table 1 – GLWA FY 2023 Total Combined Contract/Purchase Order Awards

Type	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Contract	167	167	167	\$518.4
Purchase Order	3778	3778	0	\$41.2
Contract Related *	91	91	91	\$35.3
Total Executed	4036	4036	258	\$594.9

*Amendment or change order tied to existing purchase order or contract.

Chart 1 – Total Awarded Contracts/Purchase Orders as a % of Total Purchase Orders Issued. This chart highlights the continuing emphasis Procurement places on capturing a majority of awarded spend under the protection of a formal contract. In addition to providing legal safeguards and quality of service protections, contracts restrain costs by reducing the number of purchase orders and combining purchases to drive down costs. In FY 2023, Procurement awarded \$553.7 million or 93% of the total awarded spend directly tied to a formal agreement (contract).

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



Average Dollar Amount of Contracts and Purchase Orders FY 2023. The average contract awarded by Procurement was over three million dollars.

Table 2 – Average Awarded Amount for Contracts and Purchase Orders FY 2023

Type of Award	Count	Amount Awarded (Millions)	Average Award
Contract	167	\$553,685,166	\$3,315,480
Purchase Order	3778	\$41,166,736	\$10,896

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

Table 3 – FY 2023 Top Ten Largest Contracts awarded by Dollar Value. These top ten contracts represent \$362.9 million or 61% of the total awarded Contracts/Purchase Orders for FY 2023. A complete listing of contracts awarded over a million dollars for FY 2023 can be found in Appendix A.

Table 3 – FY 2023 Top Ten Largest Contracts awarded by Dollar Value

Contract	Contract Title	Vendor	Awarded (Millions)
2103350	Pump St. No. 1 Improvement	Weiss Construction Co LLC	\$91.5
2201068	SWTP Medium Voltage Electrical System	Clark Construction Company	\$64.5
2103688	Rehab of Connors Creek Sewer System	Oscar Renda Contracting Inc	\$50.5
2102859	Conveyance System Infrastructure	Jay Dee Contractors Inc.	\$36.9
2101167	Cyber Security, Ovation, Instrum., & Controls	Emerson Process Management	\$35.3
2201255	SWTP 1958 Flocculator Replace	FH Paschen	\$25.5
2201142	Conveyance System Infrastructure (2)	Lakeshore Global Corporation	\$15.9
2103380	WWP HVAC Improvement	Commercial Contracting Corporation	\$15.0
2004674	North Service Center BPS Improvement	CDM Smith Michigan Inc	\$14.8
1902908	B/Creek CSO Effluent Conduit	Jay Dee Contractors Inc.	\$13.2
Subtotal Top Ten			\$362.9

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

Table 4 – FY 2023 Top Ten Vendor Total Awards. These top ten vendors represent \$411.6 million or 69% of the total awarded contracts/purchase orders for FY 2023. A complete list of combined awards for all vendors issued in FY 2023 can be found in Appendix B.

Table 4 – FY 2023 Top Ten Vendor Total Awards

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Weiss Construction Co LLC	49	47	47	\$91.5
Clark Construction Company	5	5	5	\$69.8
Jay Dee Contractors Inc.	16	16	16	\$59.6
Oscar Renda Contracting Inc	4	3	3	\$50.5
Emerson Process Management	6	5	5	\$35.3
CDM Smith Michigan Inc	14	14	14	\$27.8
FH Paschen	2	2	2	\$25.5
Commercial Contracting Corporation	37	37	37	\$17.9
PCI LLC	11	11	10	\$17.8
Lakeshore Global Corporation	16	15	15	\$15.9
Subtotal Top Ten	160	155	154	\$411.6

Fiscal Year Spend Analysis

The following tables and charts highlight GLWA Accounts Payable activity and **paid invoice totals for FY 2023**.

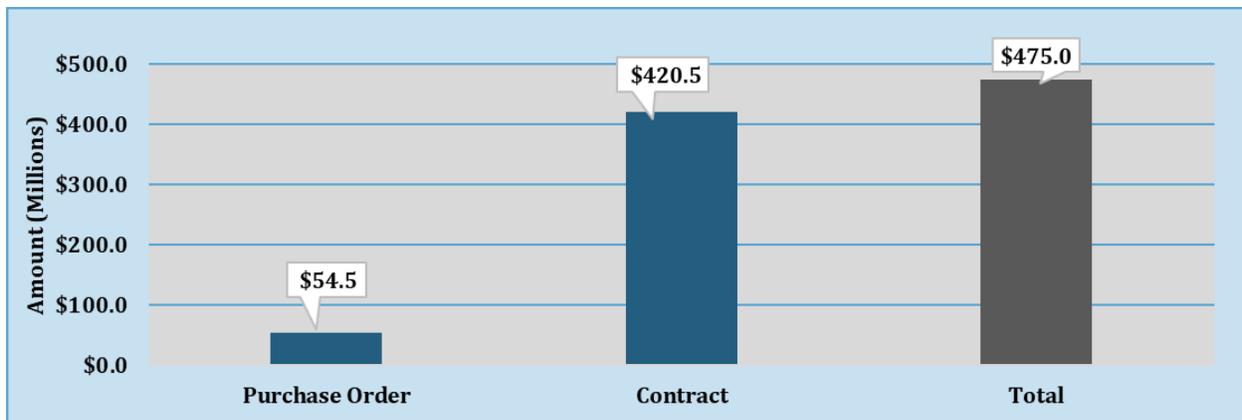
Table 5 – GLWA’s Total Spend by Invoice for FY 2023. Total spend by invoice is divided by purchase type. Contracts and purchase orders are awarded by Procurement prior to any invoicing by the vendor. In FY 2023, invoices directly related to a purchase order totaled \$475 million (\$420.5 million contract total plus \$54.5 million purchase order total in Table 5) representing 84% 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 \$91.2 million and represent less than 16% of total annual spend.

Table 5 – GLWA’s Total Spend by Invoice for FY 2023

Invoice Type	Invoice Count	Purchase Order Count	Contract Count	Amount Paid (Millions)	Percentage of Total
Contract	8298	596	473	\$420.5	74%
No Purchase Order	7666			\$91.2	16%
Purchase Order	9049	4154		\$54.5	10%
Grand Total	25013	4750	473	\$566.3	100%

Chart 2 – Total Spend Directly Related to a Purchase Order Award (with or without a Contract). This chart emphasizes Procurement’s focus on identifying opportunities to capture as much spend as possible under the safeguards of a formal contract. The majority, 89% of all Purchase Orders and 74% 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 invoice totals by Expense Type and Project.

Chart 3 – Total Spend by Expense Type. This chart organizes the spend between Operations and Maintenance (O&M), Capital Improvement Plan (CIP), and Capital Outlay.

Chart 3 – Total Spend by Expense Type

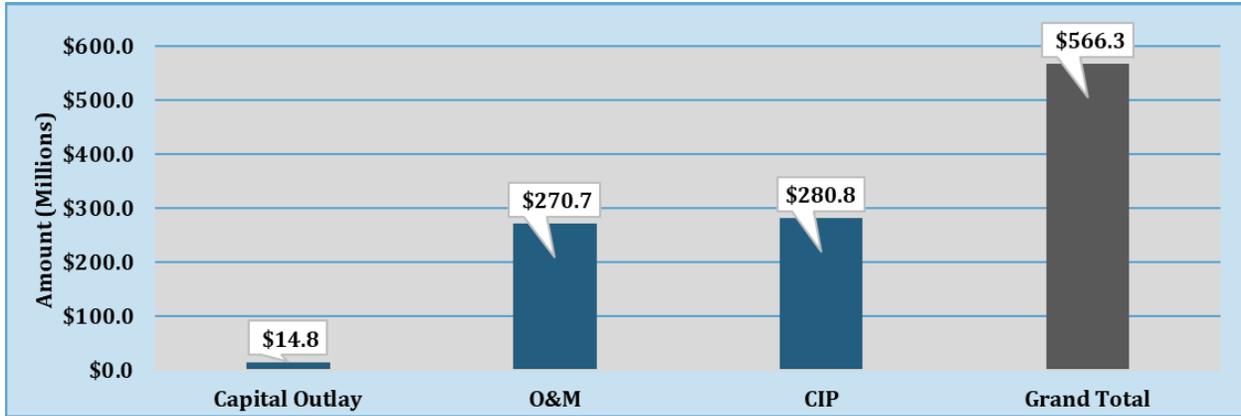


Table 6 – Top 10 Projects Invoices by Expense Type FY 2023. This table identifies the top project invoices during the fiscal year. These combined top ten projects represent 68% of the total spend for FY 2023.

Table 6 – Top 10 CIP Projects Invoiced FY 2023

Project	Project Description	Vendor	Amount (Millions)
122013	14 Mile Transmission Main Loop	Ric Man/Clark Joint Venture	\$38.0
		Major Contracting Group	\$1.8
		Brown and Caldwell LLC	\$1.5
		Kennedy Industries Inc	\$0.7
		Serra Works of Farmington Hills LLC	\$0.0
		Novi Community School District	\$0.0
		14 Mile Transmission Main Loop Total	\$42.1
122013 Total			\$42.1
122004	96" Main Relocation, Isolation Valve Ins	Kiewit Infrastructure Co	\$21.7
		Jacobs Consultants, Inc.	\$4.5
		Northwest Pipe Company	\$1.9
		RA Consultants, LLC	\$0.1
		AT&T CWO	\$0.1
		96" Main Relocation, Isolation Valve Ins Total	\$28.3
122004 Total			\$28.3
132010	Division Valves at West Service Center	Kokosing Industrial Inc.	\$17.9
		Division Valves at West Service Center Total	\$17.9
132010 Total			\$17.9
115001	Yard Piping, Valves and Venturi Meters	Lakeshore Global Corporation	\$15.2
		AECOM Great Lakes, Inc	\$0.3
		Yard Piping, Valves and Venturi Meters Total	\$15.6
115001 Total			\$15.6
116002	PA,SW and NE Raw Water Supply Tunnel Imp	Ballard Marine Construction LLC	\$14.2
		PA,SW and NE Raw Water Supply Tunnel Imp Total	\$14.2
116002 Total			\$14.2
170503	Transmission System Valve Replacement Pa	Ric-Man Construction Inc	\$9.9
		Transmission System Valve Replacement Pa Total	\$9.9
170503 Total			\$9.9
260207	Rehabilitation of Woodward Sewer System	Lanzo Construction Co., Florida	\$6.9
		Brown and Caldwell LLC	\$0.6
		PMA Consultants LLC	\$0.3
		Metropolitan United Methodist Churc	\$0.0
		Roman A. Avant	\$0.0
		Avanath North End Holdings, LLC	\$0.0
		CD Lewis Estates Inc	\$0.0
		Rehabilitation of Woodward Sewer System Total	\$7.8
260207 Total			\$7.8
222002	CON-183: DB 223 Inland Waters:	Jay Dee Contractors Inc.	\$7.5
		Urban Renewal Initiative Foundation	\$0.0
		CON-183: DB 223 Inland Waters: Total	\$7.5
222002 Total			\$7.5
232001	Fairview Sewage Pumping Station Imprvmts	Weiss Construction Co LLC	\$5.9
		Brown and Caldwell LLC	\$1.1
		Fairview Sewage Pumping Station Imprvmts Total	\$7.0
232001 Total			\$7.0
260204	Eng. Svcs for rehab of convey sewer system	Oscar Renda Contracting Inc	\$5.4
		Brown and Caldwell LLC	\$0.9
		Eng. Svcs for rehab of convey sewer system Total	\$6.3
260204 Total			\$6.3
Combined Top Ten Total			\$156.5

Top Ten Contracts – Key Contracts comprising a majority of actual spend for FY 2023.

Table 7 – Top Ten Contracts in actual spend for FY 2023 provides a list of the largest contracts that captured FY 2023 spend. These ten contracts account for \$164.0 million or 29% of FY 2023 total spend. A complete listing of contracts with over a million dollars in spend for FY 2023 can be found in Appendix C.

Table 7 – Top 10 Contracts in actual spend for FY 2023

Contract	Contract Title	Vendor	Amount (Millions)
2004456	14 Mile Trans Main Loop	Ric Man/Clark Joint Venture	\$41.3
2004825	(CMAR) for 96-Inch Water Trans Main	Kiewit Infrastructure Co	\$22.9
1803312	Division Valves at West Service Center Resv.	Kokosing Industrial Inc.	\$17.9
2000610	Yard Piping, Valves & Venturi Meter Meters	Lakeshore Global Corporation	\$16.9
GLWA-PC-792	Bio-Solids Dryer Facility	New England Fertilizer Company	\$15.7
GLWA-DB-150	Repair of Raw Water Tunnels	Ballard Marine Construction LLC	\$14.5
1802745	Water Trans Main, Valve & other repairs	Ric-Man Construction Inc	\$11.3
2102834	Facilities Maintenance Svcs. Staff Augment	Lakeshore Global Corporation	\$8.0
GLWA-DB-226	Repair & Rehab (DRI) Alter Rd. to (WRRF)	Jay Dee Contractors Inc.	\$7.7
2004082	Rehab of Woodward Sewer System	Lanzo Construction Co.	\$7.7
Subtotal Top Ten			\$164.0

Top Ten Vendors – The top vendors that dominated GLWA’s FY 2023 actual spend.

Table 8 – Top Ten Vendors by Total Spend highlights the vendors who received a majority of spend for FY 2023. These top ten vendors comprise \$257.1 million or 45% of total invoices paid. A complete list of vendor invoices in FY 2023 can be found in Appendix D.

Table 8 – Top Ten Vendors Total Spend

Vendor	Invoice Count	Purchase Order Count	Contract Count	Amount (Millions)
Lakeshore Global Corporation	157	12	12	\$49.6
DTE Energy *	4488	0	0	\$47.0
Ric Man/Clark Joint Venture	22	1	1	\$38.0
Kokosing Industrial Inc.	46	4	4	\$23.3
Kiewit Infrastructure Co	17	1	1	\$21.7
Commercial Contracting Corporation	65	10	10	\$16.5
Weiss Construction Co LLC	97	11	9	\$16.0
New England Fertilizer Company	13	1	1	\$15.5
Ballard Marine Construction LLC	28	2	2	\$14.8
Pullman SST, Inc.	51	4	4	\$14.8
Subtotal Top Ten	4984	46	44	\$257.1

*DTE (utility spend)

Detailed Appendices

Appendix A – FY 2023 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, 2022, through June 30, 2023.

Appendix B – FY 2023 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, 2022, through June 30, 2023.

Appendix C – FY 2023 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, 2022, through June 30, 2023.

Appendix D – FY 2023 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, 2022, through June 30, 2023.

Contract	Contract Title	Vendor	Amount (Awarded)
2103350	Pump St. No. 1 IMPROV	Weiss Construction Co LLC	\$91,453,079
2201068a	SWTP Medium Voltage Electrical System Replace	Clark Construction Company	\$64,457,860
2103688	Rehab of Connors Creek Sewer System	Oscar Renda Contracting Inc	\$50,508,706
2102859	Conveyance System Infrastructure IMPROV	Jay Dee Contractors Inc.	\$36,863,000
2101167	Cyber Security, Ovation, Instrum., & Controls Upgrade/Update	Emerson Process Management	\$35,285,413
2201255	SWTP 1958 Flocculator Replace	FH Paschen	\$25,468,603
2201142	Conveyance System Infrastructure IMPROV	Lakeshore Global Corporation	\$15,943,540
2103380	WWP HVAC IMPROV	Commercial Contracting Corporation	\$14,953,000
2004674	North Service Center BPS IMPROV	CDM Smith Michigan Inc	\$14,831,090
1902908	B/Creek CSO Effluent Conduit Access & Sediment. Mitigation	Jay Dee Contractors Inc.	\$13,158,292
2100239	WRR Facilities Structural Evaluation & Repairs	Kokosing Industrial Inc.	\$12,639,000
2202942	Pump St. Lift Pumps Rehab Other	PMA Consultants LLC	\$11,000,000
2100236	Reservoir Inspect., Design, CONST Admin, Resident Rep. Svcs.	Brown and Caldwell LLC	\$10,778,785
2202956	Professional & Technical Svcs. for Sewer Meter Support	PCI LLC	\$10,760,600
RFB-1123	Sodium Hypochlorite PO T's & C's	PVS Nolwood Chemical Inc	\$9,844,437
2202757	Rehab Joy Rd & Brush/Bates Sewers(KS)	Jay Dee Contractors Inc.	\$9,625,744
2101475	CSO Facility IMPROV	CDM Smith Michigan Inc	\$8,621,187
2004538	Instr./Control Syst. Replace St. Aubin, 7 Mile, Leib CSO	Burns & McDonnell Michigan Inc.	\$7,375,000
2102983	SCADA System Professional Svcs.	PCI LLC	\$6,894,870
2100340	Elevator maintenance, Repair, & Service	KONE Inc	\$6,440,000
2201041	Engineering Design Svcs. Agreement	FK Engineering Associates	\$5,988,888
2201762	Pumps Station 1 (PS 1) Rack & Grit HVAC Upgrade	Clark Construction Company	\$5,294,101
2200061	Design Svcs. of CSO Facilities IMPROV	Hazen and Sawyer	\$5,176,821
2101680	Replace instrumentation: LHWTP	Brown and Caldwell Constructors	\$5,125,915
sw-548	SW_WTP Sludge Treatment & Waste]	Colasanti Construction Services	\$5,100,000
2300247	WRAP Service Delivery Partner-Wayne Metro	Wayne Metro	\$4,647,493
2202790	(WRRF) IMPROV Sludge Feed Pumps DeWatering Facilities	CDM Smith Michigan Inc	\$4,346,982
2200368	WRRF PS No. 1 Discharge Gate Valves	J&S Valve, Inc	\$3,377,123
2201870	Replace Schoolcraft Water Main	Mark Anthony Contracting, Inc	\$3,265,896
2204949	Municipal Advisor Svcs.	PFM Financial Advisors LLC	\$3,150,000
2101878-1	2101878-1 CIP 260901Hazmat Bldg. Rehab (LK)	LaSalle Construction Services	\$2,932,000
2203412	Consult Svcs. for Workday Project	Slalom, LLC	\$2,781,472
2201101	Wastewater Engineering CCD-01	Commercial Contracting Corporation	\$2,486,000
2204376a	Replace & Rehab. of Water Mains along East Jefferson Ave.	Detroit Water and Sewerage	\$2,221,959
2203045	MiDeal (MMCP)	Dell Marketing LP	\$2,213,729
2101255	Belle Isle Seawall Rehab	Dean Marine & Excavating Inc.	\$2,158,245
2202164	SCREENINGS & GRIT TRANS. & DISPOSAL WRRF & CSO's	Waste Management of Michigan Inc	\$1,998,900
2101610	Magnetic Flow Meter Replace for Circular Primary Clarifiers	Rotor Electric Co	\$1,795,200
2201558	Gasoline & Diesel Fuel deliveries	Crystal Flash, Inc.	\$1,440,000
2103347-1	2023 TOES Eng. Svcs.	Arcadis of Michigan LLC	\$1,308,620
2103347-7	2023 TOES Eng. Svcs.	Hubbell, Roth & Clark, Inc.	\$1,111,111
2103347-4	2023 TOES Eng. Svcs.	Hazen and Sawyer	\$1,111,111
2103347-2	2023 TOES Eng. Svcs.	Brown and Caldwell LLC	\$1,111,111
2103347-9	2023 TOES Eng. Svcs.	Wade Trim Associates Inc	\$1,111,111
2103347-3	2023 TOES Engineering Services	Burns & McDonnell Michigan Inc.	\$1,111,111
2103347-6	2023 TOES Engineering Services	HNTB Michigan, Inc.	\$1,111,111
2103347-8	2023 TOES Engineering Services	Stantec Consulting Services Inc.	\$1,111,111
2300248	WRAP Service Delivery Partner-UWSEM	United Way for Southerastern MI	\$1,081,481
2204928	Gull Abatement for the WRRF Properties	ScAir Force Falconry & Bird Abateme	\$989,370
2103347-5	2023 TOES Engineering Services	HDR Michigan, Inc.	\$913,602
2101000	LH_WTP project for stockpiling a hauling sludge from site lagoo	M.L. Chartier, Inc.	\$823,000
2300249	(WRAP) Administrator - County of Macomb	County of Macomb	\$817,626
2104125	External Auditor Svcs.	Baker Tilly US LLP	\$800,000
2001493	Roofing Maintenance, Repair, & Emergency Response Svcs.	Schreiber Corporation	\$700,000
2204228	(WRAP) Administrator UWSEM	United Way for Southerastern MI	\$700,000
2301883	Secondary Clarifiers Brush Assembly Rehab	Ford W Hall Company Inc	\$597,696
2103733	Virtual Tour, Laser, & Unmanned Aerial Vehicle Scanning Svcs.	Wade Trim Associates Inc	\$525,090
2201077	Fence & Fence Repair, Gates, & Parking Control Devices	Nationwide Construction Group	\$474,492
2203506	Legal Services	Beam, Longest & Neff, LLC	\$450,000
2301545	Conner Creek Pump St. StormWater Motor #3 Repair	Heco Industrial Service Group, Inc.	\$447,551
2201811	Rental of Uniforms, Floor Mats, Mops, Towels, & Related Svcs.	Cintas	\$439,533
2104105	CCH Tagetik Support Agreement	CCH Tagetik	\$409,860
2301237	Rectangular Clarifiers, Cross Sludge Collector, & Scum Collector	Commercial Contracting Corporation	\$400,000
2101867	Gearbox Maintenance & Repair Svcs.	American Gear & Engineering, Inc	\$400,000
2202648	Maintenance & Repair Intrusion Alarm (Hardware & Software)	D/A Central Inc	\$397,575
2202429	Organizational Support for Workday Implementation	Plante & Moran PLLC	\$393,700
2203848	EPA Study PPCPs & PFASs	Brown and Caldwell LLC	\$388,025
2203891	Bonfire Support & API Integration Work - Renewal	Bonfire Interactive Ltd	\$373,000
2204670	Water Test Supplies & Reagents	Idexx Laboratories	\$368,960
2301505	IT Asset Disposal Svcs.	Re-Source Partners	\$300,000

Contract	Contract Title	Vendor	Amount (Awarded)
2202737	Modeling Impacts of Loss of Power System Resilience	Regents of the University of Mich.	\$291,203
2300808	ISA Training	International Society of Automation	\$280,218
2203703-1	Assistance Optimizing GLWA collaboration U of M	Regents of the University of Mich.	\$280,002
1803126	Chemicals & Laboratory Supplies	Hach Company	\$271,406
2204432	Time Clock	Accu-Time Systems, Inc.	\$266,272
2200417	Trimble Unity 3-year Subscription	Trimble Inc	\$261,700
2300094	Terrazzo Flooring Repairs	Boston tile and Terrazzo Company	\$259,135
2204513	Video Mgmt. System Emergency & Replace Svcs.	D/A Central Inc	\$250,000
2204326	96" Main Relocation, Isolation Valve Ins	RA Consultants, LLC	\$245,361
2203399	Gauge-Adjusted Radar Rainfall (GARR)	Vieux & Associates Inc.	\$240,520
2300336	CHEMICAL CONTAINMENT SPILL DETECTION PROJECT	W.S.I. Industrial Services, Inc.	\$237,000
1904562	Fuel Maintenance	Phoenix Environmental Inc	\$233,280
2201951	Day tanks, sensors, & other-above-ground diesel fuel storage	Phoenix Environmental Inc	\$226,084
2200545	Renovate 3rd floor of WRRF New Administration Bldg. (NAB)	Albert Kahn Associates Inc.	\$215,250
2301135-1	Basin, Influent, Effluent Roller Gates	Hesco Group LLC	\$207,000
2203215	NavVis VLX On-site Training NavVis IVION	NavVis US, Incorporated	\$202,275
2204633	Memberships	Info-Tech Research Group Inc	\$181,074
2203141	Professional Svcs. Contract (Technical Svcs. Agreement)	Innomotics LLC	\$177,108
2203991	Scrubber Tank Repairs Chlorination/De-Chlorination Areas	Powell Fabrication & Manufacturing	\$172,240
2202518a	Laboratory & Various Chemical Supplies	VWR International	\$167,590
2203543	Emergency - Install Spare EIMCO Unit & Rehab of Damaged Unit	Titus Welding Company Inc	\$164,929
2204172	Ontic - Protective Intelligence	Ontic Technologies, Incorporated	\$159,000
2300624	Personal Svcs.	Michael Gould	\$152,000
2300639	Remove Center Drive Assembly 2nd Clarifier B-23, Install Spare	Titus Welding Company Inc	\$152,000
2202738	Pilot Test Evaluate Anaerobic Digestion for Wastewater Solids	Brown and Caldwell LLC	\$150,000
2203915	Real Estate Matters	Rosati, Schultz, Joppich &	\$150,000
2204680	Sewer Operations Primary Sedimentation	Rotor Electric Co	\$150,000
2300508	Water Administration and General Expense	Brown and Caldwell LLC	\$133,820
2204068	24 Passenger shuttle bus service	Lavdas Limousines	\$130,000
2200365	Emergency Conveyors, Gearboxes, Pumps, & Other	RMF Nooter Inc	\$125,000
2203353	GLWA Water Charges Methodology Consult Svcs.	Raftelis	\$120,000
2301625	Operations, Maintenance, & Engineering Assistance for the GLW	Daniel A Hensley Alford	\$100,000
2204897	Consult Svcs.	B&R Consultants	\$96,000
2301198	UPS Replace	Superior Electric Great Lakes Co	\$90,959
2203414	Sourcewell United Rentals. Contract	United Rentals North America Inc	\$80,000
2300745	Seagull Abatement Svcs.	ScAir Force Falconry & Bird Abateme	\$80,000
2204590	Power Meter Install Svcs. at LH_WTP WTP	DES Electric LLC	\$76,836
2204867	Install of GLWA owned sink & faucet at LH_WTP Pilot Lab Area	Macomb Mechanical Inc	\$69,637
2202701	Planning strategies for evaluating risk	ESPRI	\$68,260
1803448	Parts & Repair Svcs. for Various Motors	Birclar Electric & Electronics LLC	\$64,325
2204165	Rack & Grit Explosion Proof Disconnects	Rotor Electric Co	\$63,344
2302484	Overhead Crane & Hoist Operator & Mobile Crane Operator Tra	Crane Tech LLC	\$59,375
2202339	Modifications to Screen & Grit Conveyor #1	DE-CAL Inc	\$55,746
2204527	Pump Asset Mgmt. & Optimization	Specific Energy, Inc.	\$52,430
2300265	Consult Svcs. for GLWA Conner Creek Pump St.	Behnke Pump Technologies, LLC	\$50,000
2204261	Sodium Hypochlorite & Sodium Bisulfate Project	CDM Smith Michigan Inc	\$49,970
2202321	Chlorination Facility Vault Waterproofing	Havener Tech	\$49,950
2302402	DOE Hydroth. Liquefaction Convert Organic Wet Wastes Trans F	Public Sector Consultants	\$49,760
2300781	LH_WTP Intake & Detroit River Observing System	LimnoTech	\$48,746
2300240	Relocating the sludge level sensors at each sedimentation basin	PCI LLC	\$48,705
2300534	HDS Pilot Proposal	Hifi Engineering Inc.	\$45,119
2200325	(AI) Guided Water Treatment Plant Operations & Maintenance	Brown and Caldwell LLC	\$45,000
2204544	PMS Services at WRRF	Heco Industrial Service Group, Inc.	\$45,000
2201523	ASTERRA leak detection	Asterra	\$45,000
2201341	Abatement Mold, Asbestos, Materials, & 3rd Party Test	Global Green Service Group	\$45,000
2200364	(AI) Water Advisory Professional Services	Arcadis of Michigan LLC	\$45,000
1904860	Bacteriological Water Test Supplies & Reagents	Idexx Laboratories	\$44,938
2301759	Manholes Leak Stopping Polymer Injection Grouting LEIB CSO	Havener Tech	\$43,595
2301097	Concrete Floor Repair at Chlorination & De Chlorination	Carlette Construction & Consulting	\$42,531
2201070	SREEN HOUSE PROJECT SERVICE RENDERED	Advance Instrumentation Systems	\$42,000
2300872	Consult Svcs. to support FEMA Insurance Claims	FK Engineering Associates	\$41,560
2201630	Belle Isle Intake Hypochlorite Feed System Auto.	PCI LLC	\$41,170
2203945	Trace Test of Mercury, Copper, TOC & P	Trace Analytical Laboratories Inc	\$40,342
2201286	LC-MS/MS Cyanotoxin analyses	Wayne State University	\$40,000
2201513	Dem & equipment parts & repairs Fleet Team.	Weingartz Supply Co., Inc.	\$40,000
2300845	CONST Agreement	Lutz Construction LLC	\$39,575
2300908	AISC ESTIMATE: 1156 Water WORKS CHEMIC	Advance Instrumentation Systems	\$39,500
2202291	Comprehensive Professional Development Classes	CLE Strategic Solutions LLC	\$36,000
2204908	CHEMICAL CONTAINMENT SPILL DETECTION PROJECT	Advance Instrumentation Systems	\$35,000
2203592	PPM & QA Performance Audit Support	Teledyne Leeman Labs	\$33,576
2301317	Modification of Grit Flight #1 with Sprocket	Titus Welding Company Inc	\$33,390

Contract	Contract Title	Vendor	Amount (Awarded)
2200411	Water Treatment Opt. Assess & Integration AI	University of Akron	\$30,000
2203846	Mgmt. of a 501(c)(6) Mid-West Biosolids Organization.	Kevin Burke III	\$30,000
2203345	Leib CSO: Front Entrance Gate Replace.	Industrial Fence & Landscaping Inc	\$29,059
2202675	Chlorine Storage Room Calibration Project	Advance Instrumentation Systems	\$29,000
2300181	Rewiring of WRRF External Pole Lighting	DES Electric LLC	\$28,690
2301613	Painting at Complex II DeWatering Bldg.	Signature Contracting Group, LLC	\$27,500
2300246	Environmental Social Governance Program (ESG)	Plante & Moran PLLC	\$26,350
2203808	Rack & Grit Lighting Rework	Rotor Electric Co	\$25,985
2202200	Infrared Component & Socket Aeration Tank 14, 15, 16, 17 & 18	Electrical Industries	\$25,500
2300257	As-Needed On-Site ASL Interpretation Svcs.	Bromberg & Associates LLC	\$24,840
2204693	Oakwood CSO Stairwell HVAC Design	The Osborn Engineering Company	\$24,162
2203102	Prefect Cloud Platform Purchase	Prefect Technologies, Incorporated	\$23,990
2203975	Rack & Grit Lighting Rework	Rotor Electric Co	\$21,677
2300241	2300241-WWP UPS Test & Training	PCI LLC	\$19,880
2301072	Repair of Rectangular Tank #1 Cross Collector	Commercial Contracting Corporation	\$19,000
2203335	Microsoft Intune - Quote No. 081522-2	SkyNorth Software	\$18,900
2300869	Engineering Support GLWA 2021 Flood Damage Claim	NTH Consultants Ltd	\$18,201
2203032	Build & Dismantle Temporary Platform	Electrical Industries	\$18,000
2301266	Polyurethan Injection Grouting Leak Stopping Hubbell CSO	Havener Tech	\$17,000
2202674	Water Works Chlorine Flow Meter Feeder Room Calibration	Advance Instrumentation Systems	\$17,000
2203947	Replace of Heating & Cooling Coils	Core Mechanical, Inc.	\$16,537
2300914	Detailed Site Survey at CSO Facilities	Metrix Instrument Company LP	\$15,634
2204888	Belle Isle Ice Boom Repair	Dean Marine & Excavating Inc.	\$15,510
2204890	WRAP Relief Utility Billing Import	BS&A Software	\$15,000
2300354	Stone Topping over Existing Stone Rd.	Davenport Brothers Construction Co.	\$13,800
2300762	Lockout-Tagout Procedure Writing for the Hypo & RRO Bldg.s	SEAM Group LLC	\$13,750
2897583	Req#170300	VWR International	\$13,400
2200643	Sodium Hypochlorite Tank Repairs at Conner Creek CSO Facility	Havener Tech	\$12,000
2102829	Alum VFD 20.01 Service Call & Training	Intelligent Systems Group LLC	\$11,928
2202412	PM Service of Balances, Autoclaves, & Microscopes	Tobys Instrument Shop Inc	\$9,411
1703524	Thyssenkrupp Elevators PPM	TK Elevator Corporation	\$8,119
2200950	Water Treatment Svcs. for LH_WTP WTP	Nalco Water	\$4,650
2301288	Stone Topping at St. Aubin CSO	Davenport Brothers Construction Co.	\$3,950
2301610	PM TRAININGIN-TANK EVAL. & 3D TANK SCAN	Brentwood Industries Inc	\$3,700
2302089	Mat Delivery Service	Action Mat & Towel Rental	\$2,750
1804127	Thyssenkrupp Elevators PPM	Hach Company	\$1,599
Grand Total			\$553,685,166

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Weiss Construction Co LLC	49	47	47	\$ 91,453,079
Clark Construction Company	5	5	5	\$ 69,751,961
Jay Dee Contractors Inc.	16	16	16	\$ 59,647,036
Oscar Renda Contracting Inc	4	3	3	\$ 50,508,706
Emerson Process Management	6	5	5	\$ 35,285,413
CDM Smith Michigan Inc	14	14	14	\$ 27,849,229
FH Paschen	2	2	2	\$ 25,468,603
Commercial Contracting Corporation	37	37	37	\$ 17,858,000
PCI LLC	11	11	10	\$ 17,789,186
Lakeshore Global Corporation	16	15	15	\$ 15,943,540
Kokosing Industrial Inc.	9	9	9	\$ 12,639,000
Brown and Caldwell LLC	11	10	10	\$ 12,606,741
PVS Nolwood Chemical Inc	10	10	2	\$ 11,303,089
PMA Consultants LLC	11	10	9	\$ 11,000,000
Burns & McDonnell Michigan Inc.	2	2	2	\$ 8,486,111
KONE Inc	10	10	10	\$ 6,440,000
Hazen and Sawyer	10	10	10	\$ 6,287,932
FK Engineering Associates	7	7	7	\$ 6,030,448
Brown and Caldwell Constructors	2	2	2	\$ 5,125,915
Colasanti Construction Services	2	2	2	\$ 5,100,000
Kemira Water Solutions	2	2	0	\$ 5,098,500
Wayne Metro	1	1	1	\$ 4,647,493
Detroit Water and Sewerage	4	4	1	\$ 4,281,959
PFM Financial Advisors LLC	3	3	2	\$ 3,505,800
J&S Valve, Inc	1	1	1	\$ 3,377,123
Mark Anthony Contracting, Inc	7	7	7	\$ 3,265,896
LaSalle Construction Services	1	1	1	\$ 2,932,000
Slalom, LLC	1	1	1	\$ 2,781,472
Dell Marketing LP	2	2	1	\$ 2,219,729
Dean Marine & Excavating Inc.	2	2	2	\$ 2,173,755
Wade Trim Associates Inc	29	29	28	\$ 2,111,111
Rotor Electric Co	14	14	11	\$ 2,101,104
Waste Management of Michigan Inc	26	25	3	\$ 2,022,515
United Way for Southerastern MI	2	2	2	\$ 1,781,481
Dell Computer Corporation	7	7	1	\$ 1,749,137
CDW Computer Centers Inc	64	64	0	\$ 1,672,238
Carmeuse Lime & Stone	2	2	0	\$ 1,536,120
Grainger	1101	1091	0	\$ 1,522,013
Carus LLC	4	4	0	\$ 1,491,246
Crystal Flash, Inc.	2	2	2	\$ 1,440,000
Arcadis of Michigan LLC	18	18	18	\$ 1,353,620
HNTB Michigan, Inc.	1	1	1	\$ 1,111,111
Hubbell, Roth & Clark, Inc.	8	8	8	\$ 1,111,111
Stantec Consulting Services Inc.	1	1	1	\$ 1,111,111
ScAir Force Falconry & Bird Abateme	2	2	2	\$ 1,069,370
HDR Michigan, Inc.	4	4	4	\$ 913,602
M.L. Chartier, Inc.	2	2	2	\$ 823,000
County of Macomb	2	2	2	\$ 817,626
Baker Tilly US LLP	2	2	1	\$ 803,000
Schreiber Corporation	3	3	3	\$ 700,000
D/A Central Inc	3	3	3	\$ 647,575
Data Consulting Group Inc	4	4	0	\$ 614,624
W C Ducomb Company	33	33	0	\$ 611,824
Ford W Hall Company Inc	2	2	1	\$ 601,552
Regents of the University of Mich.	4	4	3	\$ 571,525
OpTech	7	7	0	\$ 568,862
Cintas	49	45	2	\$ 557,925
MetalFab Inc	36	35	0	\$ 549,977
Water Research Foundation	2	2	0	\$ 544,466
JCI Jones Chemicals Inc	23	22	9	\$ 540,659
JGM Valve Corporation	34	33	0	\$ 508,377
Phoenix Environmental Inc	8	8	3	\$ 504,569
Heco Industrial Service Group, Inc.	4	3	2	\$ 494,851
Nationwide Construction Group	1	1	1	\$ 474,492
Mersino Dewatering Inc	1	1	0	\$ 460,000
Beam, Longest & Neff, LLC	1	1	1	\$ 450,000
American Gear & Engineering, Inc	7	7	1	\$ 440,950
W.S.I. Industrial Services, Inc.	9	9	3	\$ 438,750
Plante & Moran PLLC	5	4	4	\$ 420,050
Polydyne Inc	6	6	0	\$ 419,223

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Idexx Laboratories	21	21	21	\$ 413,898
Systems Specialties	20	20	0	\$ 412,846
CCH Tagetik	2	2	2	\$ 409,860
Dickinson Wright PLLC	2	2	1	\$ 402,000
Titus Welding Company Inc	6	5	4	\$ 400,219
Truck & Trailer Specialties Inc.	1	1	0	\$ 400,000
Bonfire Interactive Ltd	2	2	1	\$ 388,000
Detroit Pump & Mfg Co	33	32	1	\$ 345,011
Yates Industries Inc	8	8	0	\$ 341,101
Sterling Infosystems, Inc.	2	2	0	\$ 335,000
Trimble Inc	7	7	1	\$ 326,289
Penco, Inc.	6	6	0	\$ 323,960
Hach Company	71	69	63	\$ 301,490
Re-Source Partners	1	1	1	\$ 300,000
RS Technical Services Inc	63	63	0	\$ 299,462
Mcaughton Mckay Electric Company	127	123	0	\$ 298,099
Robert Half Finance & Accounting	15	14	0	\$ 293,630
Motor City Pipe & Supply Co	274	271	0	\$ 289,453
Kennedy Industries Inc	30	29	2	\$ 289,319
International Society of Automation	1	1	1	\$ 280,218
Oscar W Larson Company	3	2	0	\$ 268,700
Accu-Time Systems, Inc.	1	1	1	\$ 266,272
Alfa Laval Inc	13	13	0	\$ 263,595
Moody's Investors Service Inc	1	1	0	\$ 262,000
Imperial Dade Paper & Bag	1	1	0	\$ 260,000
Boston tile and Terrazzo Company	2	2	2	\$ 259,135
Veolia Water Technologies Canada	1	1	0	\$ 254,565
Fitch Ratings Inc	2	2	0	\$ 254,000
RA Consultants, LLC	2	2	2	\$ 245,361
Vieux & Associates Inc.	1	1	1	\$ 240,520
Clayton Industries	13	10	1	\$ 238,409
Madison Electric Company	59	58	0	\$ 236,339
American Water Works Association	1	1	0	\$ 236,249
Premier Safety	55	55	0	\$ 226,530
The Macomb Group Inc	78	78	0	\$ 225,082
Albert Kahn Associates Inc.	2	2	2	\$ 215,250
Innomotics LLC	4	4	1	\$ 211,616
People Driven Technology	1	1	0	\$ 211,440
Henry Ford College	2	2	0	\$ 210,167
Waterworks Systems & Equipment Inc	7	7	0	\$ 207,102
Hesco Group LLC	1	1	1	\$ 207,000
Lubrication Engineers Inc.	22	22	0	\$ 204,582
VWR International	28	28	15	\$ 203,047
NavVis US, Incorporated	3	2	2	\$ 202,275
The Foster Group LLC	3	3	2	\$ 200,000
i3-ImageSoft	2	2	1	\$ 197,241
GALCO Industrial Electronics	37	37	0	\$ 194,606
Eastern Oil Company	26	24	0	\$ 194,209
Lavdas Limousines	2	2	1	\$ 187,600
Info-Tech Research Group Inc	1	1	1	\$ 181,074
MSC Industrial Supply Company	189	189	0	\$ 180,828
DLT Solutions LLC	5	5	0	\$ 180,752
Powell Fabrication & Manufacturing	5	5	3	\$ 172,984
Fluid Process Equipment	3	3	0	\$ 162,639
Advance Instrumentation Systems	6	6	6	\$ 162,500
Amazon Web Services Inc	2	2	0	\$ 161,935
MacAllister Machinery Co Inc	8	8	0	\$ 160,975
Zoll Medical Corporation	1	1	0	\$ 159,153
Ontic Technologies, Incorporated	1	1	1	\$ 159,000
Experis US Inc	5	5	0	\$ 152,285
Michael Gould	1	1	1	\$ 152,000
Rosati, Schultz, Joppich &	1	1	1	\$ 150,000
RMF Nooter Inc	6	5	1	\$ 145,020
S&P Global Ratings	1	1	0	\$ 144,000
United Rentals North America Inc	5	5	2	\$ 143,257
Actuator Specialties	11	11	0	\$ 142,773
Capp USA	22	22	0	\$ 141,845
Havener Tech	5	5	4	\$ 135,295
Aston Carter Inc.	5	5	0	\$ 134,096
Michigan.com	4	4	0	\$ 132,940
Evoqua Water Technologies LLC	12	12	0	\$ 131,913

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Aquafit Chlorination System LLC	7	7	0	\$ 128,205
GEA Mechanical Equipment US Inc	1	1	0	\$ 122,744
Raftelis	1	1	1	\$ 120,000
Hydra-Tech Pumps LLC	4	4	0	\$ 118,940
JWC Environmental Inc.	4	4	0	\$ 118,035
Genesee County Drain Commissioner	1	1	0	\$ 118,000
Hamlett Environmental Technologies	7	7	0	\$ 116,554
Detroit Salt Company LLC	2	2	0	\$ 108,450
Access Interactive	2	1	0	\$ 106,210
DES Electric LLC	4	4	4	\$ 105,526
Alexander Chemical Corporation	2	2	0	\$ 104,000
Dubois-Cooper Associates Inc	3	3	0	\$ 102,522
Landia, Inc.	1	1	0	\$ 102,135
Nearmap US Inc.	2	2	1	\$ 101,505
Pomp's Tire Service Inc.	1	1	0	\$ 100,000
Michigan State University	1	1	0	\$ 100,000
Daniel A Hensley Alford	1	1	1	\$ 100,000
City of Taylor	1	1	0	\$ 99,000
B&R Consultants	1	1	1	\$ 96,000
Wadsworth Solutions Northwest	5	5	0	\$ 92,604
Macomb Mechanical Inc	7	6	2	\$ 92,064
OSIsoft LLC	1	1	0	\$ 91,748
Superior Electric Great Lakes Co	4	1	1	\$ 90,959
FranklinCovey Client Sales Inc.	1	1	0	\$ 90,950
Merit Laboratories Inc	11	11	0	\$ 88,800
Federal Pipe & Supply Co Inc	98	98	0	\$ 86,149
Siemens Industry Inc	15	12	0	\$ 83,608
Fred's Key Shop	2	2	0	\$ 80,199
City of Rochester Hills	1	1	0	\$ 80,000
City of Detroit Water and Sewage De	1	1	0	\$ 80,000
City of Warren	1	1	0	\$ 80,000
Ingersoll Rand Company	8	7	0	\$ 79,934
SE Michigan Council of Governments	1	1	0	\$ 78,584
Zones Inc	2	1	0	\$ 78,578
Rosemount Analytical Inc	3	3	0	\$ 78,003
Allingham Corporation	6	6	0	\$ 73,720
Birclar Electric & Electronics LLC	2	2	1	\$ 70,865
Jack Doheny Companies Inc	14	14	0	\$ 68,389
ESPRI	1	1	1	\$ 68,260
HESCO Group Inc.	14	14	0	\$ 67,989
Laird Plastics	2	2	0	\$ 67,755
Robinson Fans Incorporated	1	1	0	\$ 67,211
US Bank	7	7	0	\$ 64,750
Cyber Defense Technologies	1	1	0	\$ 62,332
EH Wachs	2	2	0	\$ 61,465
Solarwinds	1	1	0	\$ 60,826
Energy Products Inc	6	6	0	\$ 60,060
SkyNorth Software	2	2	1	\$ 59,900
Crane Tech LLC	1	1	1	\$ 59,375
Miss Dig System Inc.	1	1	0	\$ 59,256
Gray Matter Systems LLC	2	2	0	\$ 59,000
Brentwood Industries Inc	3	3	1	\$ 58,078
DE-CAL Inc	8	8	8	\$ 55,746
Great Lakes Electric Company, Inc	5	5	0	\$ 55,422
Owl Cyber Defense Solutions	2	2	0	\$ 54,675
Matterport, Inc.	1	1	0	\$ 52,776
Specific Energy, Inc.	1	1	1	\$ 52,430
Carlson-Dimond & Wright Inc	14	12	0	\$ 51,563
Sehi Computer Products Inc	4	4	0	\$ 51,387
Schneider Electric Systems USA Inc.	3	3	0	\$ 51,032
Electrical Industries	3	3	2	\$ 50,150
EMC Corporation	3	3	0	\$ 50,009
Water Environment Federation	1	1	0	\$ 50,000
Behnke Pump Technologies, LLC	1	1	1	\$ 50,000
Public Sector Consultants	2	1	1	\$ 49,760
A/C Service & Repair Inc.	3	3	0	\$ 48,755
LimnoTech	2	2	2	\$ 48,746
Carahsoft Technology Group	1	1	0	\$ 48,543
L&W Supply	1	1	0	\$ 48,100
Christy Glass Company, Inc.	2	2	0	\$ 48,000
Motion Industries Inc	14	14	0	\$ 47,887

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Pumps & Systems Inc	3	3	0	\$ 45,783
Kusters Zima Corporation	2	2	0	\$ 45,680
Hifi Engineering Inc.	1	1	1	\$ 45,119
Advanced Machine & Engineering Co	1	1	0	\$ 45,095
Global Green Service Group	2	1	1	\$ 45,000
Asterra	1	1	1	\$ 45,000
Nuair Fluid Power Inc	5	5	0	\$ 44,675
SPX Flow US LLC	3	2	0	\$ 43,421
Carlette Construction & Consulting	1	1	1	\$ 42,531
Moss Telecommunications Services	1	1	0	\$ 42,265
Communications Professionals Inc	13	13	0	\$ 41,421
USA Bluebook - Main	6	6	0	\$ 41,407
Trace Analytical Laboratories Inc	1	1	1	\$ 40,342
Wayne State University	6	6	6	\$ 40,000
Weingartz Supply Co., Inc.	1	1	1	\$ 40,000
Alro Steel Corporation	3	3	0	\$ 39,846
Beasley Media Group LLC	1	1	0	\$ 39,800
Midwest Municipal Instrumentation	7	7	0	\$ 39,603
Lutz Construction LLC	4	2	2	\$ 39,575
Ideation Orange	1	1	0	\$ 39,500
Skyworks LLC	1	1	0	\$ 38,936
HI Controls LLC	5	5	0	\$ 37,941
RedVector.com LLC	1	1	0	\$ 37,220
Audacy Operations, Inc.	1	1	0	\$ 36,856
Circuit Breaker Sales Co., Inc.	1	1	0	\$ 36,300
CLE Strategic Solutions LLC	1	1	1	\$ 36,000
Motorola Solutions Inc.	1	1	0	\$ 35,947
Continental Catering & Events	2	2	0	\$ 35,000
Alpha Psychological Services PC	1	1	0	\$ 35,000
Dani's Transport	1	1	0	\$ 34,365
Fab Tech Wastewater Solutions LLC	3	3	0	\$ 34,362
Teledyne Leeman Labs	1	1	1	\$ 33,576
Durawear Glove & Safety Co. Inc.	11	11	0	\$ 33,117
Best Aire Compressors Services Inc	7	7	0	\$ 33,063
PTSolutions	1	1	0	\$ 32,767
BondLink	3	3	0	\$ 30,754
Marshall E. Campbell Company	13	13	0	\$ 30,396
University of Akron	1	1	1	\$ 30,000
Kevin Burke III	1	1	1	\$ 30,000
Industrial Fence & Landscaping Inc	1	1	1	\$ 29,059
Tri County Equipment Inc	2	2	0	\$ 28,546
Public Rubber & Supply Co Inc	26	26	0	\$ 28,190
Ayyeka Inc.	2	2	0	\$ 28,085
Better Bolting, Incorporated	2	2	0	\$ 27,842
SDSpro LLC	1	1	0	\$ 27,699
Signature Contracting Group, LLC	1	1	1	\$ 27,500
EJ USA Inc	10	10	0	\$ 26,954
Canon Solutions America Inc	2	2	0	\$ 26,524
Integra Chemical Company	4	4	0	\$ 25,754
SW Controls Inc	4	4	0	\$ 25,381
Tracker	2	2	0	\$ 25,380
Midwest Air Filter Inc	23	23	0	\$ 25,289
Bromberg & Associates LLC	2	2	1	\$ 25,141
Kerr Pump and Supply, Inc.	4	4	1	\$ 25,102
FTP Today Inc.	2	2	0	\$ 24,967
Society For Human Resource Mgt.	2	2	0	\$ 24,965
ERDCO Engineering Corporation	3	3	0	\$ 24,951
TK Elevator Corporation	10	10	4	\$ 24,504
The Osborn Engineering Company	1	1	1	\$ 24,162
Prefect Technologies, Incorporated	1	1	1	\$ 23,990
Alfonsi Railroad Construction Co	2	2	0	\$ 23,827
Park Place Technologies LLC	1	1	0	\$ 23,684
Quality Air Service Inc.	1	1	0	\$ 23,535
Signs.com	1	1	0	\$ 23,395
Crucial Learning	1	1	0	\$ 23,300
YTI Office Express	29	29	0	\$ 22,870
E2intel	3	3	0	\$ 22,500
Johnson Controls Inc.	8	6	3	\$ 22,355
ZOHO Corporation #4926	1	1	0	\$ 22,130
Industrial Furnace Co Inc	1	1	0	\$ 21,774
Innovyze Inc	2	2	0	\$ 21,700

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
BAVCO	10	9	0	\$ 21,261
Schattler Shades & Blinds LLC	2	2	0	\$ 21,001
Wayne County Community College	2	2	0	\$ 20,700
Regents of the University of MI	3	2	0	\$ 20,460
Corrosion Fluid Products	5	4	0	\$ 20,364
Tarrant Regional Water District	1	1	0	\$ 20,000
Technical Hot & Cold	1	1	0	\$ 20,000
RJ Stacey LTD	3	3	1	\$ 19,800
Premier Group Associates LC	9	8	5	\$ 19,498
Dunbar Mechanical, Inc.	4	4	0	\$ 19,000
Great Lakes Pump & Supply Co	1	1	0	\$ 18,918
HF Scientific	1	1	0	\$ 18,686
Galloup,Forberg Smith, Merlo Energy	8	7	0	\$ 18,543
The Transmitter Shop	1	1	0	\$ 18,465
Maza Construction Engineering Inc.	3	2	0	\$ 18,400
Dun & Bradstreet Inc	1	1	0	\$ 18,230
NTH Consultants Ltd	2	2	2	\$ 18,201
Harold Beck & Sons Inc	1	1	0	\$ 17,870
Davenport Brothers Construction Co.	2	2	2	\$ 17,750
Black Anvil Construction Supplies	19	19	0	\$ 17,695
Eganix, Inc.	1	1	0	\$ 17,290
Lyon LLC	1	1	0	\$ 17,205
Binkelman Corporation	28	28	0	\$ 17,038
National Oilwell Varco, LP	1	1	0	\$ 16,865
Uline, Inc.	15	15	0	\$ 16,648
Core Mechanical, Inc.	3	2	2	\$ 16,537
Unconventional Solutions Inc	4	4	0	\$ 16,519
B&H Photo-Video	2	2	0	\$ 16,441
PTS Professional Technical Service	1	1	0	\$ 16,245
Compressor Engineering Corporation	7	7	0	\$ 15,794
Emergency Restoration	1	1	0	\$ 15,639
Metrix Instrument Company LP	1	1	1	\$ 15,634
TSP Environmental	1	1	0	\$ 15,515
Serpentix Conveyor	1	1	0	\$ 15,337
EMP Industries Inc	2	2	0	\$ 15,239
Institute For Environmental Health	1	1	0	\$ 15,120
BS&A Software	1	1	1	\$ 15,000
SafetySkills, LLC	1	1	0	\$ 14,400
Kiesler Police Supply Inc	4	4	0	\$ 14,396
Environmental Resource Associates	16	16	0	\$ 14,234
Service Electric Supply Inc	29	29	0	\$ 14,006
Fibergrate Composite Structures	1	1	0	\$ 13,949
Safety Services Inc	28	28	0	\$ 13,876
Digital Assurance Certification LLC	4	4	0	\$ 13,800
SEAM Group LLC	1	1	1	\$ 13,750
HD Edwards & Company	13	12	0	\$ 13,650
Scaffolding Incorporated	1	1	0	\$ 13,475
Tobys Instrument Shop Inc	8	7	1	\$ 13,125
Gold Standard Diagnostics Horsham	3	3	0	\$ 12,981
Shimadzu Scientific Instruments Inc	3	3	0	\$ 12,687
Keco Inc.	1	1	0	\$ 12,550
Barta Sales LLC	5	4	0	\$ 12,250
Chemtrac Inc	1	1	0	\$ 12,070
Action Impact - Eastpointe	1	1	0	\$ 12,000
Intelligent Systems Group LLC	1	1	1	\$ 11,928
Klein Inc.	2	2	0	\$ 11,668
Secure Door LLC	3	2	1	\$ 11,583
Central Poly-Bag Corp	4	4	0	\$ 11,465
Tru Steel Metals LLC	2	2	0	\$ 11,093
Blue Water Air Compressor	4	4	0	\$ 10,923
Chemical Systems Inc	3	3	0	\$ 10,664
Imagemaster, LLC	1	1	0	\$ 10,500
Met One Instruments Inc	3	3	0	\$ 10,212
CBT Nuggets, LLC	1	1	0	\$ 10,180
Dice Career Solution	1	1	0	\$ 10,026
Miller Canfield Paddock & Stone PLC	1	1	0	\$ 10,000
Cincinnati Babbitt Inc	1	1	0	\$ 9,971
Metrotech Automotive	3	3	0	\$ 9,728
AT&T	3	2	0	\$ 9,694
Valve Reconditioning Service	2	2	0	\$ 9,658
F B Wright Company	3	3	0	\$ 9,411

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
B & H Machine Sales, Inc	3	3	0	\$ 9,344
Harrington Industrial Plastics LLC	7	7	0	\$ 9,304
Hotsy Midwest Cleaning Systems	1	1	0	\$ 9,290
Brock Tool of Detroit, Inc.	2	2	0	\$ 9,093
Progressive Plumbing Supply Co Inc	34	34	0	\$ 9,080
J. Dedoes Enterprises Inc.	1	1	0	\$ 8,988
Indeed, Incorporated	2	2	0	\$ 8,960
Berrington Pumps & Systems, Inc	1	1	0	\$ 8,926
Complete Battery Source	3	3	0	\$ 8,639
Indian Springs Mfg. Co Inc	4	4	0	\$ 8,581
McMaster-Carr Industrial Supply Co	16	16	0	\$ 8,570
Ametek Power Instruments	1	1	0	\$ 8,471
Dynamita	1	1	0	\$ 8,400
Brehob Corporation	5	5	0	\$ 8,393
R.S. Means Company LLC	2	2	0	\$ 8,252
YSI Incorporated	2	2	1	\$ 8,235
DP Brown Of Detroit Inc	2	2	0	\$ 8,075
Aqua Solutions Inc.	2	2	0	\$ 8,048
Andax Industries LLC	5	5	0	\$ 8,029
ReadyOP Communications Inc.	2	1	0	\$ 8,000
Allstate Industrial Equipment	2	2	0	\$ 7,855
Sodexo Inc.	2	2	0	\$ 7,500
Micro Motion Inc	1	1	0	\$ 7,471
Communication Supply Co.	2	2	0	\$ 7,467
Citra, LLC	2	2	0	\$ 7,348
Madonna University	4	4	0	\$ 7,225
Bearing Headquarters Co	8	8	0	\$ 7,012
Metro Welding Supply Corporation	19	14	5	\$ 6,964
Jim Myers & Sons, Inc.	1	1	0	\$ 6,962
International Controls & Equipment	1	1	0	\$ 6,857
Choctaw-Kaul Distribution Company	9	9	0	\$ 6,842
Rosemount Inc	2	2	0	\$ 6,721
Hanna Instruments USA	2	2	0	\$ 6,670
Ohio Medical LLC	1	1	0	\$ 6,665
Kirk's Automotive Inc	23	23	0	\$ 6,560
Pure Data Services, LLC	3	2	0	\$ 6,493
Crane Technologies Group Inc	1	1	0	\$ 6,480
American Water College	2	2	0	\$ 6,380
DTN LLC	2	2	0	\$ 6,344
Hi-Lo Industrial Trucks Co. Inc.	1	1	0	\$ 6,202
AVE Office Supplies	8	8	0	\$ 6,194
Greyline Instruments	1	1	0	\$ 6,095
American Red Cross	1	1	0	\$ 5,993
Anderson Process	1	1	0	\$ 5,980
Computational Hydraulics Inc	1	1	0	\$ 5,920
EKUIPTTECH, LLC	2	2	0	\$ 5,848
I & C Sales North Inc	2	2	0	\$ 5,711
Advance Plumbing & Heating Supply	7	7	0	\$ 5,656
Ibex Battery Systems LLC	1	1	0	\$ 5,600
BCC Distributon	7	7	0	\$ 5,491
Helwig Carbon Products Inc	3	3	0	\$ 5,309
Exotic Automation & Supply	3	3	0	\$ 5,267
Sherwin Williams Company	8	8	0	\$ 5,214
Brooks Lumber Company	5	5	0	\$ 5,177
Creative Safety Supply, LLC	1	1	0	\$ 5,112
Raven Environmental Products Inc	3	3	0	\$ 5,012
Pollardwater	3	3	0	\$ 4,960
ALS Environmental	2	2	0	\$ 4,850
VESCO Oil Corporation	6	5	0	\$ 4,769
Martin Engineering Company	1	1	0	\$ 4,752
NSI Lab Solutions Inc	3	3	0	\$ 4,730
Nalco Water	1	1	1	\$ 4,650
Allied-Eagle Supply Company LLC	4	4	0	\$ 4,620
UniMeasure Inc.	2	2	0	\$ 4,543
Agilent Technologies Inc	5	5	0	\$ 4,498
Swanky Restroom Trailers	1	1	0	\$ 4,400
Identification Lamination Products	3	3	0	\$ 4,245
S P Kinney Engineers Inc	4	4	0	\$ 4,059
Process Control Services Inc	1	1	0	\$ 3,924
Moore Industries-International, Inc	1	1	0	\$ 3,913
Bentley Systems Incorporated	1	1	0	\$ 3,897

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Paragon Laboratories Inc	3	3	1	\$ 3,870
Aircentric Corporation	3	3	0	\$ 3,685
Core Electric Company Inc	2	2	0	\$ 3,567
Goodway Technologies	2	2	0	\$ 3,545
Breaker Authority	1	1	0	\$ 3,515
Fibre Industries	4	4	0	\$ 3,450
Ovivo USA, LLC	1	1	0	\$ 3,401
R L Deppmann Company	3	3	0	\$ 3,397
Ipax Atlantic LLC	3	3	0	\$ 3,360
Action Mat & Towel Rental	3	3	2	\$ 3,356
Discovery Solutions Inc	1	1	0	\$ 3,325
Crown Lift Trucks	3	3	0	\$ 3,293
Emedco	4	4	0	\$ 3,237
Michigan Valve & Fitting Inc	2	2	0	\$ 3,195
Advanced Calibration Designs	1	1	0	\$ 3,053
Cole-Parmer Instrument Company LLC	1	1	0	\$ 3,046
Fire Safety Displays Company	1	1	0	\$ 3,040
Sysmex America, Inc.	5	3	0	\$ 3,030
Youngs Consulting Ltd Inc	1	1	0	\$ 3,000
Laurie Brown	1	1	0	\$ 3,000
GEO Jobe GIS Consulting	1	1	0	\$ 3,000
ZLED Lighting	2	2	0	\$ 2,991
Downriver Utility Wastewater Auth.	2	2	0	\$ 2,990
Major Brand Oil Company Inc	1	1	0	\$ 2,965
Resa Service LLC	2	2	0	\$ 2,952
Thermo Fisher Scientific Asheville	4	4	0	\$ 2,774
Acme Bolt & Nut Co Inc	1	1	0	\$ 2,700
Global Industrial	4	4	0	\$ 2,651
Canfield Equipment Service Inc	1	1	0	\$ 2,533
Able Label	1	1	0	\$ 2,500
Hygiena LLC	2	2	0	\$ 2,406
Aero Filter Inc	3	3	0	\$ 2,379
Air Design Incorporated	1	1	0	\$ 2,375
Tri Star Steel Corporation	1	1	0	\$ 2,344
Acromag, Inc.	1	1	0	\$ 2,280
Michigan CAT	2	2	1	\$ 2,171
Holland Supply Company	1	1	0	\$ 2,160
Professional Pump Inc	1	1	0	\$ 2,138
The Crowley Company	1	1	0	\$ 2,120
Rescue Tech 1 Inc.	1	1	0	\$ 2,112
K & K Maintenance Supply Inc	5	5	0	\$ 2,075
Industrial Networking Solutions	1	1	0	\$ 2,068
Etna Supply Company	1	1	0	\$ 2,033
Poco Sales Inc	4	4	0	\$ 2,024
Duratech Systems, Inc	1	1	0	\$ 1,995
Cech Corporation	1	1	0	\$ 1,985
Accredited Lock & Door Hardware	2	2	0	\$ 1,966
Towlift Inc	1	1	0	\$ 1,945
Gilson Engineering Sales	2	1	0	\$ 1,890
Graphic Products Inc.	2	2	0	\$ 1,857
EBARA Pumps Americas Corporation	1	1	0	\$ 1,854
Flor Dri Supply Company Inc	4	4	0	\$ 1,830
City of Highland Park	1	1	0	\$ 1,800
Full Source, LLC	1	1	0	\$ 1,710
Fondriest Environmental Inc	1	1	0	\$ 1,700
Precision Digital Corporation	1	1	0	\$ 1,698
Torch Associates LLC	1	1	0	\$ 1,680
Electro-Matic Products Inc	1	1	0	\$ 1,670
Rose Pest Solutions	5	5	2	\$ 1,650
Nationwide IME	1	1	0	\$ 1,625
Hennessey Engineers Inc.	1	1	0	\$ 1,592
Flagpoles ETC	1	1	0	\$ 1,580
Converge Technology Solutions US LL	1	1	0	\$ 1,558
Jett Pump & Valve LLC	1	1	0	\$ 1,521
LabStrong Corporation	1	1	0	\$ 1,515
Team Industrial Services Inc	1	1	0	\$ 1,500
Robert Thomas CPA, LLC	1	1	0	\$ 1,500
Global Environmental Consulting LLC	1	1	0	\$ 1,500
Eurofins Eaton Analytical, Inc.	2	2	0	\$ 1,500
Contractors Connection Inc	3	3	0	\$ 1,498
IDN Hardware Sales, Inc.	1	1	0	\$ 1,448

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Air Dimensions Inc	1	1	0	\$ 1,326
Acuity Institute	1	1	0	\$ 1,299
SCP Science	2	2	0	\$ 1,246
RS Americas, Inc	2	2	0	\$ 1,236
Equipment Material Sales, LLC	3	3	0	\$ 1,225
George Instrument Company	3	3	0	\$ 1,153
Wolverine Power Systems	1	1	0	\$ 1,149
TempoTech Controls Inc	1	1	0	\$ 1,082
Michigan Municipal League	1	1	0	\$ 1,075
Unistrut Midwest	1	1	0	\$ 1,055
Time Clock Sales & Service Co., Inc	2	2	0	\$ 1,029
M C Gutherie Lumber Company	3	3	0	\$ 1,029
Ferndale Electric Company Inc	4	4	1	\$ 971
J.J. Supply Company Inc.	1	1	0	\$ 947
Engineering Reproduction Inc.	1	1	0	\$ 925
Burt Process Equipment	1	1	0	\$ 897
YRC Freight	1	1	0	\$ 873
Sterling Millwork, Incorporated	1	1	0	\$ 860
H & P Technologies Inc.	1	1	0	\$ 859
D C Hydraulics Inc.	1	1	0	\$ 851
Omega Engineering Inc	2	2	0	\$ 831
IMAC Systems, Inc	1	1	0	\$ 820
Seton	1	1	0	\$ 778
Jones Equipment Rental	1	1	0	\$ 772
Detroit Legal News	2	2	0	\$ 752
Gilson Company	1	1	0	\$ 732
Comcast Business Communication, LLC	1	1	0	\$ 709
Staples	2	2	0	\$ 682
Xylem Water Solutions Usa Inc	1	1	0	\$ 674
Johnson Controls Fire Protection LP	4	3	2	\$ 660
Radiation Safety Services	1	1	0	\$ 633
Ise Metal Incorporated	1	1	0	\$ 590
AutomationDirect.com Inc.	1	1	0	\$ 556
Drinkpod LLC	2	2	0	\$ 550
Caniff Electric Supply Co., Inc.	2	2	0	\$ 541
Staples Business Advantage	3	2	0	\$ 492
J. D. Gould Company Inc.	1	1	0	\$ 465
Restek Corporation	1	1	0	\$ 444
Liberty Plumbing Supply Company	4	4	0	\$ 436
Atlas Plumbing Supply Co.	4	4	0	\$ 435
T & N Services Inc	1	1	0	\$ 412
Radwell International Inc.	1	1	0	\$ 387
Chart Pool USA Inc	1	1	0	\$ 374
A-1 Truck Parts Detroit	4	4	0	\$ 335
Family Farm and Home	1	1	0	\$ 329
Wright Tool Co	2	2	0	\$ 320
Columbia Pipe & Supply Co.	2	2	0	\$ 311
National Ladder & Scaffold Company	1	1	0	\$ 288
Graybar Electric Company	2	2	1	\$ 265
Detroit Fire Department	1	1	0	\$ 257
Pipeline Products, Inc	1	1	0	\$ 218
Abraxis Inc	1	1	0	\$ 216
Michigan State Industries	1	1	0	\$ 149
Metro Bolt & Fastener	1	1	0	\$ 119
Bearings and Industrial Supply Co	1	1	0	\$ 101
Evident Scientific, Inc	1	1	0	\$ 99
Empire Wire & Supply LLC	1	1	0	\$ 97
JobFairGiant.com	1	0	0	\$ -
Project Innovations Inc	2	2	2	\$ -
Marsh Power Tools, Inc	1	0	0	\$ -
The Allen Law Group PC	2	2	2	\$ -
Ric-Man Construction Inc	7	7	7	\$ -
The Babcock & Wilcox Company	1	0	0	\$ -
Univar USA Inc	4	3	0	\$ -
The Christman Company	2	2	2	\$ -
Mobile Dredging & Video Pipe Inc	1	1	1	\$ -
Major Contracting Group	5	4	4	\$ -
Somat Engineering Inc	2	2	2	\$ -
McLaren Port Huron Industrial	1	1	0	\$ -
Robin Cash Ph.D., LLC	1	1	0	\$ -
Sabiston Building Supply	1	1	0	\$ -

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Jones Lang LaSalle	1	1	1	\$ -
PFM Asset Management LLC	1	1	1	\$ -
UNKNOWN	30	0	0	\$ -
Jacobs Consultants, Inc.	3	3	3	\$ -
Outbound Technologies, Inc.	2	2	2	\$ -
Salenbien Trucking & Excavating Inc	2	2	2	\$ -
Vitalsmarts LC	1	1	0	\$ -
Tidal Basin Government Consulting	1	1	1	\$ -
PeopleGro LLC	1	1	1	\$ -
Lockton Companies LLC	1	1	1	\$ -
Pullman SST, Inc.	24	23	23	\$ -
Lanzo Construction Co., Florida	8	8	8	\$ -
Process Improvement Institute Inc.	1	1	1	\$ -
Teknicolors Paints Inc	1	1	0	\$ -
Park Rite Inc	2	2	0	\$ -
Quinn Evans	1	1	1	\$ -
RedGuard Fire & Security, Inc.	1	1	0	\$ -
Tooles Contracting Group LLC	1	1	1	\$ -
LexisNexis	1	1	1	\$ -
Iron Mountain	1	1	1	\$ -
ShredCorp.	1	1	1	\$ -
SCI Floor Covering Inc.	1	1	1	\$ -
Siebert Williams Shank & Co LLC	1	1	0	\$ -
Plunkett Cooney PC	4	4	4	\$ -
Sigma Associates Inc	2	1	1	\$ -
Nichols Paper & Supply Company	1	0	0	\$ -
Verve Industrial	5	5	5	\$ -
Marra Services Inc	4	4	4	\$ -
METCO Services Inc	2	2	2	\$ -
Rehmann Robson	2	0	0	\$ -
Pete's Coin Laundry	2	2	0	\$ -
Kiewit Infrastructure Co	7	6	6	\$ -
Northwest Pipe Company	4	4	4	\$ -
Marsh USA Inc.	1	0	0	\$ -
Mechanical Solutions, Inc.	1	0	0	\$ -
Walsh Construction Company	3	3	3	\$ -
Michfab Machinery Inc.	1	1	0	\$ -
J F Cavanaugh Company	7	7	7	\$ -
New England Fertilizer Company	1	1	1	\$ -
Segal Consulting	1	1	1	\$ -
Ric Man/Clark Joint Venture	9	8	8	\$ -
Modern Water Inc.	3	3	3	\$ -
Spence Brothers	1	1	1	\$ -
Workday	1	1	1	\$ -
OHM Advisors	1	1	1	\$ -
WSP Michigan Inc.	3	3	3	\$ -
Jackson Lewis P.C.	1	1	1	\$ -
Starr Butler, PLLC	1	1	1	\$ -
TWN Consulting LLC	1	1	1	\$ -
JMK Engineering, Inc	1	1	0	\$ -
UIS Scada Inc	1	1	1	\$ -
OHM and WSP, A Joint Venture	1	1	1	\$ -
Ram Construction Services of Michig	1	1	1	\$ -
Sulco Chemicals Limited	1	1	0	\$ -
Motor City Electric Co	4	2	2	\$ -
Zausmer, P.C.	3	3	3	\$ -
Unifirst Corporation	2	2	2	\$ -
Rose Moving & Storage Co. Inc.	1	1	1	\$ -
Lewis & Munday P C	1	1	1	\$ -
Marine Pollution Control Corp	1	1	0	\$ -
PVS Technologies Inc	2	1	0	\$ -
Quadient Inc.	1	1	0	\$ -
Broadspire Services Inc	1	1	1	\$ -
FMLASource Incorporated	1	1	1	\$ -
Calls Plus	1	1	1	\$ -
Hart EMS Medical Services PLLC	1	1	0	\$ -
Epitec Inc	4	3	0	\$ -
FastSigns Detroit	1	1	1	\$ -
Incinerator Rx Corporation	1	1	1	\$ -
Attorney Eric V Smith PLC	1	1	1	\$ -
Inland Waters Pollution Control Inc	9	9	9	\$ -

Appendix B – FY 2023 Combined Vendors Awarded by Procurement.

Vendor	Requisition Count	Purchase Order Count	Contract Count	Awarded (Millions)
Allied Building Service Co. Detroit	6	5	5	\$ -
Hydromax USA LLC	2	2	2	\$ -
Dal-Tile Distribution	1	1	0	\$ -
Global Solutions Group Inc.	1	1	1	\$ -
Alliance of Rouge Communities	1	0	0	\$ -
Digital Science Group LLC	3	2	2	\$ -
Boomer Construction Materials	2	2	2	\$ -
Avante Solutions, Inc.	1	1	1	\$ -
Fleishman Hilliard Inc	3	2	0	\$ -
Interior Environments LLC	18	18	18	\$ -
4 Leaders LLC	1	1	1	\$ -
HR Management Group Inc	1	1	1	\$ -
Herc Rentals Inc.	1	1	0	\$ -
Barton Malow Company	2	2	2	\$ -
Bridgeport Consulting LLC	2	2	2	\$ -
GDI Services Inc	2	1	1	\$ -
Enterprise Holding Inc.	1	0	0	\$ -
CDM Michigan, Inc	1	1	1	\$ -
DTE Energy - Primary	1	0	0	\$ -
Butzel Long PC	1	1	1	\$ -
Future Fence Company	3	3	3	\$ -
Bay de Noc Community College	2	2	2	\$ -
Aquasight LLC	1	0	0	\$ -
Black & Veatch Ltd Of Michigan	4	4	4	\$ -
Allie Brothers Inc	2	2	2	\$ -
Erie Construction LLC	1	1	1	\$ -
Enerco Corporation	1	1	0	\$ -
Biotage LLC	1	1	0	\$ -
HireRight, LLC	1	1	1	\$ -
Granicus LLC	1	1	1	\$ -
Ballard Marine Construction LLC	4	3	3	\$ -
Fausone & Gysko, PLC	1	1	1	\$ -
Gravotech, Inc.	1	1	0	\$ -
Dan's Excavating Inc.	2	2	2	\$ -
CEC Controls Company, Inc.	7	7	7	\$ -
Dykema Gossett PLLC	1	1	1	\$ -
Aquatic Informatics Inc	1	1	1	\$ -
AECOM Great Lakes, Inc	2	2	2	\$ -
Concentra Medical Centers	2	2	0	\$ -
Home Depot USA, Inc.	1	0	0	\$ -
Alfred Benesch & Associates	3	3	3	\$ -
Chemtrade Chemicals US LLC	4	4	0	\$ -
Alight Solution LLC	1	1	0	\$ -
Applied Science Inc	2	2	2	\$ -
Grand Total *	4904	4753	834	\$ 594,851,902

* Count includes Amendments, Change Orders, CCD's, Cancelled, other

Contract	Contract Title	Vendor	Amount
2004456	14 Mile Trans Main Loop	Ric Man/Clark Joint Venture	\$41,327,435
2004825	(CMAR) for 96-Inch Water Trans Main Relocation	Kiewit Infrastructure Co	\$22,918,255
1803312	Division Valves at West Service Center Reservoir	Kokosing Industrial Inc.	\$17,913,080
2000610	Yard Piping, Valves & Venturi Meter Meters Replace	Lakeshore Global Corporation	\$16,918,908
GLWA-PC-792	Bio-Solids Dryer Facility	New England Fertilizer Company	\$15,740,950
GLWA-DB-150	Repair of Raw Water Tunnels	Ballard Marine Construction LLC	\$14,537,051
1802745	Water Trans Main, Valve & other priority repairs	Ric-Man Construction Inc	\$11,316,076
2102834	Facilities Maintenance Svcs. - Staff Augment Skilled	Lakeshore Global Corporation	\$8,034,574
GLWA-DB-226	Repair & Rehab (DRI) Alter Rd. to (WRRF)	Jay Dee Contractors Inc.	\$7,682,629
2004082	Rehab of Woodward Sewer System	Lanzo Construction Co., Florida	\$7,658,363
GLWA-CS-272	Capital Program Delivery Contract	AECOM Great Lakes, Inc	\$7,311,376
2004889	Specialized Svcs.	Lakeshore Global Corporation	\$7,190,201
GLWA-CON-149	Emergency Sewer Repair CIP 1263	Inland Waters Pollution Control Inc	\$6,200,798
2103688	Rehab of Connors Creek Sewer System	Oscar Renda Contracting Inc	\$5,893,871
GLWA-CON-170	Sludge Removal & Disposal Svcs.	Mobile Dredging & Video Pipe Inc	\$5,405,032
1902224	DB CSO Structural IMPROV	Pullman SST, Inc.	\$5,079,721
2002190	Iron(III) chloride Feed PS-1 & Sludge Lines Complex B	Weiss Construction Co LLC	\$5,036,890
RFB 1900744	Imlay, WCS,LH,SP,SW Reservoir Inspect.	Pullman SST, Inc.	\$4,947,191
2102859	Conveyance System Infrastructure IMPROV	Jay Dee Contractors Inc.	\$4,716,559
GLWA-CON-297	Fairview Sewage Pump St. IMPROV	Weiss Construction Co LLC	\$4,613,602
2102187R	Oxygen Nitrogen Supply & Svcs. Agreement	Linde Inc.	\$4,530,235
1900741	Eng. Svcs. for 96" Water Trans Main Relocation	Jacobs Consultants, Inc.	\$4,527,929
2003730	Water Trans Main, valve & other priority repairs.	Lakeshore Global Corporation	\$4,219,541
2100891	Rehab of Outfall B-39	Lakeshore Global Corporation	\$3,970,231
RFB-1123	Sodium Hypochlorite PO T's & C's	PVS Nolwood Chemical Inc	\$3,908,010
2002193	SWTP Chlorine Scrubber & Raw Water Screen Replace	Kokosing Industrial Inc.	\$3,851,204
1802170	Fleet Mgmt. Service	Enterprise Fleet Management	\$3,849,511
1904337	WRRF PS-2 Bar Racks Replace & Grit Collection System	Hazen and Sawyer	\$3,626,481
1904231	NE_WTP Flocculator Replace	Commercial Contracting Corporation	\$3,544,912
2103380	WWP HVAC IMPROV	Commercial Contracting Corporation	\$3,342,621
1904254	WWP to NE_WTP Water Trans Main - Phase 2	Dan's Excavating Inc.	\$3,142,857
4000701 (1900516)	Freeze Protection Pump Install at Imlay Pump St.	Commercial Contracting Corporation	\$3,081,677
2201870	Replace Schoolcraft Water Main	Mark Anthony Contracting, Inc	\$3,077,193
2101879	Renovation 4th Floor (WRRF) – NAB	Allied Building Service Co. Detroit	\$2,878,514
GLWA-CS-090A	Eng. Svcs. Instrumentation & SCADA Systems Svcs.	PCI LLC	\$2,732,300
1901658	Facilities Maintenance Svcs.	Lakeshore Global Corporation	\$2,727,250
1803621	Wick Rd. 48-Inch Water Trans Main	Ric-Man Construction Inc	\$2,605,108
1802448	14 Mile Trans Main Loop	Brown and Caldwell LLC	\$2,597,151
GLWA-CON-285	Wholesale Water Meter Rehab & Meter Replace	Lakeshore Global Corporation	\$2,572,462
1802410	Rehab of various sampling sites & PS2 Ferric Chloride Syst.	Commercial Contracting Corporation	\$2,562,255
2001051	SWTP SCADA Network Upgrade	Burns & McDonnell Michigan Inc.	\$2,490,355
1803705	Comprehensive Corrosion Control Optimization Study	Arcadis of Michigan LLC	\$2,474,899
2001488	7 Mile/Nevada Main Renewal	Pullman SST, Inc.	\$2,461,334
2003102	Garl&, Hurlbut, Bewick Water Trans Syst. (NE Trans Phase 3)	Pullman SST, Inc.	\$2,434,782
2100236	Reservoir Inspect., Design, CONST Admin, Resident Rep. Svcs.	Brown and Caldwell LLC	\$2,400,074
GLWA-CS-119(a)	WAM Support & Enhancement Svcs.	DXC Technology Services LLC	\$2,340,672
1904197	CSO Long-Term Control Plan	LimnoTech	\$2,275,111
2000970	Rehab of Screened Final Effluent (SFE) Pump St.	Noresco LLC	\$2,196,815
1902659	Linear System Integrity Program	HDR Michigan, Inc.	\$2,186,868
2102000	Emergency & Urgent Sewer Evaluation, Repair & Rehab	Inland Waters Pollution Control Inc	\$2,157,034
GLWA-CS-102	Rehab of Pump St. No. 1 IMPROV	Wade Trim Associates Inc	\$2,067,982
2003330	HVAC & Odor Control IMPROV - Oakwood CSO Facility	Commercial Contracting Corporation	\$2,021,936
GLWA-CS-166	CIP Implementation Assistance & Related Svcs.	PMA Consultants LLC	\$1,976,448
2100998	East Avon Early Works Pipe 96-Inch Water Trans Main	Northwest Pipe Company	\$1,874,235
2201068a	SWTP Medium Voltage Electrical System Replace	Clark Construction Company	\$1,868,631
1900134	1900134 Springwell's Low Lift Pump Suction Gate Replace	Barton Malow Company	\$1,786,440
1904449	LHWTP Pilot Plant DB Svcs.	Brown and Caldwell Constructors	\$1,764,033
1900995	Maintenance & Repair of Electrical Equipment	Motor City Electric Co	\$1,699,681
1902548C	(HVAC) Bldg. & Mechanical System	Johnson Controls Inc.	\$1,641,759
2101475	CSO Facility IMPROV	CDM Smith Michigan Inc	\$1,630,729
2100136	Piping Hanger Replace at Hubbell Southfield CSO Facility	Weiss Construction Co LLC	\$1,626,707
2000274	Enterprise Resource Planning (ERP) Syst. Implementation Svc	Workday	\$1,602,238
2000292	New Valve Exercising Project for Field Svcs.	Hydromax USA LLC	\$1,574,110
1903312	14 Mile Trans Main Loop - Phase I	Major Contracting Group	\$1,531,599
1802575	GLWA Conveyance System Eng. Svcs.	Brown and Caldwell LLC	\$1,480,625
2201142	Conveyance System Infrastructure IMPROV	Lakeshore Global Corporation	\$1,460,182
2102824	Rehab of NW Interceptor 8 Mile Rd to Tireman	Lakeshore Global Corporation	\$1,435,846
1900318-6	Eng. Svcs. for GLWA (all sites) - 6 vendors total	Wade Trim Associates Inc	\$1,427,273
1902908	B/Creek CSO Effluent Conduit Access & Sediment. Mitigation	Jay Dee Contractors Inc.	\$1,416,738
GLWA-CS-120	Freud & Conner Creek Pump St. Improv. Study & Design	Arcadis of Michigan LLC	\$1,388,791
GLWA-CON-252	Springwell's Condensate Return, & Compressed Air	Clark Construction Company	\$1,353,584

Contract	Contract Title	Vendor	Amount
2003443	Study & Design Svcs. for Conveyance System	FK Engineering Associates	\$1,347,761
1904332	(Multiple PO's) Commercial Janitorial Svcs.	GDI Services Inc	\$1,308,058
2004773	Low Voltage Wiring TOES Svcs.	Lakeshore Global Corporation	\$1,261,461
2102618	Complete Rehab of screens	Commercial Contracting Corporation	\$1,256,790
2100239	WRRF Facilities Structural Evaluation & Repairs	Kokosing Industrial Inc.	\$1,234,863
1902548A	Labor rate negotiations GLWA & JCI	Johnson Controls Inc.	\$1,211,929
2103206	Effluent Butterfly Valves Actuators 7 Mile & Puritan-Fenkell CS	Lakeshore Global Corporation	\$1,170,588
1803508	Liquid Chlorine for Water Plants (one ton)	JCI Jones Chemicals Inc	\$1,159,944
2200373	WRRF PS No. 1 HVAC Equipment	ThermalNetics LLC	\$1,077,000
1903601	Yard Piping Eng. Svcs.	CDM Smith Michigan Inc	\$1,074,398
1803990	DB LHWTP High Lift Pump Meter & Yard Piping	Weiss Construction Co LLC	\$1,072,525
2200368	WRRF PS No. 1 Discharge Gate Valves	J&S Valve, Inc	\$1,013,137
2002655	Study & Design NW Interceptor Relief Sewer to Oakwood CSO	FK Engineering Associates	\$984,264
1900702	Grounds Maintenance Svcs. for GLWA sites	Premier Group Associates LC	\$936,909
1902548B	Planned Svcs. agreement	Johnson Controls Inc.	\$936,005
2100330-2	2 2022 Job Order Contract	Weiss Construction Co LLC	\$935,830
GLWA-CON-179	Professional & Technical Svcs.	PCI LLC	\$861,288
2100575	CSO Facilities - Emergency Generator Imp	Rotor Electric Co	\$851,203
GLWA-CS-103	Engineering Springwell's Low & High Lift Pump St.	CDM Smith Michigan Inc	\$845,911
1803025-4	Job Order Contract - (6 vendors total)	J F Cavanaugh Company	\$824,400
2101000	LH_WTP stockpiling a hauling sludge from site lagoons	M.L. Chartier, Inc.	\$822,159
1803025-3	Job Order Contract - (6 vendors total)	DE-CAL Inc	\$781,784
2002048	14 Mile Trans Main Loop -Double Disc Gate Valves	Kennedy Industries Inc	\$741,045
2203045	MiDeal (MMCP)	Dell Marketing LP	\$721,401
1903598	Assess. & Rehab of WRRF Piping & Underground Utilities	The Christman Company	\$709,813
2103350	Pump St. No. 1 IMPROV	Weiss Construction Co LLC	\$696,392
2001370	Effluent Channel Stop-Logs, Store Racks, & Lift Conner Creek C	Ballard Marine Construction LLC	\$688,488
2204376a	Replace & Rehab. of Water Mains along East Jefferson Ave.	Detroit Water and Sewerage	\$686,566
GLWA-CON-197	Modifications Incinerator Sludge Feed Syst. Complex II WRRF	Weiss Construction Co LLC	\$679,407
GLWA-CS-216	Third Party Facilitator - Customer Outreach	Bridgeport Consulting LLC	\$672,590
2203412	Consult Svcs. for Workday Project	Slalom, LLC	\$659,100
2200346	VMWARE Cloud Disaster Recovery as a Service	Access Interactive	\$658,777
1904219	Enterprise Asset Mgmt. Syst. Software & Implementation Svcs.	NEXGEN Asset Management	\$643,125
2004538	Instr./Control Syst. Replace St. Aubin, 7 Mile, Leib CSO	Burns & McDonnell Michigan Inc.	\$637,220
2002291	JOC - 120KV Third Feeder - Demolition Task #37	Commercial Contracting Corporation	\$620,867
1900318-5	Eng. Svcs. for GLWA (all sites) - 6 vendors total	HDR Michigan, Inc.	\$601,105
1803769	Low Lift, High Lift, Wash Water Pump IMPROV	Arcadis of Michigan LLC	\$589,320
1903453	Systems Control Center Support Svcs.	PCI LLC	\$583,160
GLWA-CS-195	Financial Mgmt. Consult Svcs.	The Foster Group LLC	\$577,500
2004674	North Service Center BPS IMPROV	CDM Smith Michigan Inc	\$567,737
1900318-1	Eng. Svcs. for GLWA (all sites) - 6 vendors total	Arcadis of Michigan LLC	\$550,252
GLWA-CS-151A	Inspect Design & Cons Treatment Plants	Hazen and Sawyer	\$545,829
1901592	GIS Strategic Support Svcs.	Magnolia River Services Inc.	\$537,181
2102026	Aura 6.0 & annual maintenance	Aquasight LLC	\$537,169
2302699	Provide legal representation, consultation	Dykema Gossett PLLC	\$528,134
1803126	Chemicals & Laboratory Supplies	Hach Company	\$525,458
2201558	Gasoline & Diesel Fuel deliveries	Crystal Flash, Inc.	\$506,333
1803978	Ceridian Human Resources Information Systems (HRIS)	Ceridian HCM Inc	\$498,264
1901569	Dell MiDeal Agreement	Dell Computer Corporation	\$491,723
2100822	Lease of Warehouse Space in Melvindale, Michigan	Family Associates, LLC	\$489,546
1904738-1	Engage up to 6 instrumentation contractors for TOES	Outbound Technologies, Inc.	\$478,934
1803709	Conveyance System Infrastructure IMPROV	Applied Science Inc	\$475,015
1803025-6	Job Order Contract - (6 vendors total)	Weiss Construction Co LLC	\$464,258
GLWA-CS-198	Asset Mgmt.	CH2M Hill Engineers Inc	\$460,048
GLWA-CS-2102200	Legal Svcs.	Wade Trim Associates Inc	\$452,644
GLWA-CS-168	Conveyance System Interceptors & Trunk Sewers	FK Engineering Associates	\$446,915
2101766A	Hauling & Disposal of Ash	DHT Transport	\$443,034
2000917	Refractory Inspect. & Repairs - Complex Incineration II	Commercial Contracting Corporation	\$437,313
2002915	Redesign of Circular Scum Syst. & Scum Concentration Facility	Arcadis of Michigan LLC	\$435,394
2004735	DB Incineration Complex Fire Repairs	Commercial Contracting Corporation	\$425,498
GLWA-CS-239	Good Sewer Metering Practices & Analytic Svcs.	CDM Michigan, Inc	\$416,308
2001433	Marketing & Communications Svcs.	Fleishman Hilliard Inc	\$414,140
2001082	Standby Generator PPM & Repair Water Plant/Pump	Preventive Maintenance Technologies	\$409,669
2002946	Environmental Health & Safety Compliance Svcs.	NTH Consultants Ltd	\$407,003
1902702	(Multiple PO's) Furniture & Flooring & Space Design Svcs.	Interior Environments LLC	\$405,748
2000284	Fire Alarm, Fire Sprinkler, Fire Extinguisher Maint. & Repair	Johnson Controls Fire Protection LP	\$400,411
2103717	Repair of motor to specifications	Integrated Power Services LLC	\$400,011
2103317	(PLD) to DTE Energy (DTE) Electrical Conversions	Ferndale Electric Company Inc	\$387,133
4302	90 Ton Liquid Chlorine (WRRF)	JCI Jones Chemicals Inc	\$381,528
2200061	Design Svcs. of CSO Facilities IMPROV	Hazen and Sawyer	\$369,879
2100911	Roof Replace & Roofing IMPROV	Schreiber Corporation	\$362,772
1803258	DB Svcs. for Northeast Flow Control Facility	Walsh Construction Company	\$357,587

Contract	Contract Title	Vendor	Amount
1802774	SWTP Sedimentation Basin Sluice Gates, Guides, & Hoist	Kokosing Industrial Inc.	\$348,911
2004474	UPS Maintenance Service CSO & WRRF Facilities	PCI LLC	\$340,729
1703524	Thyssenkrupp Elevators PPM	TK Elevator Corporation	\$337,972
GLWA-CS-055	Replace of Yard Piping	AECOM Great Lakes, Inc	\$337,588
2003785	Dye Test Svcs. & As-Needed Engineering	Applied Science Inc	\$336,024
2000279	SWTP Flocculator Drive Replace	Fishbeck	\$321,274
1903746	Contractual Professional Svcs. Team Training	PeopleGro LLC	\$308,450
1901555	Snow removal & de-Icing Svcs.	Premier Group Associates LC	\$305,902
2004549	LHWTP - Flocculation IMPROV	CDM Smith Michigan Inc	\$300,277
1803594-1	Accusonic Flow Meters all CSOs	HESCO Group Inc.	\$297,695
1067-1	Repair Pumps	Kennedy Industries Inc	\$296,146
2101867	Gearbox Maintenance & Repair Svcs.	American Gear & Engineering, Inc	\$294,940
2001317	Overhead Door Assess., Repair & Replace Svcs.	Secure Door LLC	\$289,223
2101048	GLWA TPA Svcs.	PMA Management Corp	\$288,918
2202648	Maintenance & Repair Intrusion Alarm (Hardware & Software)	D/A Central Inc	\$274,384
GLWA-CS-300	Financial Automation Solution Svcs.	CCH Tagetik	\$273,473
2002350	PPM, Inspect. & repair of Rotork Actuators	Systems Specialties	\$270,106
1803456	Loading, Hauling & Disposal of Scum	Rickman Enterprise Group LLC	\$256,120
GLWA-CS-006	Third Party Claims Administrator	Broadspire Services Inc	\$250,098
2102500	Esri Licensing for all Water operations	ESRI Inc.	\$250,000
1904738-2	Engage up to 6 instrumentation contractors TOES	PCI LLC	\$249,115
2003901	Non-St&ard Joint Funding Water Resource Investigations	United States Geological Survey	\$247,600
2202091	General maintenance for all grit collector needs.	Titus Welding Company Inc	\$241,650
2100144	Fuel Svcs.	Crystal Flash, Inc.	\$234,637
1904562	Fuel Maintenance	Phoenix Environmental Inc	\$232,354
1904860	Bacteriological Water Test Supplies & Reagents	Idexx Laboratories	\$230,806
2102046	Masonry, concrete repair & Restore of historical monument	Ram Construction Services of Michig	\$227,929
2001492	Crane Service Inspect.s & Repairs WRRF/CSO Basins	Crane Technologies Group Inc	\$226,266
RFB-1067	Service & Parts for all Pumps Rated 125Hp & Lowe	Detroit Pump & Mfg Co	\$225,155
1900318-4	Eng. Svcs. for GLWA (all sites) - 6 vendors total	Hubbell, Roth & Clark, Inc.	\$221,615
2203848	EPA Study PPCPs & PFASs	Brown and Caldwell LLC	\$220,395
1803942	Downriver Trans Main Loop	OHM and WSP, A Joint Venture	\$219,127
1902721	3 Year Investment advisor Svcs. with two (1) year options.	PFM Asset Management LLC	\$216,924
GLWA-CS-299	GLWA-CSO Facilities Needs Assess. Project	Jacobs Consultants, Inc.	\$216,766
2897583	Req#170300	VWR International	\$215,514
2202164	SCREENINGS & GRIT TRANS. & DISPOSAL WRRF & CSO's	Waste Management of Michigan Inc	\$213,545
GLWA-LS-2103067	Property Acquisition	The Allen Law Group PC	\$208,929
2104125	External Auditor Svcs.	Baker Tilly US LLP	\$203,575
2102509	Independent Engineering Analysis & Report to Board AD HOC	AECOM Great Lakes, Inc	\$197,759
2202429	Organizational Support for Workday Implementation	Plante & Moran PLLC	\$197,160
GLWA-CS-002(a)	Financial Adviser	PFM Financial Advisors LLC	\$194,041
1900318-3	Eng. Svcs. for GLWA (all sites) - 6 vendors total	Hazen and Sawyer	\$189,033
GLWA-CS-1671	Steam, Condensate Return & Compressed Air	METCO Services Inc	\$187,817
GLWA-LS-295	Legal Rep. Lease with COD & Regional Water & waste	Dickinson Wright PLLC	\$186,740
1802543	Rehab Ferric Chloride Feed Syst. at PS-1 & Complex B Sludge	Hazen and Sawyer	\$185,475
2000644	Power Monitor Install Project	DES Electric LLC	\$184,031
GLWA-CS-235	Property & Casualty Brokerage & Ancillary Svcs.	Marsh USA Inc.	\$183,326
2200669	Professional Svcs. Contract	LimnoTech	\$182,544
2203215	NavVis VLX On-site Training NavVis IVION	NavVis US, Incorporated	\$182,275
2201041	Engineering Design Svcs. Agreement	FK Engineering Associates	\$181,847
GLWA-LS-1905087	Legal Representation	Zausmer, P.C.	\$181,834
2101032	St. Aubin Outfall IMPROV	Marra Services Inc	\$177,750
2101610	Magnetic Flow Meter Replace for Circular Primary Clarifiers	Rotor Electric Co	\$177,469
GLWA-LS-1802970	Legal Representation General Mills Supply Company	Fausone & Grysko, PLC	\$175,801
GLWA-CON-268	Park - Merriman 24" Watermain	Salenbien Trucking & Excavating Inc	\$172,962
GLWA-CS-039	Units of Service for Non-Master Metered Customers	Black & Veatch Ltd Of Michigan	\$172,914
1902299	ITSM	Avante Solutions, Inc.	\$167,018
1902063 (GLWA-CS-2)	Ypsilanti Pump St. IMPROV Design	Brown and Caldwell LLC	\$164,964
2203543	Emergency - Install Spare EIMCO Unit & Rehab of Damaged Un	Titus Welding Company Inc	\$164,929
2102993	2102993 - 360Water Professional Svcs.	360water, Inc.	\$164,820
2100340	Elevator maintenance, Repair, & Service	KONE Inc	\$164,556
1803448	Parts & Repair Svcs. for Various Motors	Birclar Electric & Electronics LLC	\$163,936
1904738-5	Engage up to 6 instrumentation contractors for TOES	CEC Controls Company, Inc.	\$161,579
GLWA-CS-152	Route Alternatives Analysis & Design WWP to NE Trans Main	CH2M Hill Engineers Inc	\$161,554
2204172	Ontic - Protective Intelligence	Ontic Technologies, Incorporated	\$159,000
1904736	1904736 Pretreatment Software Mgmt. System	Aquatic Informatics Inc	\$155,331
2200417	Trimble Unity 3-year Subscription	Trimble Inc	\$152,600
2002908	WAM Systems Specialist expertise(CMMS)	David D. Taylor	\$152,390
2102864	Data-Driven Decision-Making Framework Water Transmission	Regents of the University of Mich.	\$150,897
2100771	Detection Human Sources of Fecal Contamination in Watershe	Wayne State University	\$150,624
2003340	Robicon 40 & 60 HP 454GT Drive Upgrades	Siemens Industry Inc	\$149,061
2101820	Enterprise wide document scanning	Global Solutions Group Inc.	\$148,367

Contract	Contract Title	Vendor	Amount
1904862	Geotab	Geotab USA, Inc.	\$140,462
2003492	Amend No.1 to Contract 1803437	Kennedy Industries Inc	\$139,460
2100330-8	8 2022 Job Order Contract	Commercial Contracting Corporation	\$139,432
1900455-2	2 Architectural, Engineering, & Design Service	WSP Michigan Inc.	\$139,022
2204326	96" Main Relocation, Isolation Valve Ins	RA Consultants, LLC	\$136,078
2101255	Belle Isle Seawall Rehab	Dean Marine & Excavating Inc.	\$135,917
1900646	Uniform Rental & Laundering for Water Supply Operations	Unifirst Corporation	\$135,060
2002492	Equipment Rental	United Rentals North America Inc	\$127,116
GLWA-CS-259	Concrete Test, Geotechnical Soil Borings & other	Somat Engineering Inc	\$126,722
2001595	Life Cycle Analysis of the GLWA	Regents of the University of Mich.	\$125,422
1904738-3	Engage up to six instrumentation contractors for TOES	Verve Industrial	\$122,910
2001434	Integration (RTC) Water Mgmt. Systems	Regents of the University of Mich.	\$120,218
2103401	Welding Supplies for Northeast	Metro Welding Supply Corporation	\$119,973
GLWA-PS-074	Oversight of CONST Contractors for WRRF (\$300,000.00)	Hugh Connolly	\$118,147
2002363	Printers for Print Shop	Xerox Corporation	\$117,639
2203891	Bonfire Support & API Integration Work - Renewal	Bonfire Interactive Ltd	\$117,000
2300336	CHEMICAL CONTAINMENT SPILL DETECTION PROJECT	W.S.I. Industrial Services, Inc.	\$114,500
2101423	2101423 Evaluation of Real-Time Bacteria Monitoring Tools	OHM Advisors	\$113,929
2203506	Legal Services	Beam, Longest & Neff, LLC	\$113,660
1802499	WWP HVAC IMPROV	HDR Michigan, Inc.	\$111,592
1164	Intrusion Alarm Maintenance for Security & Information Tech	D/A Central Inc	\$108,662
1802144	Government Relations & Legislative Representation	Dykema Gossett PLLC	\$108,470
2204928	Gull Abatement for the WRRF Properties	ScAir Force Falconry & Bird Abateme	\$104,460
2004471	Consult Svcs.	Public Sector Consultants	\$102,305
2202790	(WRRF) IMPROV Sludge Feed Pumps DeWatering Facilities	CDM Smith Michigan Inc	\$101,741
2001694	Water Residential Assistance Program Advisor	Public Sector Consultants	\$98,371
2101819	Service-Link (Work Force Mgmt. Syst.) Maintenance Agreement	West Coast Labour Systems Corp	\$97,623
2300094	Terrazzo Flooring Repairs	Boston tile and Terrazzo Company	\$96,315
1803077	Air Stack Emission Test for 8 incinerators	Alliance Technical Group	\$92,944
GLWA-LS-2100779	Highl& Park Appeal	Plunkett Cooney PC	\$91,993
2203353	GLWA Water Charges Methodology Consult Svcs.	Raftelis	\$89,854
2102512	Vendor Performance related to Yates Cider Mill	Zausmer, P.C.	\$89,388
2204633	Memberships	Info-Tech Research Group Inc	\$88,329
2200571	Emergency Repair of 18" SFE & 6" Secondary SFE Line at WRRF	Ric-Man Construction Inc	\$87,315
1902536	Refuse & recycling Svcs. various locations	Waste Management of Michigan Inc	\$86,888
2004284	EDS Dashboard Pilot Enhancements	Emerson Process Management	\$86,098
2100721	GLWA Security Uniforms & Supplies	Allie Brothers Inc	\$84,496
GLWA-CS-282	Design & CONST Assistance Svcs.	WSP Michigan Inc.	\$84,191
2002204	DEVELOPMENT OF NEW DASHBOARDS	Aquasight LLC	\$82,000
1905080	Facilitation & Project Mgmt. Svcs.	TWN Consulting LLC	\$81,600
GLWA-CS-257	Employee Benefits Broker Svcs.	Lockton Companies LLC	\$81,275
2104248	LIMS	HORIZON Lab Systems	\$78,138
2204590	Power Meter Install Svcs. at LH_WTP WTP	DES Electric LLC	\$76,836
2201969	(PO) Background Screening Consult	Plante & Moran PLLC	\$75,299
2201268	Compensation Study	HR Management Group Inc	\$75,081
2201913	Mgmt. Consult Svcs. (WRAP)	Plante & Moran PLLC	\$73,129
1900949	Member Partner Opt-In Program	Aquasight LLC	\$72,320
2104064	Pilot Plant Research, Collaboration & Renovation WWP	Wayne State University	\$72,130
2201077	Fence & Fence Repair, Gates, & Parking Control Devices	Nationwide Construction Group	\$72,119
2201559	Purchase & Install Modified Bucket Pins at Grit Collectors	Titus Welding Company Inc	\$71,292
2000092	Systems Planning	Wade Trim Associates Inc	\$65,621
2203399	Gauge-Adjusted Radar Rainfall (GARR)	Vieux & Associates Inc.	\$65,405
2002240	Crane Service Inspect.s & Repairs Water Plants & Pump St.s	Crane Technologies Group Inc	\$64,211
GLWA-LS-2000388	General Employment/Labor Matters	The Allen Law Group PC	\$64,084
GLWA-CS-160	General Eng. Svcs.	METCO Services Inc	\$62,333
1803447	1803447 Parts & Repair Svcs. for Various Motors	Integrated Power Services LLC	\$61,093
1804129	Schoolcraft Rd. 48 Inch Water Trans Main	Lakeshore Global Corporation	\$61,000
2001493	Roofing Maintenance, Repair, & Emergency Response Svcs.	Schreiber Corporation	\$60,052
1900217	CONST Agreement for GLWA sites	Future Fence Company	\$59,977
GLWA-LS-2102518	Real Property Matters	Zausmer, P.C.	\$56,457
2204670	Water Test Supplies & Reagents	Idexx Laboratories	\$54,969
2103091	7 Mile/Nevada & Garl&, Hurlbut, & Bewick projects.	Stantec Consulting Services Inc.	\$54,416
2202339	Modifications to Screen & Grit Conveyor #1	DE-CAL Inc	\$53,622
2102526	Learning Mgmt. System	Cornerstone onDemand Inc.	\$53,179
2002722	Svcs. Agreement (Technical Svcs. Agreement)	Siemens Industry Inc	\$51,750
SCO-1134	WWP Filter Upgrade WRRF DOO WWP Valve Master WRRF	Emerson Process Management	\$50,814
1803933	Extermination Svcs.	Rose Pest Solutions	\$50,468
2200348	Geotech Polymer Sludge Processing Complex A Basement	Havener Tech	\$49,950
2202321	Chlorination Facility Vault Waterproofing	Havener Tech	\$49,950
2103509	West Service Center Vibration Analysis	Mechanical Solutions, Inc.	\$49,350
1903098	Blanket with MiDeal contract no. 071B77000086	Truck & Trailer Specialties Inc.	\$49,322
1803437-2	2 Pump Repair for the Five Water Plants	Kerr Pump and Supply, Inc.	\$49,228

Contract	Contract Title	Vendor	Amount
2203141	Professional Svcs. Contract (Technical Svcs. Agreement)	Innomotics LLC	\$49,036
2003090	(DA) Gateway Software for a 90-Day Trial Period	Landis+Gyr Technology, Inc.	\$48,240
1905154	Maintenance & Repairs Clayton Steam Generators (4) Water P	Clayton Industries	\$47,628
GLWA-LS-221	Legal Representation, Consult & Advice	Attorney Eric V Smith PLC	\$47,623
2103276	Consult Svcs. FOR FEDERAL/STATE GRANTS	Tidal Basin Government Consulting	\$47,268
2200550	Assist/Assessing Affordability in Service Area	Raftelis	\$46,985
1903548	Gov Delivery Communications Cloud & Legistar	Granicus LLC	\$46,962
1803437-1	1 Pump Repair for the Five Water Plants	Kennedy Industries Inc	\$46,935
2001308	Vinyl Graphics Svcs. for GLWA Fleet & Facilities	FastSigns Detroit	\$46,135
2000779	Imagery Subscription	Nearmap US Inc.	\$45,000
2201523	ASTERRA leak detection	Asterra	\$45,000
2101260	Revere Dock Litigation - 5851 W Jefferson Ave, Detroit, MI	Lewis & Munday P C	\$43,845
2100360A	Cyanide & Ammonia Instruments	YSI Incorporated	\$43,086
2301097	Concrete Floor Repair at Chlorination & De Chlorination	Carlette Construction & Consulting	\$42,531
2100385A	Install of Pressure Transmitters	Advance Instrumentation Systems	\$42,300
1902151	PFAs Health & Ecological Impacts	Wayne State University	\$41,522
2002530	Midwest Valve v GLWA	Dickinson Wright PLLC	\$40,320
GLWA-LS-2102207	Legal June 25th & 26th, 2021 Rain Events	Schenk & Bruetsch PLC	\$39,839
GLWA-LS-2201015	GLWA v Highl& Park Industrial Pretreat Program Litigation	Dykema Gossett PLLC	\$39,537
2300908	AISC ESTIMATE: 1156 Water WORKS CHEMIC	Advance Instrumentation Systems	\$39,500
1804127	Thyssenkrupp Elevators PPM	Hach Company	\$39,310
2201070	SREEN HOUSE PROJECT SERVICE RENDERED	Advance Instrumentation Systems	\$37,538
2004712	Consult Svcs. for Various Outreach Initiatives	Bridgeport Consulting LLC	\$35,150
1902084	Project Mgmt. Assistance with Plante & Moran	Plante & Moran PLLC	\$34,668
GLWA-CS-060	Upgraded Sludge Conveyance Svcs. CIP 1257	Black & Veatch Ltd Of Michigan	\$34,410
2300745	Seagull Abatement Svcs.	ScAir Force Falconry & Bird Abateme	\$33,880
1901340	GLWA Employee Engagement Workplace Survey Subscription	Gallup Inc	\$33,488
2103919	Sludge Thickening Tank Repair - As-needed	Titus Welding Company Inc	\$33,137
2200243	Chemical Feed Pump Maintenance at Oakwood CSO Facility	HESCO Group Inc.	\$32,959
2103001	Specialized Utility Consult	4 Leaders LLC	\$32,259
2200365	Emergency Conveyors, Gearboxes, Pumps, & Other	RMF Nooter Inc	\$32,017
1901767	Newburgh Rd. Booster Pump St. IMPROV.	Brown and Caldwell LLC	\$32,000
GLWA-CS-018	Utility Billing & Cash Receipt Software	BS&A Software	\$31,808
2103970	Wastewater Treatment Assess., Training, & Certification Progr	Bay de Noc Community College	\$31,260
2202518a	Laboratory & Various Chemical Supplies	VWR International	\$29,751
1901566	GLWA Incinerator MACT MMM Emission Test Assistance	Incinerator Rx Corporation	\$29,400
2203345	Leib CSO: Front Entrance Gate Replace.	Industrial Fence & Landscaping Inc	\$29,059
2200008	Advisa - Predictive Index Renewal	The Predictive Index LLC	\$29,000
2202675	Chlorine Storage Room Calibration Project	Advance Instrumentation Systems	\$29,000
2300181	Rewiring of WRRF External Pole Lighting	DES Electric LLC	\$28,690
2001236	Industrial Lubricant Inventory lends Warehouses	Eastern Oil Company	\$28,510
2200670	Evaluation of Flow Cytometry for Drinking Water Applications	Wayne State University	\$28,252
2200367	Seagull Control Svcs.	American Falconry Services LLC	\$28,000
2102672	Trusted Advisors for up to 250 hours	SkyNorth Software	\$27,563
2004315	SIDRIVE IQ Svcs.	Siemens Industry Inc	\$26,800
2100234	Large scale (Grid) sampling for E.coli	Alliance of Rouge Communities	\$25,993
2203808	Rack & Grit Lighting Rework	Rotor Electric Co	\$25,985
2102587	Water Administration and General Expense	Tidal Basin Government Consulting	\$25,936
1904710	Occurrence & Fate of Microplastics	Wayne State University	\$25,825
2200545	Renovate 3rd floor of WRRF New Administration Bldg. (NAB)	Albert Kahn Associates Inc.	\$25,500
2202200	Infrared Component & Socket Aeration Tank 14, 15, 16, 17 & 1	Electrical Industries	\$25,500
2103733	Virtual Tour, Laser, & Unmanned Aerial Vehicle Scanning Svcs	Wade Trim Associates Inc	\$25,090
2100570	Consult Risk & Process Safety Mgmt. Program (RMP/PSM)	Process Improvement Institute Inc.	\$25,020
1904716	1904716 Member Outreach Advisor	Project Innovations Inc	\$24,610
2001402	2001402, Surveillance of SARS CoV-2 in Detroit Wastewater	Michigan State University	\$24,383
2004493	MV VFD PPM Svcs., Leak Repairs, & DCS Verification	Siemens Industry Inc	\$24,332
SCO-1133	Capturis: Utility Billing Mgmt. Svcs. - Contract #1133	Capturis	\$24,243
1903519	Filter Transmitter Replace	TS Systems, Inc.	\$24,075
2204068	24 Passenger shuttle bus service	Lavdas Limousines	\$24,000
2204897	Consult Svcs.	B&R Consultants	\$24,000
2203102	Prefect Cloud Platform Purchase	Prefect Technologies, Incorporated	\$23,990
2002947	Renovation 4th Floor at WRR	Albert Kahn Associates Inc.	\$23,377
1904024	WWP Water Treatment Facility Public Tour Signage	Ideation Orange	\$23,000
2101151	OnBase EP4 Upgrade	i3-ImageSoft	\$22,788
2101929	Install & Furnishing of Shades	The Sheer Shop Inc.	\$22,785
2000322	Furniture & Equipment Moving Svcs.	Rose Moving & Storage Co. Inc.	\$22,340
1903808	Ethics & Compliance Hotline Svcs. (RFB)	Calls Plus	\$22,025
1900455-1	1 Architectural, Engineering, & Design Service	SDG Associates, LLC	\$21,932
2203975	Rack & Grit Lighting Rework	Rotor Electric Co	\$21,677
GLWA-CS-2102199	Legal Svcs. - Expert Witnesses	Brown and Caldwell LLC	\$20,665
2203915	Real Estate Matters	Rosati, Schultz, Joppich &	\$20,606
1900107	General Mill Supply Co v. GLWA & City of Detroit	Kopka Pinkus & Dolin PC	\$20,217

Contract	Contract Title	Vendor	Amount
2001574	Sympro Debt Mgmt. Software	Emphasys Software	\$20,157
1900169	Biological Phosphorus Removal Pilot	Regents of the University of Mich.	\$20,025
2204228	(WRAP) Administrator UWSEM	United Way for Southerastern MI	\$20,000
1803876	Renew InfoTech Subscription	Info-Tech Research Group Inc	\$19,612
CS-115	Background Screening Svcs.	HireRight, LLC	\$19,567
1902110	Technical Consult Svcs. for the transition of auditors.	Rehmann Robson	\$19,460
2200621	JIT Process Workshop	Plante & Moran PLLC	\$19,143
1902059	Transport & Fate of Nutrients in Biosolids at WRRF	Michigan State University	\$19,141
2103659	Plunkett Cooney, P.C. Legal Svcs.	Plunkett Cooney PC	\$18,925
2004445	Addendum No.1 Lerch Bates Co op	Lerch Bates, Inc.	\$18,600
2103137	Blanket	Paragon Laboratories Inc	\$18,154
2104330	1 Year Pipe Repairs	RJ Stacey LTD	\$18,000
2203032	Build & Dismantle Temporary Platform	Electrical Industries	\$18,000
2004700	Executive & Managerial Training for Water Operations	Project Innovations Inc	\$17,825
1904373	Incinerator Fuel Train Syst. Inspect. & Safety Checks	Industrial Furnace Co Inc	\$17,250
2202674	Water Works Chlorine Flow Meter Feeder Room Calibration	Advance Instrumentation Systems	\$17,000
2301266	Polyurethan Injection Grouting Leak Stopping Hubbell CSO	Havener Tech	\$17,000
2201341	Abatement Mold, Asbestos, Materials, & 3rd Party Test	Global Green Service Group	\$16,877
2104348	360Water Software	360water, Inc.	\$16,800
2203592	PPM & QA Performance Audit Support	Teledyne Leeman Labs	\$16,788
2003851	CDL Test & Training for 'B' & 'A'	Bert's Testing & Training Services	\$16,640
2203947	Replace of Heating & Cooling Coils	Core Mechanical, Inc.	\$16,537
GLWA-CS-301	General Eng. Svcs.	Sigma Associates Inc	\$16,279
2300872	Consult Svcs. to support FEMA Insurance Claims	FK Engineering Associates	\$15,574
2100712	Digital Imaging Svcs. for Documents Located at WRRF/CSO	Digital Science Group LLC	\$15,481
2102225	Svcs. for Biotage Horizon 3100 & 5000 Laboratory Instrument	Biotage LLC	\$14,945
2103059	PPM & Repair Service for the Three Deionized Water Syst.	Evoqua Water Technologies LLC	\$14,770
GLWA-PS-246	Administrative Consent Order for WWTP	Robert M Kowal	\$14,400
2103268	Svcs. Agreement for Two Quick Trace M7600 Mercy Analyzers	Teledyne Leeman Labs	\$14,274
2300354	Stone Topping over Existing Stone Rd.	Davenport Brothers Construction Co.	\$13,800
2101321	Lighting & electrical supplies MiDeal	Graybar Electric Company	\$13,057
2300246	Environmental Social Governance Program (ESG)	Plante & Moran PLLC	\$12,845
2202942	Pump St. Lift Pumps Rehab Other	PMA Consultants LLC	\$12,493
1802860	Legal Representation	Plunkett Cooney PC	\$12,299
2004507	Legal Rep., Consult & Advice General Employment Matters	Miller Canfield Paddock & Stone PLC	\$12,182
2200643	Sodium Hypochlorite Tank Repairs at Conner Creek CSO Facili	Havener Tech	\$12,000
2102829	Alum VFD 20.01 Service Call & Training	Intelligent Systems Group LLC	\$11,928
2002514	MIDeal Contract - IT Asset Disposal Svcs.	Re-Source Partners	\$11,430
GLWA-LS-2101689	Environmental Matters	Dykema Gossett PLLC	\$11,318
1901968	1901968 Mat Rental Svcs.	Action Mat & Towel Rental	\$11,152
2200244	Hubbell-Southfield CSO Install of An Exhaust Fan	Dunbar Mechanical, Inc.	\$10,866
2004666	Conner Creek Canal Dike IMPROV	M-K Construction Company Inc.	\$10,680
2002823	Digital Records Conversion - WRRF/CSO Documents	Digital Science Group LLC	\$10,579
1901904	CSO - Control Basins Operations	GHD Services Inc.	\$10,475
GLWA-CON-234	Conner Creek CSO Basin Urgent Rehab	Weiss Construction Co LLC	\$10,299
2203846	Mgmt. of a 501(c)(6) Mid-West Biosolids Organization.	Kevin Burke III	\$10,000
2000014	Hurlbut Memorial Gate Architectural Svcs.	Quinn Evans	\$9,450
2300624	Personal Svcs.	Michael Gould	\$9,299
2102174	Volatile Fatty Acids Analysis	Wayne State University	\$8,980
1902433	(Emergency) Generator Maintenance & Repair	Michigan CAT	\$8,897
2000299	Floor Covering Supply & Install Svcs.	SCI Floor Covering Inc.	\$8,839
2102007	Stationary Generator Repair & Maintenance	Wolverine Power Systems	\$8,813
2103347-4	2023 TOES Eng. Svcs.	Hazen and Sawyer	\$8,045
2202291	Comprehensive Professional Development Classes	CLE Strategic Solutions LLC	\$8,000
1901155	Drinking Water Monitoring Network	Environmental Consulting	\$8,000
GLWA-CS-141	Family & Medical Leave Act Svcs.	FMLASource Incorporated	\$7,965
GLWA-LS-2102450	June 25-26, July 2-3, July 16 & July 24, 2021 Rain Events	Collins & Collins Law PC	\$7,960
1903753	PPM, Lab Supplies & Repairs for Microtox & Deltatox Analyzer	Modern Water Inc.	\$7,796
1803821	Trimble Unity Implementation	Trimble Inc	\$7,680
2003057	Water & Sewer Svcs. to the City of Dearborn	Fausone & Grysko, PLC	\$7,582
2200664	Purchase & Install Distilled Water Maker	Evoqua Water Technologies LLC	\$7,039
GLWA-LS-2102331	June 25-26, July 2-3, July 16 & July 24, 2021 Rain Events	Kerr, Russell and Weber, PLC	\$6,660
2002349	Maintenance, Repair, Service & Supply for GLWA Fleet	Michigan CAT	\$6,590
2102464	(HVAC) Bldg. & Mechanical System	Dunbar Mechanical, Inc.	\$6,369
2100041	Fire Alarm, Fire Sprinkler, Fire Extinguisher Maint. & Repair	Johnson Controls Fire Protection LP	\$6,218
2201518	IBM Cloud Pak for Data as a Service	LPA Software Solutions, LLC	\$6,000
2203945	Trace Test of Mercury, Copper, TOC & P	Trace Analytical Laboratories Inc	\$5,969
2100013	Target Solutions	TargetSolutions Learning, LLC	\$5,915
2100588	Blanket for Masonry Supplies & Tools.	Boomer Construction Materials	\$5,424
2102560-1	Car Rental	Enterprise Holding Inc.	\$4,811
2202701	Planning strategies for evaluating risk	ESPRI	\$4,725
1900318-2	Eng. Svcs. for GLWA (all sites) - 6 vendors total	Black & Veatch Ltd Of Michigan	\$4,549

Contract	Contract Title	Vendor	Amount
2002059	Br& Name Tires, Forklift, Front-End Loader Tires & Other Equ	Tredroc Tire Services, LLC	\$4,358
1803422	Iron Mountain Storage for FR&A & Treasury	Iron Mountain	\$4,272
2001549	Legal Repr., Consult 14 Mile Water Supply Redundancy Project	Zausmer, P.C.	\$4,269
2103086	Removal & Abatement of Hazard Materials	Norkan Inc	\$4,226
2300684	Provide legal representation, consultation	Butzel Long PC	\$4,200
GLWA-LS-2101474	Legal Svcs.	Plunkett Cooney PC	\$4,068
1803594	PM Svcs. for all of the CSO Facilities	HESCO Group Inc.	\$4,030
2101258	Geo tab installing & repair of geo tabs	SGN Mobile Electronics	\$3,973
2301288	Stone Topping at St. Aubin CSO	Davenport Brothers Construction Co.	\$3,950
2002275	Stationary Generator Repair & Maintenance	Wolverine Power Systems	\$3,831
2300920	Amend No. 2 to GLWA-LS-294	Dickinson Wright PLLC	\$3,788
GLWA-CS-233	Lexisnexis Subscription Agreement	LexisNexis	\$3,583
2300265	Consult Svcs. for GLWA Conner Creek Pump St.	Behnke Pump Technologies, LLC	\$3,355
2101113	Audit Svcs. for Process Safety Mgmt. (PSM) & Risk Mgmt. Plan	NTH Consultants Ltd	\$3,170
1903684	Grit Removal Optimization - Grit Sampling & Characterization	Hazen and Sawyer	\$3,036
2202737	Modeling Impacts of Loss of Power System Resilience	Regents of the University of Mich.	\$2,895
2003099	PMP for CSF, WWB & WRRF	Macomb Mechanical Inc	\$2,803
GLWA-LS-1905017	LS-1905017 General ODMatters	Plunkett Cooney PC	\$2,788
2000382	Mgmt. Consult Svcs. for Fleet Implementation Support	Plante & Moran PLLC	\$2,644
2103134	Emergency Geotechnical Svcs.	FK Engineering Associates	\$2,545
2101259	Attorney for IT Negotiations	Schuster Law PLC	\$2,491
GLWA-CS-077	Occupational Health Svcs.	Henry Ford Health System	\$2,378
2001970	Blanket towing Svcs. for all GLWA vehicles	L.I.J.B.S. Enterprises, LLC	\$2,205
GLWA-LS-2200276	2021 & 2022 14 Mile Rd. Watermain break claims	Rosati, Schultz, Joppich &	\$1,450
1902806	Trained Field Engineer for Actuator Svcs.	Process Control Services Inc	\$1,425
2202412	PM Service of Balances, Autoclaves, & Microscopes	Tobys Instrument Shop Inc	\$1,355
GLWA-CS-291	General Eng. Svcs.	Alfred Benesch & Associates	\$1,309
1900230	Hardware warehouse items (2 year contract)	Black Anvil Construction Supplies	\$1,242
1802659	Legal representation, Consult & advice- Jackson Lewis, P.C.	Jackson Lewis P.C.	\$1,110
1900227	Electrical warehouse items (2 year contract)	MSC Industrial Supply Company	\$1,106
2004251	Maintenance & Repairs on GLWA Specialty Fleet	Bell Equipment Company	\$1,070
1900355	Plumbing warehouse items (2 year contract)	Grainger	\$892
2101630	GLWA Payment Portal Project	PaymentVision	\$880
1803350	Service Charge Consult Svcs.	Hupp Consulting LLC	\$405
2200950	Water Treatment Svcs. for LH_WTP WTP	Nalco Water	\$388
GLWA-LS-2102598	June & July 2021 Rain Events	Dickinson Wright PLLC	\$280
1900356	Safety warehouse items (2 year contract)	Grainger	\$186
GLWA-LS-1903626	Legal Contract: General Employment /Labor Matters	Starr Butler, PLLC	\$96
2102397	Tiles, Cutting Tools & Accessories	Dal-Tile Distribution	\$84
2101040	Blanket Welding Supplies	Metro Welding Supply Corporation	\$56
1900250	Industrial Lubricant Warehouse Items for two years	MSC Industrial Supply Company	\$38
1900357	Tool warehouse items (2 year contract)	Grainger	-\$818
Grand Total			\$420,515,870

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Lakeshore Global Corporation	157	12	12	\$49,594,844
DTE Energy	4488	0	0	\$46,999,530
Ric Man/Clark Joint Venture	22	1	1	\$37,994,052
Kokosing Industrial Inc.	46	4	4	\$23,253,380
Kiewit Infrastructure Co	17	1	1	\$21,654,185
Commercial Contracting Corporation	65	10	10	\$16,466,269
Weiss Construction Co LLC	97	11	9	\$15,990,184
New England Fertilizer Company	13	1	1	\$15,525,159
Ballard Marine Construction LLC	28	2	2	\$14,825,640
Pullman SST, Inc.	51	4	4	\$14,807,771
Ric-Man Construction Inc	31	3	3	\$14,536,144
AT&T	289	2	0	\$14,394,557
Board of Water Commissioners	43	0	0	\$13,399,484
Jay Dee Contractors Inc.	43	3	3	\$13,013,520
State of Michigan - Natural Gas	12	0	0	\$11,869,483
Inland Waters Pollution Control Inc	25	2	2	\$8,142,129
AECOM Great Lakes, Inc	41	3	3	\$7,846,722
Marsh USA Inc.	46	1	1	\$7,048,935
Brown and Caldwell LLC	70	8	7	\$6,915,873
Lanzo Construction Co., Florida	28	1	1	\$6,892,526
Arcadis of Michigan LLC	63	5	5	\$5,438,656
Mobile Dredging & Video Pipe Inc	8	1	1	\$5,405,032
Oscar Renda Contracting Inc	13	1	1	\$5,402,484
JCI Jones Chemicals Inc	152	11	2	\$5,329,041
Hazen and Sawyer	51	7	7	\$4,927,778
PCI LLC	62	7	5	\$4,796,021
Jacobs Consultants, Inc.	17	2	2	\$4,744,696
Linde Inc.	67	1	1	\$4,530,235
CDM Smith Michigan Inc	42	6	6	\$4,520,793
Chemtrade Chemicals US LLC	565	5	0	\$4,358,441
PVS Nolwood Chemical Inc	329	8	1	\$4,068,898
Wade Trim Associates Inc	124	5	5	\$4,038,610
Clark Construction Company	16	2	2	\$3,861,398
Enterprise Fleet Management	13	1	1	\$3,849,511
Johnson Controls Inc.	163	6	3	\$3,805,661
Kemira Water Solutions	432	2	0	\$3,714,800
Detroit Water and Sewerage	43	5	1	\$3,696,241
Dan's Excavating Inc.	12	1	1	\$3,142,857
Mark Anthony Contracting, Inc	12	1	1	\$3,067,193
Pencco, Inc.	157	8	0	\$2,995,633
FK Engineering Associates	45	6	6	\$2,978,905
HDR Michigan, Inc.	55	3	3	\$2,899,565
Burns & McDonnell Michigan Inc.	43	2	2	\$2,800,758
Allied Building Service Co. Detroit	15	1	1	\$2,719,789
LimnoTech	19	2	2	\$2,457,655
DXC Technology Services LLC	15	1	1	\$2,340,672
Noresco LLC	11	1	1	\$2,196,815
Alight Solution LLC	31	1	0	\$2,124,502
PMA Consultants LLC	20	3	2	\$2,043,449
Univar USA Inc	61	5	0	\$2,023,594
Barton Malow Company	14	1	1	\$2,011,440
Brown and Caldwell Constructors	13	1	1	\$1,880,240
Northwest Pipe Company	6	1	1	\$1,874,235
Kennedy Industries Inc	57	34	4	\$1,845,842
Major Contracting Group	6	1	1	\$1,842,449
Detroit Pump & Mfg Co	57	42	1	\$1,714,814
Motor City Electric Co	36	5	1	\$1,710,766
Grainger	1475	1148	3	\$1,608,340
Workday	9	1	1	\$1,602,238
Walsh Construction Company	11	1	1	\$1,585,485
Hydromax USA LLC	12	1	1	\$1,574,110
Polydyne Inc	188	5	0	\$1,563,732
GDI Services Inc	149	2	1	\$1,308,058
Premier Group Associates LC	305	7	2	\$1,278,782
Dell Computer Corporation	22	7	1	\$1,214,916
CDW Computer Centers Inc	102	60	0	\$1,211,207
ThermalNetics LLC	10	1	1	\$1,077,000
Systems Specialties	66	28	1	\$1,031,842
J&S Valve, Inc	1	1	1	\$1,013,137
Flowserve US Inc	2	1	0	\$995,698
Rotor Electric Co	14	6	4	\$979,286

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
W C Ducomb Company	49	45	0	\$920,283
DE-CAL Inc	15	3	2	\$884,924
J F Cavanaugh Company	5	1	1	\$824,400
M.L. Chartier, Inc.	2	1	1	\$822,159
Applied Science Inc	17	2	2	\$811,039
The Foster Group LLC	20	3	1	\$777,500
Access Interactive	26	2	1	\$764,987
Crystal Flash, Inc.	254	2	2	\$740,970
Dell Marketing LP	3	2	1	\$736,993
The Christman Company	5	1	1	\$709,813
Bridgeport Consulting LLC	23	2	2	\$707,740
Aquasight LLC	14	3	3	\$691,489
Dykema Gossett PLLC	63	4	4	\$687,459
Verizon	34	0	0	\$666,816
Slalom, LLC	14	1	1	\$659,100
NEXGEN Asset Management	9	1	1	\$643,125
Dickinson Wright PLLC	27	6	4	\$633,128
CH2M Hill Engineers Inc	14	2	2	\$621,602
Waste Management of Michigan Inc	530	18	2	\$617,103
Hach Company	259	74	2	\$574,241
Experis US Inc	83	5	0	\$549,173
PFM Financial Advisors LLC	14	3	1	\$546,916
Water Research Foundation	2	2	0	\$544,466
Magnolia River Services Inc.	11	1	1	\$537,181
Robert Half Finance & Accounting	133	15	0	\$525,629
Titus Welding Company Inc	17	4	4	\$511,008
PVS Technologies Inc	13	1	0	\$508,803
Ceridian HCM Inc	24	1	1	\$498,264
Fluid Process Equipment	6	4	0	\$495,777
State of Michigan	19	0	0	\$491,826
Family Associates, LLC	13	1	1	\$489,855
Motor City Pipe & Supply Co	342	281	0	\$488,694
Outbound Technologies, Inc.	5	1	1	\$478,934
City Of Allen Park	13	0	0	\$473,634
Integrated Power Services LLC	12	2	2	\$461,104
Mersino Dewatering Inc	1	1	0	\$460,000
DHT Transport	54	1	1	\$443,034
Schreiber Corporation	14	3	2	\$442,182
Fleishman Hilliard Inc	20	2	1	\$441,825
HESCO Group Inc.	38	26	3	\$435,989
Madison Electric Company	72	61	0	\$429,236
Regents of the University of Mich.	46	6	5	\$419,778
CDM Michigan, Inc	12	1	1	\$416,308
Plante & Moran PLLC	37	7	7	\$414,886
NTH Consultants Ltd	19	2	2	\$410,173
Preventive Maintenance Technologies	269	3	1	\$409,669
Johnson Controls Fire Protection LP	16	4	2	\$408,665
Interior Environments LLC	26	1	1	\$405,748
Siemens Industry Inc	35	16	4	\$403,720
Mcnaughton Mckay Electric Company	202	136	0	\$400,981
Ferndale Electric Company Inc	6	4	1	\$388,104
D/A Central Inc	153	3	2	\$387,533
TK Elevator Corporation	40	7	1	\$381,395
American Gear & Engineering, Inc	19	8	1	\$376,970
Data Consulting Group Inc	23	5	0	\$374,540
JGM Valve Corporation	25	25	0	\$374,383
DES Electric LLC	8	3	3	\$371,358
Oracle America Inc	11	5	0	\$358,681
Evoqua Water Technologies LLC	24	13	2	\$357,283
OpTech	36	7	0	\$344,160
Epitec Inc	129	3	0	\$337,098
Zausmer, P.C.	42	4	4	\$331,948
Wayne State University	40	6	6	\$327,334
Waterfont Terminal Holdings LLC II	1	0	0	\$325,000
Fishbeck	13	1	1	\$321,274
VWR International	864	30	2	\$313,572
PeopleGro LLC	12	1	1	\$308,450
MetalFab Inc	35	34	0	\$305,192
Secure Door LLC	97	2	1	\$300,806
Crane Technologies Group Inc	98	2	2	\$290,477
PMA Management Corp	21	1	1	\$288,918
Idexx Laboratories	71	24	2	\$285,775

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Welding Concepts Training Inc	34	1	0	\$282,500
CCH Tagetik	14	2	1	\$273,473
The Allen Law Group PC	51	2	2	\$273,012
Moody's Investors Service Inc	1	1	0	\$262,000
Rickman Enterprise Group LLC	14	1	1	\$256,120
Phoenix Environmental Inc	18	5	1	\$254,949
METCO Services Inc	14	2	2	\$250,150
Broadspire Services Inc	27	1	1	\$250,098
ESRI Inc.	1	1	1	\$250,000
Eastern Oil Company	39	30	1	\$247,782
United States Geological Survey	2	1	1	\$247,600
Metro Welding Supply Corporation	324	19	2	\$247,266
Dubois-Cooper Associates Inc	4	4	0	\$243,161
RS Technical Services Inc	71	59	0	\$242,959
American Water Works Association	1	1	0	\$236,249
OSIsoft LLC	3	3	0	\$233,896
A/C Service & Repair Inc.	4	4	0	\$232,392
Ram Construction Services of Michig	4	1	1	\$227,929
PFM Asset Management LLC	12	2	1	\$226,774
Fitch Ratings Inc	3	2	0	\$226,000
Trimble Inc	13	8	2	\$223,769
WSP Michigan Inc.	10	2	2	\$223,213
Hubbell, Roth & Clark, Inc.	6	1	1	\$221,615
OHM and WSP, A Joint Venture	11	1	1	\$219,127
Staples Business Advantage	970	0	0	\$216,684
SEMCO Energy	12	0	0	\$214,831
Alfa Laval Inc	13	13	0	\$214,042
Marra Services Inc	8	1	1	\$212,281
Black & Veatch Ltd Of Michigan	15	3	3	\$211,873
GALCO Industrial Electronics	51	37	0	\$211,039
People Driven Technology	5	1	0	\$209,337
Premier Safety	59	44	0	\$206,857
Baker Tilly US LLP	9	2	1	\$205,075
Lubrication Engineers Inc.	31	22	0	\$202,493
The Macomb Group Inc	96	70	0	\$200,955
Public Sector Consultants	24	2	2	\$200,676
Salenbien Trucking & Excavating Inc	3	1	1	\$199,769
Employee Reimbursement	677	0	0	\$192,108
Cintas	713	43	0	\$187,485
W.S.I. Industrial Services, Inc.	12	4	1	\$187,000
Concentra Medical Centers	98	1	0	\$186,613
Fausone & Grysko, PLC	23	2	2	\$183,383
NavVis US, Incorporated	2	1	1	\$182,275
360water, Inc.	3	2	2	\$181,620
Allingham Corporation	35	9	0	\$180,375
Oscar W Larson Company	3	2	0	\$177,591
Capp USA	35	33	0	\$172,630
Advance Instrumentation Systems	9	6	5	\$171,698
Avante Solutions, Inc.	22	1	1	\$167,018
KONE Inc	9	1	1	\$164,556
Birclar Electric & Electronics LLC	7	2	1	\$163,936
Sulco Chemicals Limited	20	1	0	\$163,055
Hart EMS Medical Services PLLC	15	1	0	\$161,550
Ontic Technologies, Incorporated	1	1	1	\$159,000
JMK Engineering, Inc	24	1	0	\$158,532
DLT Solutions LLC	5	5	0	\$157,748
Aquatic Informatics Inc	3	1	1	\$155,331
CEC Controls Company, Inc.	9	1	1	\$154,089
MSC Industrial Supply Company	335	198	2	\$154,050
Aquafit Chlorination System LLC	10	10	0	\$153,250
David D. Taylor	51	1	1	\$152,390
Yates Industries Inc	24	7	0	\$150,898
Global Solutions Group Inc.	3	1	1	\$148,367
Amazon Web Services Inc	13	3	0	\$145,664
S&P Global Ratings	2	1	0	\$144,000
Havener Tech	5	5	4	\$141,650
United Rentals North America Inc	103	3	1	\$140,482
Geotab USA, Inc.	17	1	1	\$140,462
Laird Plastics	9	6	0	\$138,423
ScAir Force Falconry & Bird Abateme	6	2	2	\$138,340
Emerson Process Management	4	2	2	\$136,912
Raftelis	17	2	2	\$136,839

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
RA Consultants, LLC	3	1	1	\$136,078
Unifirst Corporation	586	1	1	\$135,060
Federal Pipe & Supply Co Inc	132	103	0	\$134,623
JWC Environmental Inc.	3	3	0	\$132,516
Plunkett Cooney PC	37	5	5	\$130,072
EJ USA Inc	33	18	0	\$128,163
Somat Engineering Inc	8	1	1	\$126,722
Verve Industrial	4	1	1	\$122,910
Gabriel Novac & Associates Ltd.	2	2	0	\$122,350
Dean Marine & Excavating Inc.	14	1	1	\$122,325
SE Michigan Council of Governments	2	2	0	\$118,584
Hugh Connolly	12	1	1	\$118,147
Genesee County Drain Commissioner	1	1	0	\$118,000
Xerox Corporation	66	1	1	\$117,639
MacAllister Machinery Co Inc	20	10	0	\$117,503
Smartsheet Inc	1	1	0	\$117,000
Bonfire Interactive Ltd	1	1	1	\$117,000
Solarwinds	2	2	0	\$116,628
City of Melvindale	27	0	0	\$115,272
OHM Advisors	10	1	1	\$113,929
Beam, Longest & Neff, LLC	17	1	1	\$113,660
Consumers Energy	101	0	0	\$111,884
Gilson Engineering Sales	4	2	0	\$110,131
Electrical Industries	4	4	2	\$108,945
Info-Tech Research Group Inc	2	2	2	\$107,941
HI Controls LLC	7	7	0	\$105,776
Vieux & Associates Inc.	16	3	1	\$105,155
M-K Construction Company Inc.	2	1	1	\$104,475
EBARA Pumps Americas Corporation	2	2	0	\$103,343
Christy Glass Company, Inc.	10	2	0	\$98,381
West Coast Labour Systems Corp	2	1	1	\$97,623
Boston tile and Terrazzo Company	2	1	1	\$96,315
Bell Equipment Company	2	2	1	\$95,540
Alliance Technical Group	2	1	1	\$92,944
Michigan.com	5	5	0	\$92,909
FranklinCovey Client Sales Inc.	1	1	0	\$90,950
Powell Fabrication & Manufacturing	3	2	0	\$89,447
Merrick Industries Inc.	2	2	0	\$88,656
National Association of Clean Water	1	0	0	\$86,205
Allie Brothers Inc	347	1	1	\$84,496
Catch Transport, LLC	6	1	0	\$81,840
AT&T CWO	1	0	0	\$81,838
TWN Consulting LLC	12	1	1	\$81,600
Lockton Companies LLC	12	1	1	\$81,275
Zones Inc	1	1	0	\$80,666
Merit Laboratories Inc	98	9	0	\$79,589
Nearmap US Inc.	2	2	1	\$78,835
HORIZON Lab Systems	7	1	1	\$78,138
Schneider Electric Systems USA Inc.	4	4	0	\$75,092
HR Management Group Inc	9	1	1	\$75,081
Hydra-Tech Pumps LLC	3	3	0	\$74,917
Kerr Pump and Supply, Inc.	5	4	1	\$74,330
Communications Professionals Inc	20	20	0	\$73,803
Homrich	11	1	0	\$73,389
Tidal Basin Government Consulting	16	2	2	\$73,204
RMF Nooter Inc	4	3	1	\$72,897
Circuit Breaker Sales Co., Inc.	7	2	0	\$72,225
CSX Transportation	13	0	0	\$72,162
Nationwide Construction Group	22	1	1	\$72,119
Park Rite Inc	13	1	0	\$70,800
Fort Gratiot Charter Township	4	0	0	\$70,234
US Bank	17	8	0	\$69,750
Durawear Glove & Safety Co. Inc.	15	13	0	\$69,142
Professional Pump Inc	5	2	0	\$68,781
Actuator Specialties	6	6	0	\$68,483
Robinson Fans Incorporated	1	1	0	\$67,211
Jack Doheny Companies Inc	24	12	0	\$64,798
Intelligent Systems Group LLC	2	2	1	\$61,508
EH Wachs	2	2	0	\$61,465
Lavdas Limousines	27	2	1	\$61,440
Motion Industries Inc	19	18	0	\$60,546
Clayton Industries	28	7	1	\$59,979

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Future Fence Company	17	1	1	\$59,977
Carus Corporation	1	1	0	\$59,766
Miss Dig System Inc.	1	1	0	\$59,256
Gray Matter Systems LLC	3	2	0	\$59,000
Ideation Orange	6	3	1	\$58,815
Wadsworth Solutions Northwest	4	4	0	\$57,854
Detroit Salt Company LLC	6	2	0	\$57,719
Truck & Trailer Specialties Inc.	15	2	1	\$57,141
Macomb Mechanical Inc	21	5	1	\$56,809
Alro Steel Corporation	5	5	0	\$55,616
Aston Carter Inc.	33	4	0	\$54,621
Stantec Consulting Services Inc.	3	1	1	\$54,416
Brentwood Industries Inc	2	2	0	\$54,378
Charter Townshiip of Clinton	1	0	0	\$53,888
Great Lakes Electric Company, Inc	7	5	0	\$53,462
Binkelman Corporation	34	31	0	\$53,302
Cornerstone onDemand Inc.	1	1	1	\$53,179
Fred's Key Shop	19	3	0	\$52,265
Sehi Computer Products Inc	5	4	0	\$51,387
Moss Telecommunications Services	3	2	0	\$51,212
Rose Pest Solutions	46	2	1	\$50,843
City of Dearborn	27	0	0	\$50,509
Innomotics LLC	2	2	1	\$50,050
EMC Corporation	3	3	0	\$50,009
Mechanical Solutions, Inc.	2	1	1	\$49,350
Albert Kahn Associates Inc.	3	2	2	\$48,877
Carahsoft Technology Group	1	1	0	\$48,543
Landis+Gyr Technology, Inc.	1	1	1	\$48,240
Attorney Eric V Smith PLC	12	1	1	\$47,623
Thermo Electron North America LLC	6	2	0	\$47,542
Atlantic Coast Polymers Inc	1	1	0	\$47,520
Granicus LLC	1	1	1	\$46,962
Owl Cyber Defense Solutions	1	1	0	\$46,675
FastSigns Detroit	30	1	1	\$46,135
Pumps & Systems Inc	3	3	0	\$45,783
Ingersoll Rand Company	8	6	0	\$45,277
Linkedin Corporation	2	2	0	\$45,184
Advanced Machine & Engineering Co	2	1	0	\$45,095
Asterra	1	1	1	\$45,000
Nuair Fluid Power Inc	5	5	0	\$44,675
Imperial Dade Paper & Bag	62	1	0	\$44,123
Lewis & Munday P C	18	1	1	\$43,845
Michigan State University	5	2	2	\$43,524
YSI Incorporated	8	1	1	\$43,086
America's Green Line	5	1	0	\$42,939
Best Aire Compressors Services Inc	11	9	0	\$42,698
Carlette Construction & Consulting	1	1	1	\$42,531
Project Innovations Inc	25	2	2	\$42,435
Serra Works of Farmington Hills LLC	1	0	0	\$42,400
Carlson-Dimond & Wright Inc	17	15	0	\$42,055
Schenk & Bruetsch PLC	14	1	1	\$39,839
Midwest Municipal Instrumentation	8	7	0	\$39,567
Biotage LLC	10	3	1	\$39,253
Skyworks LLC	1	1	0	\$38,936
RJ Stacey LTD	3	2	1	\$37,800
Abraxis Inc	2	2	0	\$37,365
RedVector.com LLC	1	1	0	\$37,220
Beasley Media Group LLC	11	1	0	\$37,000
Motorola Solutions Inc.	2	1	0	\$35,947
USA Bluebook - Main	14	6	0	\$35,469
Herc Rentals Inc.	28	4	0	\$34,884
Canon Solutions America Inc	24	2	0	\$34,645
Midwest Air Filter Inc	37	31	0	\$34,436
SkyNorth Software	9	2	1	\$34,395
Dani's Transport	4	1	0	\$34,365
William Cooper and Debra Cooper	1	0	0	\$33,859
Veolia Water Technologies Canada	1	1	0	\$33,853
Wayne Health	1	1	0	\$33,625
Gallup Inc	2	1	1	\$33,488
SPX Flow US LLC	2	1	0	\$33,441
Wayne County Community College	1	1	0	\$32,400
Energy Products Inc	5	5	0	\$32,289

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
4 Leaders LLC	15	1	1	\$32,259
BS&A Software	3	1	1	\$31,808
Great Lakes Pump & Supply Co	2	2	0	\$31,527
Bay de Noc Community College	3	1	1	\$31,260
Teledyne Leeman Labs	4	2	2	\$31,062
Electrical Workers Insurance Fund	54	1	0	\$30,518
Integra Chemical Company	5	5	0	\$29,815
BondLink	3	2	0	\$29,553
Incinerator Rx Corporation	2	1	1	\$29,400
Industrial Fence & Landscaping Inc	1	1	1	\$29,059
The Predictive Index LLC	1	1	1	\$29,000
Public Rubber & Supply Co Inc	22	22	0	\$28,945
Tri County Equipment Inc	4	2	0	\$28,546
Powder Bulk Products Inc	1	1	0	\$28,127
Ayyeka Inc.	3	2	0	\$28,085
American Falconry Services LLC	2	1	1	\$28,000
YTI Office Express	37	35	0	\$27,895
Better Bolting, Incorporated	3	2	0	\$27,842
SDSpro LLC	1	1	0	\$27,699
City of Warren	12	1	0	\$27,560
Alexander Chemical Corporation	3	3	0	\$26,924
Digital Science Group LLC	6	2	2	\$26,060
Alliance of Rouge Communities	3	1	1	\$25,993
Association of Metropolitan Water	1	0	0	\$25,900
Tracker	17	2	0	\$25,880
Barta Sales LLC	5	5	0	\$25,812
Corrosion Fluid Products	6	6	0	\$25,406
SW Controls Inc	4	4	0	\$25,260
Dunbar Mechanical, Inc.	7	6	2	\$25,224
Process Improvement Institute Inc.	3	1	1	\$25,020
Society For Human Resource Mgt.	2	1	0	\$24,965
Park Place Technologies LLC	13	2	0	\$24,362
Ohio Medical LLC	3	2	0	\$24,339
Paragon Laboratories Inc	30	3	1	\$24,302
Capturis	12	1	1	\$24,243
TS Systems, Inc.	1	1	1	\$24,075
Uline, Inc.	19	19	0	\$24,013
B&R Consultants	6	1	1	\$24,000
Prefect Technologies, Incorporated	1	1	1	\$23,990
Alfonsi Railroad Construction Co	2	2	0	\$23,827
Waterworks Systems & Equipment Inc	3	3	0	\$23,784
Wex Bank	13	0	0	\$23,578
Process Engineering & Equipment	3	3	0	\$23,191
i3-ImageSoft	7	1	1	\$22,788
The Sheer Shop Inc.	4	1	1	\$22,785
E2intel	3	3	0	\$22,500
Newing-Hall Inc.	1	1	0	\$22,355
Rose Moving & Storage Co. Inc.	7	1	1	\$22,340
HD Edwards & Company	16	15	0	\$22,286
BAVCO	10	10	0	\$22,276
Fisher Scientific Company LLC	2	2	0	\$22,191
Miller Canfield Paddock & Stone PLC	7	2	1	\$22,182
ZOHO Corporation #4926	1	1	0	\$22,130
Rosati, Schultz, Joppich &	10	2	2	\$22,056
Calls Plus	1	1	1	\$22,025
SDG Associates, LLC	14	1	1	\$21,932
Marshall E. Campbell Company	34	18	0	\$21,602
FTP Today Inc.	2	2	0	\$21,143
Schattler Shades & Blinds LLC	2	2	0	\$21,001
Saginaw Control & Engineering	2	1	0	\$20,474
American Tower Management LLC	13	1	0	\$20,468
CBT Nuggets, LLC	2	2	0	\$20,360
Kopka Pinkus & Dolin PC	10	1	1	\$20,217
Frontier Communications	97	0	0	\$20,185
Emphasys Software	2	1	1	\$20,157
United Way for Southerastern MI	1	1	1	\$20,000
Ward Diesel Filter Systems	1	1	0	\$19,789
City of Rochester Hills	10	1	0	\$19,684
HireRight, LLC	13	1	1	\$19,567
VEGA Americas Inc.	4	2	0	\$19,537
Unconventional Solutions Inc	6	5	0	\$19,498
Rehmann Robson	2	1	1	\$19,460

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Metro Detroit EITC	12	1	0	\$19,200
Communication Supply Co.	14	3	0	\$18,995
G.E. Distribution Service/ipromoteu	5	4	0	\$18,704
Lerch Bates, Inc.	9	1	1	\$18,600
R.S. Means Company LLC	4	3	0	\$18,572
The Transmitter Shop	1	1	0	\$18,465
Kiesler Police Supply Inc	6	5	0	\$18,436
Agilent Technologies Inc	7	7	0	\$18,366
Maza Construction Engineering Inc.	1	1	0	\$18,240
Safety Services Inc	45	30	0	\$18,232
Dun & Bradstreet Inc	1	1	0	\$18,230
Cisco Systems Inc	6	1	0	\$18,180
Harold Beck & Sons Inc	1	1	0	\$17,829
Davenport Brothers Construction Co.	2	2	2	\$17,750
Michigan CAT	15	3	2	\$17,658
Eganix, Inc.	1	1	0	\$17,290
Industrial Furnace Co Inc	1	1	1	\$17,250
Robin Cash Ph.D., LLC	10	1	0	\$17,196
Pete's Coin Laundry	11	1	0	\$16,976
Global Green Service Group	4	1	1	\$16,877
Innovyze Inc	1	1	0	\$16,700
Bert's Testing & Training Services	4	1	1	\$16,640
Environmental Resource Associates	19	15	0	\$16,561
Core Mechanical, Inc.	1	1	1	\$16,537
Sigma Associates Inc	11	1	1	\$16,279
PTS Professional Technical Service	1	1	0	\$16,245
BCC Distributon	9	8	0	\$16,054
Brehob Corporation	7	7	0	\$15,910
B&H Photo-Video	7	2	0	\$15,671
Emergency Restoration	1	1	0	\$15,639
Sherwin Williams Company	33	8	0	\$15,422
Matterport, Inc.	7	2	0	\$15,393
Serpentix Conveyor	1	1	0	\$15,337
Jim Myers & Sons, Inc.	1	1	0	\$15,270
American Red Cross	34	2	0	\$15,114
J. Dedoes Enterprises Inc.	15	2	0	\$15,041
Qmarkets USA Inc.	1	1	0	\$14,900
Alpha Psychological Services PC	26	2	0	\$14,550
Robert M Kowal	3	1	1	\$14,400
SafetySkills, LLC	1	1	0	\$14,400
L&W Supply	22	2	0	\$14,249
Dwyer Instruments Inc.	1	1	0	\$14,040
Black Anvil Construction Supplies	26	21	1	\$13,827
Digital Assurance Certification LLC	5	4	0	\$13,800
Graybar Electric Company	53	2	1	\$13,322
Wolverine Power Systems	13	2	2	\$12,645
Keco Inc.	1	1	0	\$12,468
Trace Analytical Laboratories Inc	19	4	1	\$12,452
Hi-Lo Industrial Trucks Co. Inc.	6	2	0	\$12,433
Detroit Legal News	14	1	0	\$12,270
Compressor Engineering Corporation	5	5	0	\$12,254
Enerco Corporation	7	1	0	\$12,176
Action Mat & Towel Rental	64	3	1	\$12,143
Chemtrac Inc	1	1	0	\$12,070
Sunbelt Rentals, Inc.	8	2	0	\$12,015
Blue Water Air Compressor	6	5	0	\$11,999
Scaffolding Incorporated	1	1	0	\$11,975
Klein Inc.	2	2	0	\$11,668
Service Electric Supply Inc	35	30	0	\$11,592
Central Poly-Bag Corp	5	5	0	\$11,530
Re-Source Partners	2	1	1	\$11,430
Galloup,Forberg Smith, Merlo Energy	8	8	0	\$11,373
Rosemount Analytical Inc	2	2	0	\$11,360
Met One Instruments Inc	4	4	0	\$11,181
Institute For Environmental Health	11	1	0	\$11,040
Harrington Industrial Plastics LLC	21	9	0	\$10,950
Chemical Systems Inc	3	3	0	\$10,664
Miles Parish	1	0	0	\$10,500
GHD Services Inc.	1	1	1	\$10,475
Imagemaster, LLC	3	1	0	\$10,292
Helwig Carbon Products Inc	6	6	0	\$10,225
De Nora Water Technologies, LLC	3	1	0	\$10,148

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Marsh Power Tools, Inc	36	1	0	\$10,115
Dice Career Solution	1	1	0	\$10,026
Kevin Burke III	4	1	1	\$10,000
Cincinnati Babbitt Inc	1	1	0	\$9,963
Xylem Water Solutions Usa Inc	3	2	0	\$9,760
Metrotech Automotive	3	3	0	\$9,728
Hotsy Midwest Cleaning Systems	2	2	0	\$9,715
Valve Reconditioning Service	2	1	0	\$9,542
Quinn Evans	5	1	1	\$9,450
F B Wright Company	3	3	0	\$9,411
Andax Industries LLC	7	7	0	\$9,364
B & H Machine Sales, Inc	5	3	0	\$9,330
Michael Gould	3	1	1	\$9,299
Progressive Plumbing Supply Co Inc	42	36	0	\$9,288
Eurofins Eaton Analytical, Inc.	11	2	0	\$9,198
iProjectSolutions LLC	1	1	0	\$9,150
McLaren Port Huron Industrial	5	1	0	\$9,055
Temple Beth EL	1	0	0	\$9,000
Environmental Consulting	9	2	1	\$8,921
SCI Floor Covering Inc.	3	1	1	\$8,839
Continental Carbon Group Inc	4	1	0	\$8,640
Complete Battery Source	3	3	0	\$8,639
Berrington Pumps & Systems, Inc	1	1	0	\$8,626
Ametek Power Instruments	1	1	0	\$8,471
McMaster-Carr Industrial Supply Co	16	15	0	\$8,441
Brock Tool of Detroit, Inc.	1	1	0	\$8,365
Major Brand Oil Company Inc	3	2	0	\$8,324
Caniff Electric Supply Co., Inc.	52	3	0	\$8,300
Tru Steel Metals LLC	2	2	0	\$8,235
Articulate Global, LLC	2	1	0	\$8,049
Aero Filter Inc	6	6	0	\$8,016
DP Brown Of Detroit Inc	2	2	0	\$8,009
ReadyOP Communications Inc.	1	1	0	\$8,000
CLE Strategic Solutions LLC	2	1	1	\$8,000
FMLASource Incorporated	2	1	1	\$7,965
Collins & Collins Law PC	1	1	1	\$7,960
Ozone Water Systems, Inc	1	1	0	\$7,909
I & C Sales North Inc	3	3	0	\$7,870
Allstate Industrial Equipment	4	2	0	\$7,855
Quality Air Service Inc.	4	1	0	\$7,829
Modern Water Inc.	2	2	1	\$7,796
Brooks Lumber Company	7	7	0	\$7,668
Kirk's Automotive Inc	30	27	0	\$7,615
Raven Environmental Products Inc	5	5	0	\$7,410
Micro Motion Inc	1	1	0	\$7,399
Choctaw-Kaul Distribution Company	10	10	0	\$7,336
Applied Industrial Technologies Inc	1	1	0	\$7,297
Tobys Instrument Shop Inc	10	9	1	\$7,177
Metropolitan United Methodist Churc	1	0	0	\$7,000
Z Contractors, Inc	1	1	0	\$6,838
Fibre Industries	7	7	0	\$6,799
Continental Catering & Events	1	1	0	\$6,774
Kerr, Russell and Weber, PLC	9	1	1	\$6,660
Etna Supply Company	2	2	0	\$6,610
AVE Office Supplies	8	8	0	\$6,589
Hanna Instruments USA	2	2	0	\$6,570
Zymo Research Corporation	1	1	0	\$6,422
Fab Tech Wastewater Solutions LLC	2	2	0	\$6,412
Synergy Equipment	1	1	0	\$6,408
Pure Data Services, LLC	38	5	0	\$6,267
Global Industrial	7	7	0	\$6,228
City of Detroit	20	0	0	\$6,186
Bearing Headquarters Co	6	6	0	\$6,185
Shimadzu Scientific Instruments Inc	2	2	0	\$6,143
DTN LLC	13	2	0	\$6,041
Greyline Instruments	1	1	0	\$6,025
Roman A. Avant	1	0	0	\$6,000
LPA Software Solutions, LLC	1	1	1	\$6,000
Avanath North End Holdings, LLC	1	0	0	\$6,000
Citra, LLC	1	1	0	\$5,962
TargetSolutions Learning, LLC	1	1	1	\$5,915
Downriver Refrigeration Supply Co	1	1	0	\$5,853

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Ibex Battery Systems LLC	1	1	0	\$5,600
Resa Service LLC	3	3	0	\$5,552
Boomer Construction Materials	40	1	1	\$5,424
Exotic Automation & Supply	5	3	0	\$5,267
Core & Main LP	3	1	0	\$5,265
RedGuard Fire & Security, Inc.	5	1	0	\$5,140
Creative Safety Supply, LLC	1	1	0	\$5,081
Process Control Services Inc	2	2	1	\$5,003
Pollardwater	3	3	0	\$4,960
Core Electric Company Inc	3	3	0	\$4,949
Enterprise Holding Inc.	3	1	1	\$4,811
VESCO Oil Corporation	5	5	0	\$4,769
Michigan Chronicle Publishing Co	2	1	0	\$4,750
ESPRI	1	1	1	\$4,725
Allied-Eagle Supply Company LLC	4	4	0	\$4,620
Technical Hot & Cold	3	1	0	\$4,566
UniMeasure Inc.	2	2	0	\$4,543
Prism Lab, LLC and Erskine Law	1	0	0	\$4,500
Swanky Restroom Trailers	1	1	0	\$4,400
Tredroc Tire Services, LLC	10	1	1	\$4,358
Heritage Vision Plans	11	1	0	\$4,322
Iron Mountain	49	1	1	\$4,272
Norkan Inc	10	1	1	\$4,226
Butzel Long PC	8	1	1	\$4,200
Quadient Inc.	18	2	0	\$4,128
S P Kinney Engineers Inc	4	4	0	\$4,059
SGN Mobile Electronics	13	1	1	\$3,973
Sabiston Building Supply	39	1	0	\$3,920
Moore Industries-International, Inc	2	1	0	\$3,913
Bentley Systems Incorporated	1	1	0	\$3,897
Rosemount Inc	1	1	0	\$3,866
NSI Lab Solutions Inc	2	2	0	\$3,866
American Water College	1	1	0	\$3,800
Advance Plumbing & Heating Supply	11	9	0	\$3,773
Crown Lift Trucks	13	4	0	\$3,692
LexisNexis	13	1	1	\$3,583
Scientific Methods Inc	3	1	0	\$3,555
Sismex America, Inc.	14	5	0	\$3,530
Spalding DeDecker	1	1	0	\$3,525
EnviroScape	2	1	0	\$3,509
Goodway Technologies	2	2	0	\$3,464
Consolidated Rail Corporation	8	0	0	\$3,461
Ovivo USA, LLC	1	1	0	\$3,401
Precision Digital Corporation	1	1	0	\$3,392
Teknicolors Paints Inc	24	1	0	\$3,390
Xylem Dewatering Solutions Inc	2	1	0	\$3,385
Instrumart	1	1	0	\$3,377
Behnke Pump Technologies, LLC	1	1	1	\$3,355
Ipax Atlantic LLC	3	3	0	\$3,310
United Parcel Service	105	0	0	\$3,303
Emedco	5	4	0	\$3,218
Action Impact - Eastpointe	13	2	0	\$3,212
LaserCom, LLC	1	1	0	\$3,158
Downriver Utility Wastewater Auth.	11	3	0	\$3,132
Macomb Community College	2	1	0	\$3,064
Advanced Calibration Designs	1	1	0	\$3,053
Novi Community School District	1	0	0	\$3,000
Laurie Brown	1	1	0	\$3,000
Detroit-Wayne Joint Building Auth	1	0	0	\$3,000
Metro Bolt & Fastener	2	1	0	\$2,869
Identification Lamination Products	2	2	0	\$2,830
Transcat Inc	1	1	0	\$2,829
Discovery Solutions Inc	14	2	0	\$2,807
Gutter Supply Inc	1	1	0	\$2,794
Acme Bolt & Nut Co Inc	1	1	0	\$2,700
Thermo Fisher Scientific Asheville	4	4	0	\$2,688
Association for Talent Development	1	1	0	\$2,631
NLB Corp.	1	1	0	\$2,590
Schuster Law PLC	4	1	1	\$2,491
Sodexo Inc.	1	1	0	\$2,485
Able Label	1	1	0	\$2,469
Bromberg & Associates LLC	2	2	0	\$2,431

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
LabStrong Corporation	2	2	0	\$2,406
Teledyne CETAC Technologies Inc	1	1	0	\$2,406
Henry Ford Health System	2	1	1	\$2,378
Hygiena LLC	2	2	0	\$2,330
Lightstoreusa, Inc.	1	1	0	\$2,328
L.I.J.B.S. Enterprises, LLC	2	1	1	\$2,205
Holland Supply Company	1	1	0	\$2,160
The Crowley Company	1	1	0	\$2,120
Comcast Business Communication, LLC	9	0	0	\$2,113
Michigan Municipal League	2	2	0	\$2,095
K & K Maintenance Supply Inc	4	4	0	\$2,010
Jett Pump & Valve LLC	2	2	0	\$2,010
CD Lewis Estates Inc	1	0	0	\$2,000
Duratech Systems, Inc	1	1	0	\$1,995
ZLED Lighting	1	1	0	\$1,985
Cech Corporation	1	1	0	\$1,985
Gold Standard Diagnostics Horsham	2	2	0	\$1,981
Accredited Lock & Door Hardware	2	2	0	\$1,966
Cornell Field Vibration Service Inc	3	1	0	\$1,910
Wright Tool Co	3	3	0	\$1,850
Flor Dri Supply Company Inc	4	4	0	\$1,830
Urban Renewal Initiative Foundation	1	0	0	\$1,800
City of Highland Park	1	1	0	\$1,800
EKUIPTech, LLC	1	1	0	\$1,765
Poco Sales Inc	3	3	0	\$1,700
Prestige Worldwide Technologies, LL	1	1	0	\$1,695
Full Source, LLC	1	1	0	\$1,695
Torch Associates LLC	1	1	0	\$1,680
Crucial Learning	1	1	0	\$1,668
Nationwide IME	1	1	0	\$1,625
Hennessey Engineers Inc.	1	1	0	\$1,592
Converge Technology Solutions US LL	1	1	0	\$1,558
Robert Thomas CPA, LLC	1	1	0	\$1,500
Shelby Township DPW	4	0	0	\$1,486
Detroit Ready Mix Concrete Inc	1	1	0	\$1,475
Contractors Connection Inc	3	3	0	\$1,474
Marine Pollution Control Corp	1	1	0	\$1,458
IDN Hardware Sales, Inc.	1	1	0	\$1,448
Bearings and Industrial Supply Co	2	2	0	\$1,426
Global Environmental Consulting LLC	4	2	0	\$1,425
TForce Freight	5	0	0	\$1,412
Madonna University	2	2	0	\$1,400
Indian Springs Mfg. Co Inc	4	4	0	\$1,391
Van Buren Township	1	0	0	\$1,347
T & N Services Inc	2	2	0	\$1,324
Connection Technology Center Inc	1	1	0	\$1,318
Alfred Benesch & Associates	1	1	1	\$1,309
Aircentric Corporation	2	2	0	\$1,305
Acuity Institute	1	1	0	\$1,299
Boll Filter Corporation	1	1	0	\$1,286
Michigan Valve & Fitting Inc	2	2	0	\$1,286
Piping Components, INC	3	3	0	\$1,256
M C Gutherie Lumber Company	3	3	0	\$1,225
ALS Environmental	4	1	0	\$1,200
Jackson Lewis P.C.	7	1	1	\$1,110
Time Clock Sales & Service Co., Inc	2	2	0	\$1,029
Spiral Binding Company Inc	1	1	0	\$985
JobFairGiant.com	1	1	0	\$967
Regents of the University of MI	4	1	0	\$953
J.J. Supply Company Inc.	1	1	0	\$947
Devar Inc.	1	1	0	\$941
State Chemical Solutions	2	1	0	\$939
RS Americas, Inc	3	1	0	\$922
Unistrut Midwest	1	1	0	\$900
Burt Process Equipment	1	1	0	\$897
PaymentVision	4	1	1	\$880
Gravotech, Inc.	1	1	0	\$855
D C Hydraulics Inc.	1	1	0	\$851
Commerical Group Lifting Products	1	1	0	\$850
Omega Engineering Inc	2	2	0	\$831
Hamlett Environmental Technologies	1	1	0	\$820
Dal-Tile Distribution	6	2	1	\$803

Appendix D – FY 2023 Combined Vendors paid by Invoice

Vendor	Invoice Count	PO Count	Contract Count	Amount
Jones Equipment Rental	1	1	0	\$772
Team Industrial Services Inc	1	1	0	\$771
Excel Industrial Electronics, Inc.	1	1	0	\$770
Michfab Machinery Inc.	1	1	0	\$753
Gilson Company	1	1	0	\$732
Equipment Material Sales, LLC	2	2	0	\$705
Airgas USA LLC	1	1	0	\$699
Bulldog Records Management Inc	13	1	0	\$686
City of Novi	4	0	0	\$679
Aqua Solutions Inc.	1	1	0	\$676
Liberty Plumbing Supply Company	5	5	0	\$669
R L Deppmann Company	1	1	0	\$641
Linde Gas & Equipment Inc.	1	1	0	\$637
Radiation Safety Services	1	1	0	\$633
J H Bennett & Company Inc	1	1	0	\$628
DTE Energy Company	1	0	0	\$600
Tooles Contracting Group LLC	1	0	0	\$573
Michigan Dept. of State Police	2	2	0	\$560
Road Commission for Oakland County	1	1	0	\$550
The Lab Depot Inc	1	1	0	\$515
George Instrument Company	3	2	0	\$510
Chart Pool USA Inc	2	2	0	\$489
J. D. Gould Company Inc.	1	1	0	\$465
Macomb County Department of Roads	1	0	0	\$450
Restek Corporation	1	1	0	\$444
City of Romulus	7	0	0	\$443
Medler Electric Company	1	1	0	\$431
Charter Township of Plymouth	12	0	0	\$411
Hupp Consulting LLC	1	1	1	\$405
Nalco Water	1	1	1	\$388
Solomon Diving Inc.	1	1	0	\$375
Radwell International Inc.	1	1	0	\$340
A-1 Truck Parts Detroit	4	4	0	\$335
City of Wayne - Water Department	7	0	0	\$325
Gabbert's Concrete Products	1	1	0	\$310
National Ladder & Scaffold Company	1	1	0	\$288
United States Plastic	1	1	0	\$284
Graphic Products Inc.	1	1	0	\$279
Atlas Plumbing Supply Co.	3	3	0	\$260
Columbia Pipe & Supply Co.	1	1	0	\$245
Pipeline Products, Inc	1	1	0	\$218
Michigan State Industries	1	1	0	\$149
EMP Industries Inc	1	1	0	\$122
Empire Wire & Supply LLC	1	1	0	\$97
Starr Butler, PLLC	1	1	1	\$96
Medcor Inc	1	0	0	\$79
City of Roseville Water Department	2	0	0	\$48
Henry Ford College	2	1	0	\$47
City of Southfield	12	0	0	\$36
AutomationDirect.com Inc.	1	1	0	\$15
Pyrosoft Inc	2	1	0	\$0
The Water Tower Institute	2	1	0	\$0
Engineering Reproduction Inc.	2	0	0	\$0
Proteus Instruments	2	1	0	\$0
Grand Total	25013	4750	473	\$ 566,271,610



Financial Services Audit Committee Communication Affordability & Assistance Update March 22, 2024

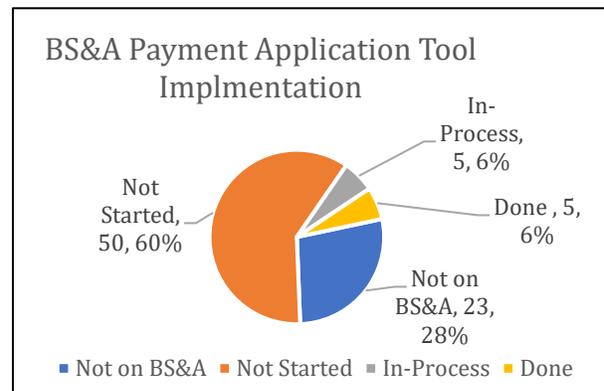
Contact: Haran Stanley, Affordability & Assistance Management Professional

Welcome!

We would like to welcome June White, GLWA's new Affordability & Assistance Manager. June comes to GLWA with a strong management and accounting background in management as well as experience with and a passion for human services programs. We are pleased to welcome June to the GLWA Financial Services Area.

Dashboard - Implementation of BS&A Payment Application WRAP Outreach

Water Residential Assistance Program (WRAP) Service Delivery Partners (SDPs) have completed the rollout of the new BS&A payment application tool to Member Partners. Along with our SDPs, we will continue to encourage Member Partners to take advantage of this time-saving opportunity. Most recently, GLWA Member Partners received a reminder of this tool with final charges letters mailed in early March.



WRAP Update

CFO & Treasurer Nicolette Bateson and Affordability & Assistance Management Professional Haran Stanley recently shared the WRAP FY 2023 4th Quarter Report with a FY2023 Year-to-Date Activity and FY 2024 Look Ahead with Senator Stephanie Chang's Water Affordability Workgroup, GLWA's Communication and Education workgroup, and other stakeholders.

Key Initiatives

1. In-process - Convert legacy monthly statements of expenses from myriad formats to create a "WRAP Database" to support effective program management
2. In-process - WRAP commitment forecasting model for Service Delivery Partners
3. In-process - Engage in statewide conversations with stakeholders and leaders related to water affordability matters in Michigan
4. Discovery Phase - Develop a grant-seeking proposal package to identify additional sources of funding
5. Discovery Phase - Electronic data extraction from Service Delivery Partner systems to create a comprehensive database
6. Final Stage - WRAP program manual and Frequently Asked Questions documents
7. Complete - WRAP toll-free phone number for residents to contact their Service Delivery Partner



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Nick Simms, Grants Management Professional

Re: Grants, Gifts, and Other Resources Report Through February 29, 2024

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 ⁽¹⁾ 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⁽²⁾.

(1) Other resources as referenced above 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.

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

GLWA's Grants, Gifts, and Other Resources Delegation Policy is online at [Grants, Gifts, and Other Resources Delegation Policy - GLWA \(glwater.org\)](https://www.glwawa.org/Grants-Gifts-and-Other-Resources-Delegation-Policy).

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.

This report has been updated to align section titles with the grant lifecycle as found in best practice guidance and in the Workday system currently being implemented at GLWA. The grants lifecycle refers to the process required to secure, administer, and close out grant activity. These steps are broken down in three major phases: pre-award, award, and post award.

The **pre-award** phase includes the process of applying for a grant and the period prior to the signing of the grant agreement between the awarding agency and GLWA.

The **award phase** reflects the period after the agreement is executed with the awarding agency. In this phase, GLWA becomes responsible for meeting the administrative, financial, and programmatic reporting requirements of the award.

The **post award** phase is the final stage of grant activity and includes final reporting requirements, auditing, and closeout. There are final financial and programmatic reports that must be submitted to formally close out the grant as defined in each grant agreement.

The tables in each section of this report now reflect GLWA grant activity in each phase. As a grant moves through this lifecycle, it will be updated in the appropriate section of the report.

Items highlighted in yellow in the attached tables reflect changes from the prior report.

Highlights of this report through February 29, 2024, includes the following.

- ✓ **Federal Emergency Management Agency (FEMA) Flood Event Projects** – GLWA submitted two reimbursement requests for two FEMA Flood Event Projects: Conner Creek Sewer System (FEMA Project #664811/Ref #2023-022) in the amount of \$1.8M and Outfalls Sewer Cleaning (FEMA Project #714729/Ref #2023-013) in the amount of \$275K for allowable expenses flood event expenses.
- ✓ **State of Michigan Public Act 53 Act American Rescue Plan Grant (PA 53 ARPA Grant)** – GLWA received one reimbursement payment of \$25M from the State of Michigan related to the PA 53 American Rescue Plan grant (Ref# 2023-017). The funds pertaining to the grant were used for various sewer projects. This grant is now moving to the post award program section of this report.
- ✓ This report presents the Grants, Gifts, and Other Resources across three tables.

Table 1 – Pre-Award Programs reflects open submissions for FY 2023 and FY 2024 to date. The summarized activity provided identifies two earmark EPA Community Grants, seven FEMA Flood projects, two application submissions, two letters of intent to support and collaborate with other entities, one letter of intent to apply by GLWA, a second PA 53 ARPA grant supporting water infrastructure projects, and the I-94

Modernization Project grant which is in the National Environmental Policy Act (NEPA) process to identify any environmental impacts related to the grant activities.

Table 2 - Awarded Programs reflects all open, awarded grants from FY 2021 through FY 2024. Current month summarized activity below includes one State Revolving Fund American Rescue Plan Act Funding program in which there has been no disbursement activity to date, three award receipts related to local nonprofit apprenticeship grants, two reimbursement requests submitted for two FEMA projects, and the Department of Energy grant in which only expenses related to the GLWA cost share have been accounted for to date.

Table 3 - Post Award Programs reflects one program with one reimbursement request and receipt through February 29, 2024. The program that is reflected below is the PA 53 ARPA grant. The program that is reflected below is the PA 53 ARPA grant. Funds related to these programs have been received in full and the programs are in the process of being closed out, including any closeout reporting requirements.



Financial Services Audit Committee Communication

Table 1 – Pre-Award Programs reflects open submissions for FY 2023 and FY 2024 to date. The Programs listed under this section do not have a grant agreement between the awarding agency and GLWA at this time, but the grant has been applied to or earmarked. The summarized activity provided identifies two earmark EPA Community Grants, seven FEMA Flood projects, two application submissions, two letters of intent to support and collaborate with other entities, one letter of intent to apply by GLWA, a second PA 53 ARPA grant supporting water infrastructure projects, and the I-94 Modernization Project grant which is in the National Environmental Policy Act (NEPA) process to identify any environmental impacts related to the grant activities.

Table 1 – Pre-Award Programs

Reference Number	Request Date	Program Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status
2023-002	7/1/2022	FY2022 Environmental Protection Agency Community Grant – Detroit River Interceptor	Federal Grant (Reimbursement Basis)	\$2,000,000 (20% Cost Share)	Federal Audit Requirements	Earmark
2023-003	7/1/2023	FY2023 Environmental Protection Agency Community Grant – PFAS Compounds remediations project	Federal Grant (Reimbursement Basis)	\$3,452,972 (20% Cost Share)	Federal Audit Requirements	Earmark
2023-012	4/4/2023	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 660110 – Obligated \$319,911 Fairview PS	Federal pass-through State (Reimbursement Basis)	\$319,911	Federal Audit Requirements	Funds are obligated but have not been received

Reference Number	Request Date	Program Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status
2023-009	4/4/2023	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 660133 – Obligated \$80,129 Puritan Fenkell CSO	Federal pass-through State (Reimbursement Basis)	\$80,129	Federal Audit Requirements	Funds are obligated but have not been received
2023-010	4/11/2023	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 660118 – Obligated \$180,000 WRRF	Federal pass-through State (Reimbursement Basis)	\$180,000	Federal Audit Requirements	Funds are obligated but have not been received
2023-011	8/30/2022	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 668672– Obligated \$43,031 System Wide Emergency Protective Measures	Federal pass-through State (Reimbursement Basis)	\$43,031	Federal Audit Requirements	Funds are obligated but have not been received
2023-018		Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 673958 Detroit River Interceptor	Federal pass-through State (Reimbursement Basis)	\$529,731	Federal Audit Requirements	Grant Amount is Estimated
2023-014		Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 660745 East Side Sewers	Federal pass-through State (Reimbursement Basis)	\$3,566,407	Federal Audit Requirements	Grant Amount is Estimated
2023-015		Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 670521 CAT-Z – Allocation of Management Costs	Federal pass-through State (Reimbursement Basis)	\$50,000	Federal Audit Requirements	Grant Amount is Estimated

Reference Number	Request Date	Program Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status
2024-001	8/30/2023	NFWF Coastal Resilience Challenge	Letter of Intent by University of Michigan	Unknown at this time	Unknown at this time	Grant Amount is Estimated
2024-002	8/30/2023	NOAA Climate Resilience Regional Challenge	Letter of Intent by University of Michigan	Min \$25,000,000	Unknown at this time	Grant Amount is Estimated
2024-003	10/30/2023	Workforce Development Opportunity Grant	Application Submitted by GLWA	\$1,800,000	Federal Audit Requirements	Grant Amount is Estimated and dependent on number of applicants EPA receives
2024-004	11/15/2023	Climate Pollution Reduction Grants Program	Letter of Intent to Apply by GLWA	\$500,000,000	Federal Audit Requirements	Grant Amount is Estimated
2024-005	12/15/2023	Fiscal Year 2023 Building Resilient Infrastructure and Communities (BRIC) Project Scoping	Michigan State Police Application Submitted by GLWA	\$856,000	Federal Audit Requirements	Grant Amount is Estimated
2023-023	8/30/2023	I-94 Modernization Project	MDOT Federal pass-through State (Reimbursement Basis)	\$34,400,000	Federal Audit Requirements	NEPA Review with the State of Michigan
2024-006		American Rescue Plan PA-53 Clean Water Infrastructure Improvements	Federal pass-through State (Reimbursement Basis)	\$5,000,000	Federal Audit Requirements	Grant Amount is Estimated

Table 2 Awarded Programs reflects all awarded grants from FY 2021 through FY 2024. These Projects have been awarded by the agency listed and an agreement is in place. Each grant is in process including compliance checks for all required administrative, financial, and programmatic requirements. Current month summarized activity below includes one State Revolving Fund American Rescue Plan Act Funding program in which there has been no disbursement activity to date, three award receipts related to local nonprofit apprenticeship grants, an American Rescue Plan Clean Water Infrastructure grant through the State of Michigan, two reimbursement requests submitted for two FEMA projects, and the Department of Energy grant in which only expenses related to the GLWA cost share have been accounted for to date.

Table 2 – Awarded Programs

Reference Number	Request Date	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
2022-004	2/23/2022	Water Technician Registered Apprenticeship Program- \$2,225 per apprentice, 25 apprentices	Macomb Community College Tuition (Nonprofit)	\$55,625	None	Ongoing No activity as of date for FY 2024
2021-012	9/21/2021	Michigan Industrial Cluster Approach (MICA 3.0) Apprenticeship Program - \$1,000 per apprentice, 45 apprentices	Focus Hope (Nonprofit)	\$45,000	None	Ongoing No activity as of date for FY 2024
2024-003	7/7/2023	Detroit Employment Solutions Corporation (DESC) Apprentices \$5,000 per apprentice; 9 apprentices	Detroit At Work (Nonprofit)	\$45,000	None	\$25,000 received in the month of August
2023-005	4/1/2023	Department Of Energy – Hydrothermal Liquefaction Project	Federal Grant (Reimbursement Basis)	\$1,000,000	Federal Audit Requirements	Awarded Ongoing
2023-013		Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 714729 Outfalls	Federal pass-through State (Reimbursement Basis)	\$1,332,235	Federal Audit Requirements	Grant Amount is Estimated
2023-022		Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 664811 Conner Creek Sewer System	Federal pass-through State (Reimbursement Basis)	\$8,888,277	Federal Audit Requirements	Grant Amount is Estimated

Reference Number	Request Date	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
2023-019	3/3/2021	American Rescue Plan – State Revolving Fund (ARPA) Funded Project 7532-02 96 Inch Water Transmission Main Relocation Phase 2 EGLE	Federal pass-through State (Reimbursement Basis)	\$16,057,500	Federal Audit Requirements	No disbursement requests submitted to date

Table 3 – Post Award Programs reflects one program with one reimbursement request and receipts through February 29, 2024. The program that is reflected below is the American Rescue Plans PA 53. The program that is reflected below is the PA 53 American Rescue Plan grant. Funds related to these programs have been received in full and the programs are in the process of being closed out, including any closeout reporting requirements.

Reference Number	Request Date	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
2023-017	08/30/2023	American Rescue Plan PA-53 Clean Water Infrastructure Improvements	Federal pass-through State (Reimbursement Basis)	\$25,000,000	Federal Audit Requirements	Supplemental Budget Appropriation

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: Deirdre Henry, Treasury Manager

Re: Quarterly Investment Report (Unaudited)

Background: As stated in section 14 of the Great Lakes Water Authority (GLWA) Investment Policy, quarterly reporting shall be presented to provide a clear picture of the status of the current GLWA investment portfolio. The attached report, prepared and presented by PFM Asset Management LLC, summarizes portfolio information through December 30, 2023 (unaudited).

Analysis: The Quarterly Investment Report complies with the requirements of Public Act 20 of 1948, as amended and the GLWA Investment Policy. GLWA is investing its funds in a diversified portfolio which includes bank deposits, money market funds, a local government investment pool (LGIP), U.S. Treasuries, Federal Agencies, and commercial paper. All securities in the portfolio comply with the GLWA investment policy. Key metrics are provided below with additional commentary in the attached report.

- Yield at Cost:
 - As of December 31, 2023: 5.03%
 - As of September 30, 2023: 4.82%

- Yield at Market:
 - As of December 31, 2023: 5.12%
 - As of September 30, 2023: 5.15%

- Portfolio Allocation in Cash/Money Market/LGIP Securities:
 - As of December 31, 2023: 67%
 - As of September 30, 2023: 67%

The Treasury group continues to work with PFM Asset Management LLC to identify strategies to maximize investment returns while meeting the GLWA standards for safety and liquidity.

Proposed Action: Receive and file this report.

Great Lakes Water Authority

Investment Performance Report – December 2023



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Executive Summary

PORTFOLIO RECAP

- **Safety** – The aggregate portfolio is diversified amongst cash, bank deposits, U.S. Treasuries, Federal Agencies, commercial paper, SEC-registered money market funds, and a local government investment pool. The total credit profile of the portfolio is strong with over 97% of the assets invested in bank deposits or securities that are rated within the two highest short and long-term rating classifications as established by S&P.
- **Liquidity** – Great Lakes Water Authority (“GLWA”) has continued to monitor its portfolio with the goal of limiting the allocation to cash and bank deposit accounts and maximizing the use of short-term investments to meet cash requirements. As of December 31, 2023, approximately 67% of the funds were held in cash and money market accounts maturing overnight. The percentage is similar to what was seen in the last quarter.
- **Return** – The overall yield at market decreased to 5.12% as of December 31, 2023, versus 5.15% as of September 30, 2023. The lower yield is reflective of the decline in interest rates that the market has experienced throughout the past quarter. GLWA earned over \$26.9 million (unaudited) in investment income for the first six months of fiscal year 2024 on a book value basis. It should be noted that the budgeted investment income for GLWA for FY 2024 was originally \$41 million and is now projected at \$55.7 million for all fund types. Investment income includes earnings on all fund types, including restricted funds and unrestricted funds combined as well as construction and bond proceeds.

AVAILABLE FUNDS (Unaudited)

Type	Book Value	Market Value	Yield @ Cost (as of 12/31/23)	Yield @ Market (as of 12/31/23)
Deposit Account	\$32,257,188	\$32,257,188	3.61%	3.61%
Deposit Account - Retainage	\$31,282,361	\$31,282,361	0.01%	0.01%
Deposit Account – Flint Security Deposit	\$3,974,670	\$3,974,671	3.61%	3.61%
Trust Money Market Fund	\$389,455,446	\$389,455,446	5.25%	5.25%
Money Market Fund	\$25,861,779	\$25,861,779	5.24%	5.24%
Local Government Investment Pool	\$450,758,820	\$450,758,820	5.53%	5.53%
Managed Funds	\$459,651,966	\$458,331,788	4.86%	5.15%
<u>DECEMBER 2023 TOTALS:</u>	<u>\$1,393,242,230</u>	<u>\$1,391,922,053</u>	<u>5.03%</u>	<u>5.12%</u>
<u>PREVIOUS QUARTER TOTALS:</u>	<u>\$1,090,269,520</u>	<u>\$1,086,727,127</u>	<u>4.82%</u>	<u>5.15%</u>

Investment Strategy

OVERALL STRATEGY

- All investment activity is conducted subject to GLWA’s investment policy and state statutes while meeting the primary objectives of safety and liquidity. The portfolio is managed to a disciplined investment plan to provide improved safety and diversification while putting every dollar to work.
- GLWA, working with its investment advisor PFM Asset Management (“PFMAM”), has continued to invest its funds in a mixture of short and intermediate-term individual investment securities to ensure adequate liquidity to cover upcoming debt, pension payments, and operational requirements.
- PFMAM will continue to actively manage long-term portfolios with full discretion and align short-term balances with expected liabilities and identify strategies to maximize future investment income in the current interest rate environment, subject to GLWA’s investment policy and state statutes.

PORTFOLIO PERFORMANCE – CURRENT PERIOD*

- The overall portfolio’s original yield at cost went from 4.82% as of 9/30/2023 to 5.03% as of 12/31/2023; the higher yield at cost is a result of reinvesting proceeds of lower-yielding securities that have matured in a higher interest rate environment.
- The total portfolio had a market yield of 5.12% at the end of December. Yield at market represents what the market would provide in return if the portfolio was purchased on December 31, 2023 (versus purchased in prior months / years); the higher yield is a result of the increase in interest rates throughout the quarter.
 - We utilize a variety of investment sectors that has led to this 5.12% yield at market as of 12/31/2023.

PORTFOLIO PERFORMANCE – PROJECTIONS

- GLWA earned over \$26.9 million (unaudited) in investment interest income for fiscal year-to-date 2024 on a book value basis.
- It should be noted that the FY 2024 total interest earnings projection forecast was originally estimated to be around \$41 million and is now projected at \$55.7 million.
- The fiscal year period earnings have been slightly higher than budgeted expectations, mainly due to the Federal Reserve’s “higher for longer” mantra.

** Yield at cost is based on the original cost of the individual investments from the purchase date to maturity. On the other hand, yield at market is calculated on a specific day (in this case, September 30, 2023) and assumes that all the securities in the portfolio are purchased given the market price/yield on that particular day. If one is to generally hold their investments to the stated maturity date, then the yield at cost would be the better number to use to gauge how the portfolio is performing.*

Summary Market Overview and Outlook

ECONOMIC HIGHLIGHTS UPDATE

- At the conclusion of its meeting on December 13th, a surprisingly dovish Federal Reserve (the “Fed”) suggested it had likely reached the end of its historic rate-hiking cycle. In addition to maintaining the overnight target rate at its current range of 5.25% to 5.50%, the Fed published an updated “dot plot” showing a total of three 25 basis point rate cuts by the end of 2024, more than previously projected. Treasury yields fell notably as a result.
- The December employment report showed non-farm payrolls increased by 216,000, beating expectations, while the unemployment rate was unchanged at 3.7%. For the year, non-farm payrolls showed 225,000 new jobs created per month, down from 2022’s blistering pace of 399,000, while the unemployment rate increased modestly from its historically low level at the beginning of the year. The number of job openings also fell to the lowest level since March of 2021, pointing to a labor market that continues to moderate.
- Inflation, measured by the year-over-year change in the consumer price index (“CPI”), fell to 3.1% in November as lower energy prices continue to offset higher shelter costs. The Fed’s preferred gauge of inflation, the Personal Consumption Expenditure (“PCE”) index, fell slightly on a month-over-month basis between October and November, the first monthly decline in more than 3½ years.
- After a disappointing October, retail sales (which are not adjusted for inflation) surprised to the upside in November, by increasing 0.3%. Lower prices at the gas pump helped fuel a stronger-than-expected start to the holiday shopping season. Eight of 13 spending categories showed growth, including sales at food services and drinking places, non-store retailers, health and personal care and furniture stores.
- Home prices accelerated as the S&P/Case-Shiller Home Price Index increased by 4.8% year-over-year. Mortgage rates mirrored the overall move lower in yields; however, new home sales declined 12% in December while existing home sales remained near record lows.

ECONOMIC IMPACT ON PORTFOLIO

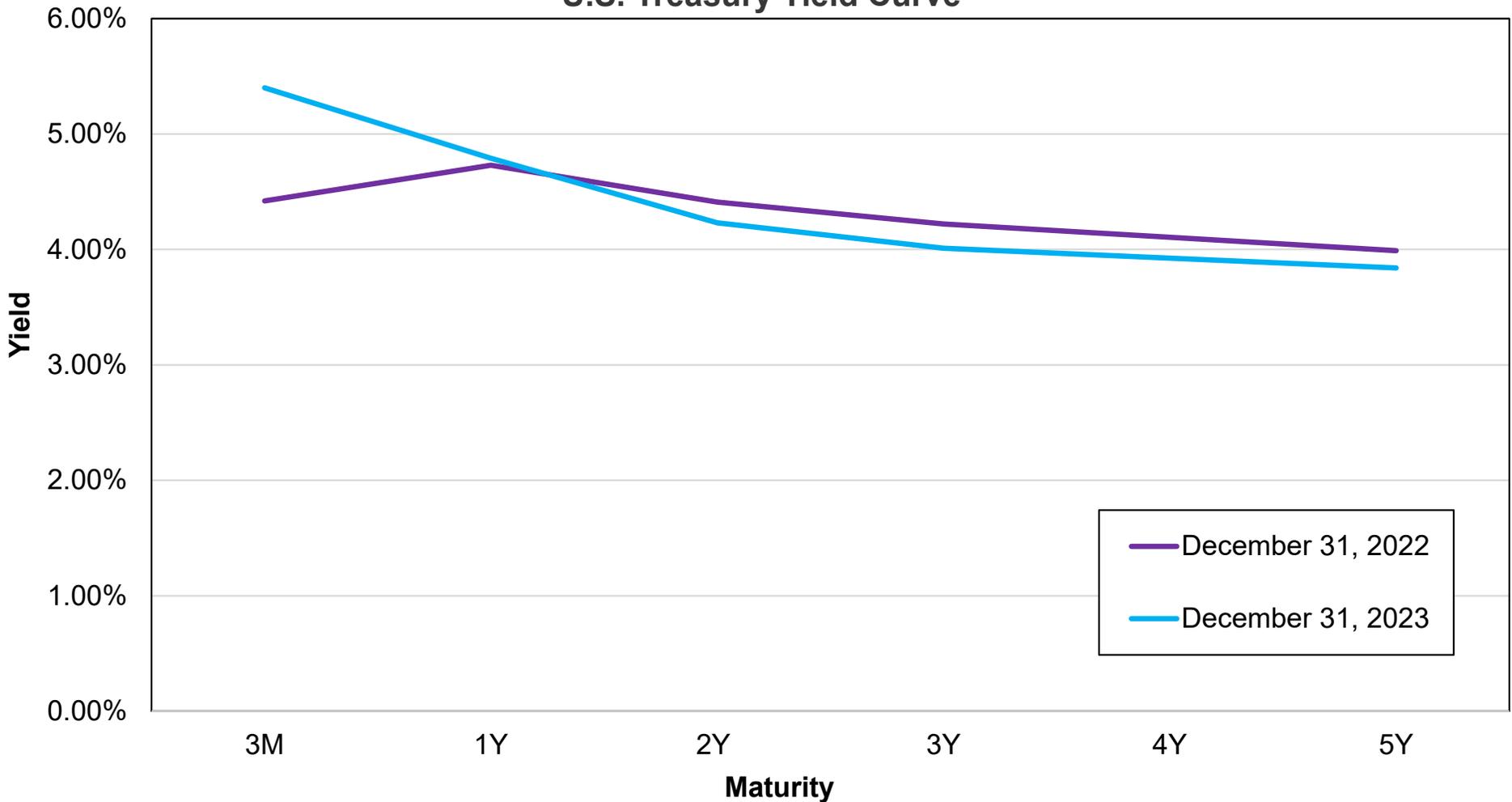
- U.S. Treasury yields continued their descent from the multi-year highs reached in October and rallied significantly into calendar year-end. The Fed’s dovish tone added downward pressure on yields as policymakers appeared to affirm that easier monetary policy may be the most likely outcome in 2024.
- The benchmark 2, 5, and 10-year U.S. Treasuries finished the quarter at 4.25%, 3.85%, and 3.88%, moving down for the quarter.
- The dollar index (“DXY”) declined by 2% in December, nearing the lower end of its calendar year range. Gold and oil commodities diverged modestly to close the calendar year as the former closed just shy of its all-time high, while oil prices maintained their multi-month trend lower.
- Portfolio Impact: The market is now viewing that the Fed has reached the end of its historic hiking cycle and is also viewing that the risk of rates moving lower is outweighing the risk of significant moves higher. A neutral duration stance is now preferred. Well-diversified portfolios have generated attractive returns over the past few months and the past calendar year as most non-Treasury sectors produced firmly positive excess returns. Nevertheless, spreads on Agencies spent the better part of the past 12 months in a very low and narrow range, largely as demand for already-light issuance persisted. Short-term credit (i.e., commercial paper) spreads tightened over the quarter and the credit curve flattened modestly. Shorter-term maturities are less attractive and issuers with maturities between 6 and 12 months are now preferred.

Summary Market Overview and Outlook

Treasury Yield Curve Presently Inverted

- U.S. Treasury yields continued their descent from the multi-year highs reached in October and rallied significantly into calendar year-end. The Fed’s dovish tone added downward pressure on yields as policymakers appeared to affirm that easier monetary policy may be the most likely outcome in 2024.

U.S. Treasury Yield Curve



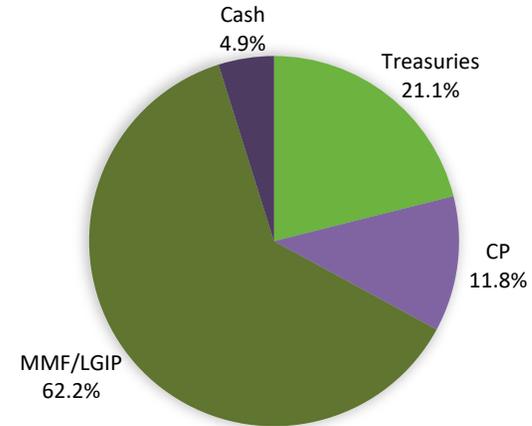
Portfolio Snapshot

Overall Portfolio Composition Summary

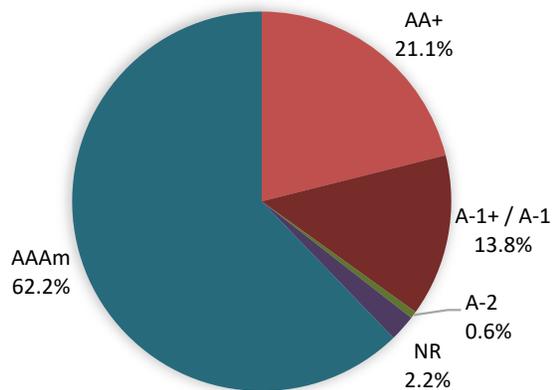
PORTFOLIO STATISTICS

Invested Amount	\$1.392 Billion
Duration	0.23 Years
Yield at Cost	5.03%
Yield at Market	5.12%

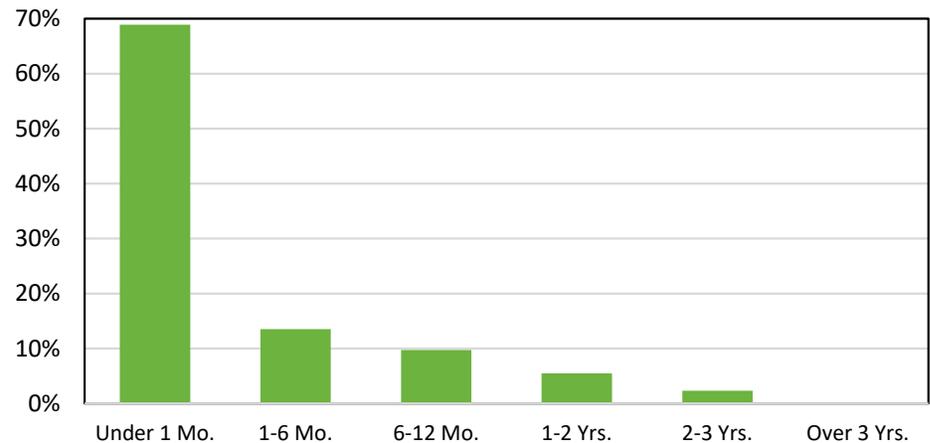
SECTOR ALLOCATION



CREDIT QUALITY



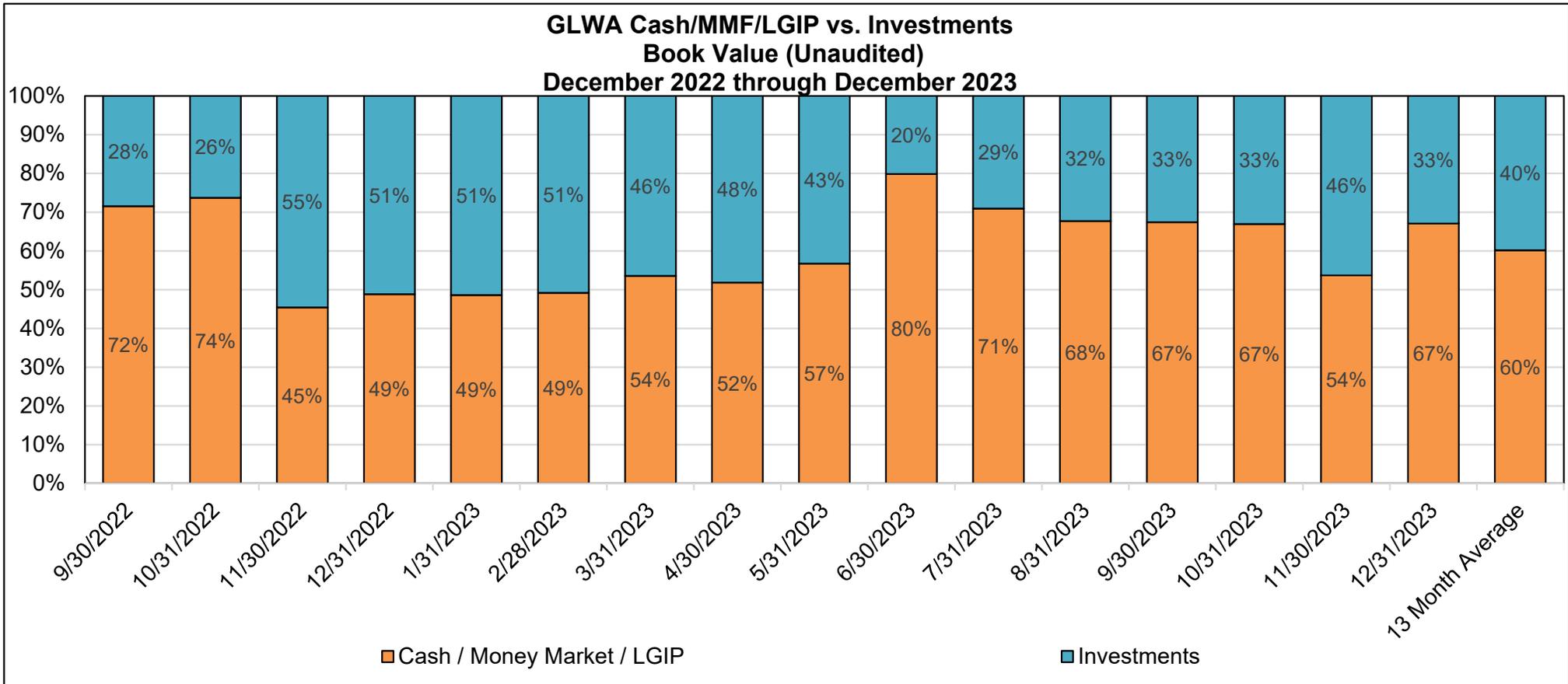
MATURITY DISTRIBUTION



Portfolio Snapshot

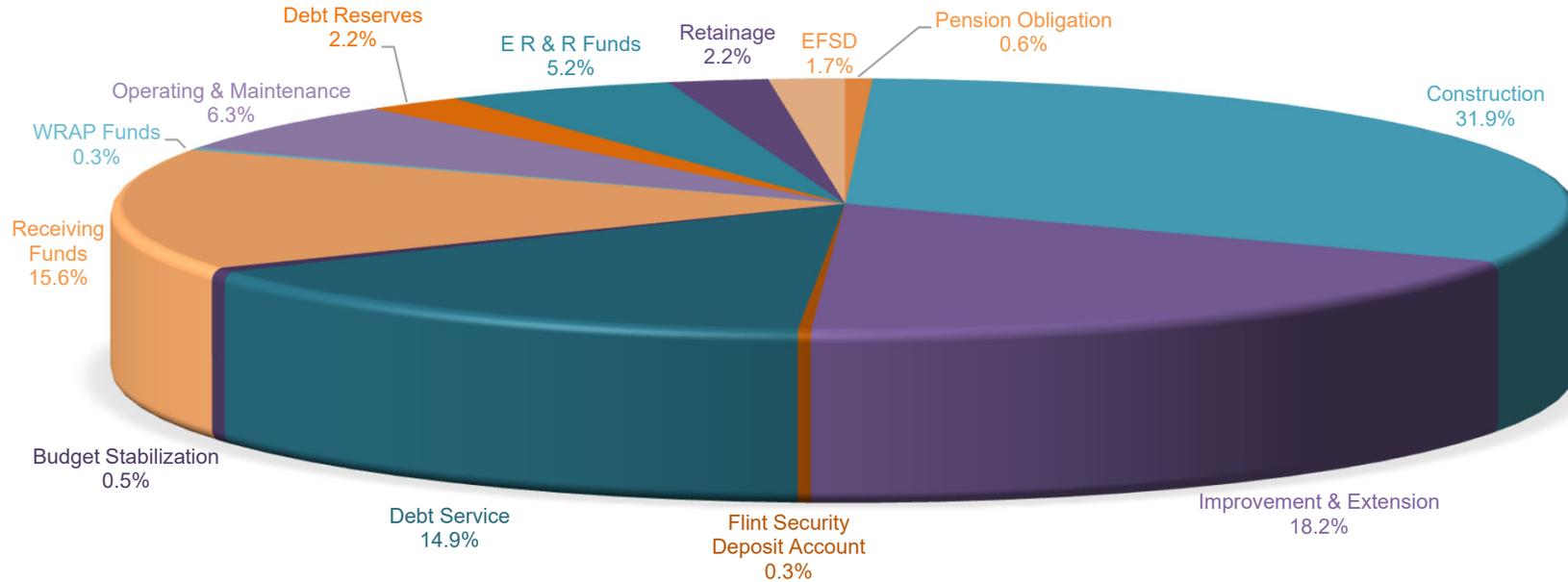
Portfolio Mix – Cash / Money Market vs. Investments

- GLWA’s liquidity requirements fluctuate each month based on operational requirements, capital funding, and debt payments. Based on a review of historical activity and refinement of cash flow projections, GLWA has continually tried to balance the allocation of the portfolio’s holdings to cash & money market accounts versus the allocation to investments for the portfolio holdings.
- The chart below compares the monthly allocation of the portfolio holdings to the 13-month average. The allocation between cash and investments will vary each month based on liquidity requirements. For December of 2023, about 67% of the overall portfolio was invested in cash, LGIP, and/or overnight money market fund accounts. This is in line with the level seen in the last quarter and is reflective of the inverted yield curve that has been persistent in the market.



Portfolio Snapshot

Investments – By Account Purpose

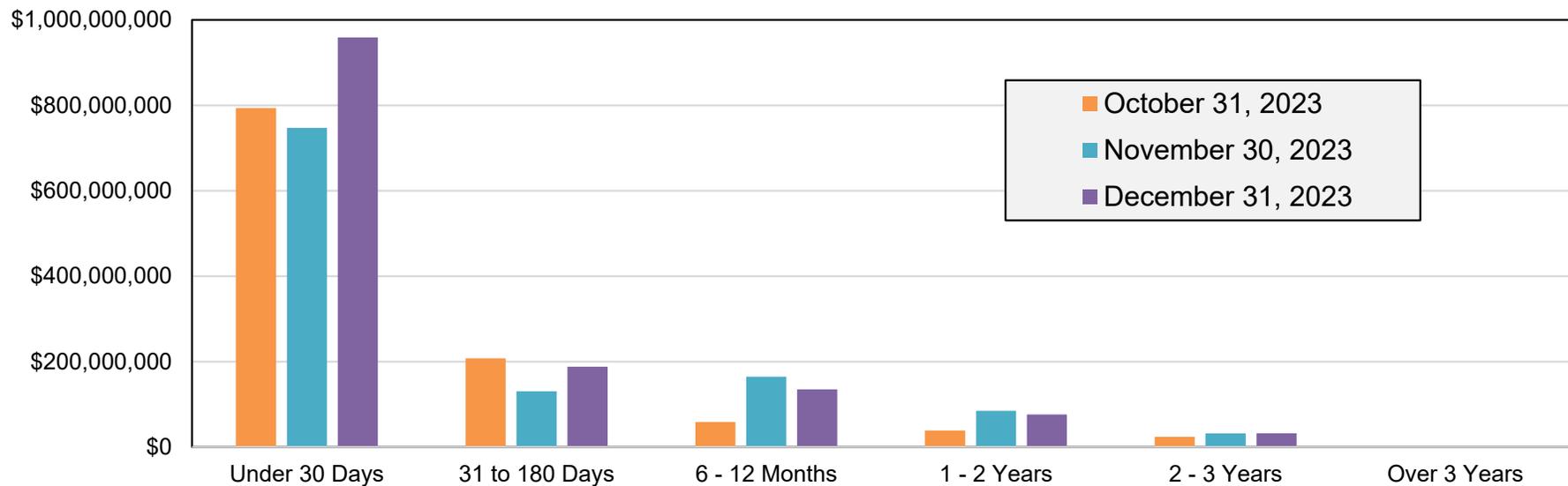


Account Purpose	Value Market	Allocation %	Cost Yield at	Market Yield at	Duration	Strategy
Construction	\$ 444,433,795	31.9%	5.49%	5.52%	0.014 Years	Cash Flow Driven
Improvement & Extension	\$ 253,309,059	18.2%	5.39%	5.19%	0.441 Years	Cash Flow Driven
Receiving Funds (includes lockbox account)	\$ 216,715,395	15.6%	5.21%	5.21%	0.003 Years	Short-Term
Debt Service	\$ 208,071,397	14.9%	5.48%	5.32%	0.306 Years	Short-Term
Operating & Maintenance	\$ 88,113,409	6.3%	5.05%	5.05%	0.003 Years	Short-Term
Extraordinary Repair & Replacement Funds	\$ 71,851,378	5.2%	2.17%	4.35%	1.446 Years	Long-Term
Retainage	\$ 31,282,361	2.2%	0.01%	0.01%	0.003 Years	Restricted Short-Term
Debt Reserves	\$ 30,729,188	2.2%	4.38%	5.15%	0.482 Years	Long-Term
Evergreen Farmington Sewer District	\$ 23,702,827	1.7%	3.76%	3.76%	0.003 Years	Restricted Short-Term
Pension Obligation Funds	\$ 8,507,562	0.6%	5.48%	5.38%	0.395 Years	Short-Term
Budget Stabilization Funds	\$ 7,333,214	0.5%	2.15%	4.34%	1.438 Years	Long-Term
Flint Security Deposit Account	\$ 3,974,670	0.3%	3.61%	3.61%	0.003 Years	Restricted Short-Term
WRAP Funds	\$ 3,897,797	0.3%	5.54%	7.90%	0.035 Years	Short-Term
Total	\$ 1,391,922,053	100.0%	5.03%	5.12%	0.226 Years	

Portfolio Snapshot

Investments – By Maturity

Maturity Distribution	October 31, 2023	%	November 30, 2023	%	December 31, 2023	%
Under 30 Days	\$ 793,795,063	70.7%	\$ 747,277,307	64.4%	\$ 959,198,819	68.9%
31 to 180 Days	207,965,201	18.5%	130,532,635	11.3%	188,389,061	13.5%
6 - 12 Months	58,767,460	5.2%	164,858,103	14.2%	135,460,744	9.7%
1 - 2 Years	38,830,086	3.5%	85,054,116	7.3%	76,403,928	5.5%
2 - 3 Years	24,142,934	2.1%	32,122,802	2.8%	32,469,501	2.3%
Over 3 Years	-	0.0%	-	0.0%	-	0.0%
Totals	\$ 1,123,500,744	100.0%	\$ 1,159,844,963	100.0%	\$ 1,391,922,053	100.0%



Portfolio Snapshot

Investment Accounts – Yield at Cost & Market

	As of December 31, 2023		As of September 30, 2023	
	YTM @ Cost	YTM @ Market	YTM @ Cost	YTM @ Market
Bank Deposits				
Bank A	0.01%	0.01%	0.01%	0.01%
Bank B	0.01%	0.01%	0.01%	0.01%
Flint Deposit Account	3.61%	3.61%	4.01%	4.01%
Bank C	3.61%	3.61%	4.01%	4.01%
Sub-Total Bank Deposits	1.49%	1.49%	1.92%	1.92%
Money Market Funds / LGIPs				
Local Government Investment Pool	5.53%	5.53%	5.48%	5.48%
Trust Money Market Fund	5.25%	5.25%	5.21%	5.21%
Money Market Fund	5.24%	5.24%	5.22%	5.22%
Sub-Total MMF / LGIPs	5.40%	5.40%	5.29%	5.29%
Investment Portfolios				
Sewage SR Debt Serv 5403	5.61%	5.36%	5.60%	5.68%
Sewage SR Res 5400	3.67%	5.11%	3.30%	5.47%
Sew 2nd Debt Serv 5403	5.59%	5.36%	5.62%	5.73%
Sewage 2nd Res 5481	4.82%	5.08%	4.92%	5.47%
Sew SRF Debt Serv 5410	5.57%	5.31%	5.79%	5.87%
Sewage ER & R	2.14%	4.35%	1.51%	5.15%
Sewer Improvement & Extension	5.48%	5.16%	0.00%	0.00%
Sewer Pension Obligation	5.49%	5.38%	5.46%	5.57%
Sewer Wrap Fund	5.64%	7.39%	5.60%	6.36%
Sewer Budget Stabilization Fund	2.14%	4.34%	1.76%	5.15%
Sewer Bond Fund	5.33%	5.56%	5.08%	5.41%
Sewer O&M Pension Sub Account	5.31%	5.30%	5.31%	5.52%
Water SR Debt Ser 5503	5.64%	5.38%	5.62%	5.73%
Water SR Reserve 5500	5.02%	5.18%	4.49%	5.49%
Water 2nd Debt Serv 5503	5.62%	5.39%	5.61%	5.74%
Water 2nd Res 5581	5.15%	5.23%	5.08%	5.49%
Water SRF Debt Serv 5575	5.63%	5.38%	5.82%	5.86%
Water ER & R	2.20%	4.34%	1.67%	5.16%
Water Improvement & Extension	5.48%	5.16%	0.00%	0.00%
Water Pension Obligation	5.52%	5.39%	5.50%	5.59%
Water Wrap Fund	5.59%	11.22%	5.58%	6.54%
Water Budget Stabilization Fund	2.17%	4.33%	1.85%	5.15%
Water Bond Fund	0.00%	0.00%	5.54%	5.69%
Water O&M Pension Sub Account	5.31%	5.30%	5.31%	5.52%
Sub-Total Investment Portfolios	4.86%	5.15%	4.49%	5.51%
Grand Total	5.03%	5.12%	4.82%	5.15%

YTM @ Cost is the expected return, based on the original cost, the annual interest receipts, maturity value and the time period from purchase date to maturity, stated as a percentage, on an annualized basis. YTM @ Market is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.

Portfolio Snapshot

Peer Analysis Comparison

- The comparison agencies included in the list below were selected based on type and/or other non-performance-based criteria to show a broad range of water entities/utilities; this peer group list does not represent an endorsement of any of the public agencies or their services.
- The overall yield of GLWA's aggregate portfolio compares somewhat similarly to those of other short-term market indices (i.e., the S&P LGIP index and the 3-month U.S. Treasury index), despite the volatility of short-term interest rates and the limited ability in managing assets to a longer-term strategy.
- GLWA does have some limitations and unique constraints related to its ordinance and covenants that restricts the potential for a longer duration portfolio when compared to other similar water agencies.

As of December 31, 2023				
	Market Value	YTM @ Market	Effective Duration	Weighted Average Maturity
GLWA				
Great Lakes Water Authority	\$1,391,922,053	5.12%	0.23 Years	81 Days
Short/Intermediate-Term Indices				
S&P Rated Government Investment Pool Index		5.43%	0.08 Years	30 Days
BoA / ML 3-Month Treasury Index		5.37%	0.15 Years	55 Days
BoA / ML 6-Month Treasury Index		5.20%	0.39 Years	142 Days
BoA / ML 1-Year Treasury Index		4.80%	0.88 Years	321 Days
BoA / ML 1-3 Year Treasury Index		4.32%	1.75 Years	639 Days
BoA / ML 1-5 Year Treasury Index		4.16%	2.51 Years	916 Days
Peer Analysis (Water Entities / Utilities)				
District of Columbia Water & Sewer Authority, DC	\$364,478,457	4.67%	1.16 Years	459 Days
DuPage Water Commission, IL	\$196,824,141	4.52%	2.03 Years	948 Days
Fairfax County Water Authority, VA	\$203,009,071	4.46%	1.66 Years	638 Days
Metro Wastewater Reclamation District, CO	\$215,791,881	4.39%	2.27 Years	919 Days
Metropolitan Water District of Southern California, CA	\$808,517,983	4.79%	1.49 Years	664 Days
Philadelphia Water Department, PA	\$238,468,182	5.04%	0.89 Years	340 Days
San Bernardino Valley Municipal Water District, CA	\$346,789,475	4.49%	1.70 Years	669 Days
Tohopekaliga Water Authority, FL	\$202,875,512	4.27%	1.72 Years	872 Days
Truckee Meadows Water Authority, NV	\$11,487,598	4.51%	1.62 Years	614 Days

The BoA / ML indexes are unmanaged indexes tracking on-the-run Treasuries. These indexes are produced and maintained by Bank of America / Merrill Lynch & Co. Yield to maturity is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.

Portfolio Snapshot

Monthly Investment Income

(Book Value in 000's)

FY 2024 INVESTMENT INCOME BY MONTH (Unaudited)

Month	Interest Earned During Period <i>(in thousands)</i>	Realized Gain / Loss <i>(in thousands)</i>	Investment Income <i>(in thousands)</i>
July 2023	\$3,920.9	\$0.0	\$3,920.9
August 2023	\$4,068.8	\$0.0	\$4,068.8
September 2023	\$4,060.2	\$0.0	\$4,060.3
October 2023	\$4,313.0	\$0.0	\$4,313.0
November 2023	\$5,068.5	\$0.0	\$5,068.5
December 2023	\$5,491.7	(\$0.1)	\$5,491.6
<u>FY 2024 Y-T-D</u>	<u>\$26,923.1</u>	<u>(\$0.1)</u>	<u>\$26,923.0</u>

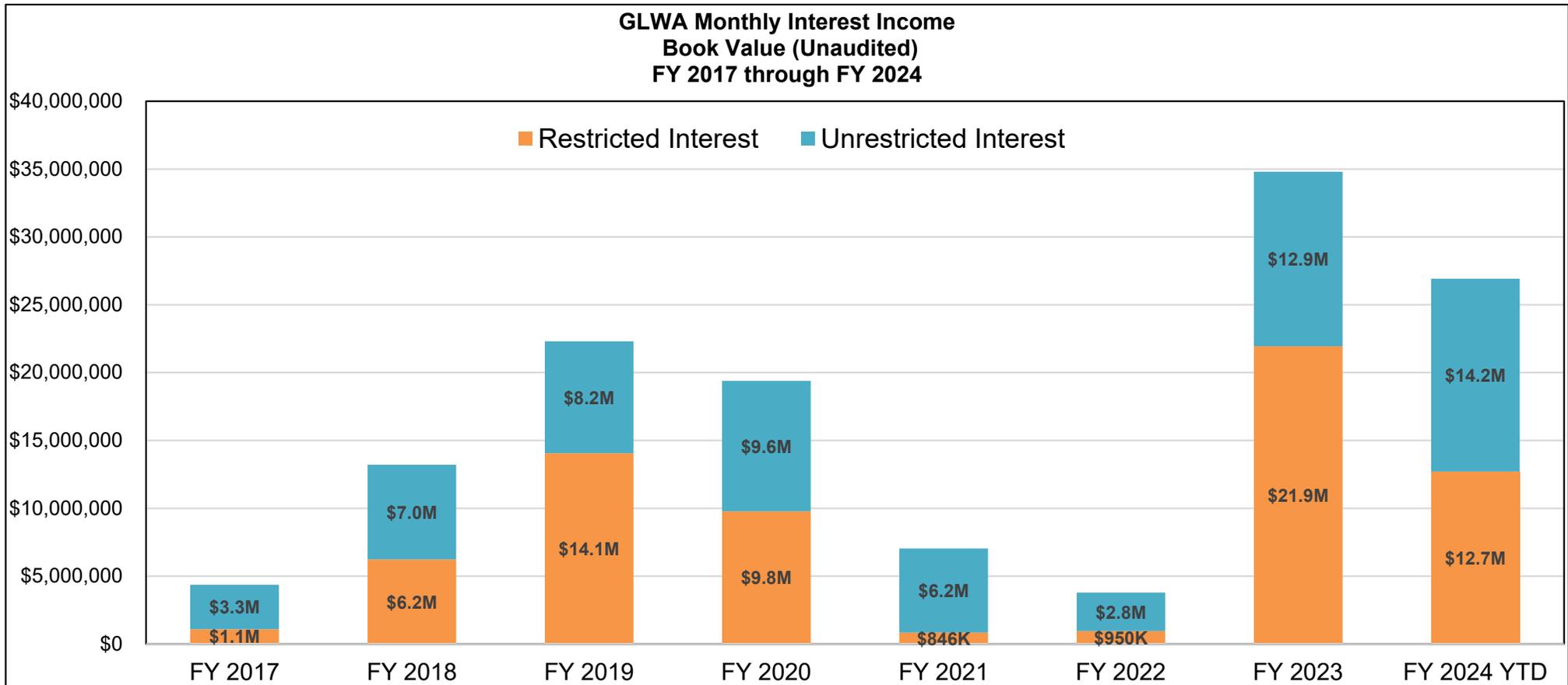
** The realized loss in December of 2023 was due to the sale of investments in the Sewer Second Reserve account in anticipation of liquidity requirements and liquidity needed in the Reserve Fund. The trade settled on December 1st and was available ahead of the bond closing on December 5th.*

These figures are based upon actual interest earned and posted to the Authority's various accounts via book value and does not include any earnings credit rate tied to the Authority's bank deposits.

Portfolio Snapshot

Year-Over-Year Investment Income

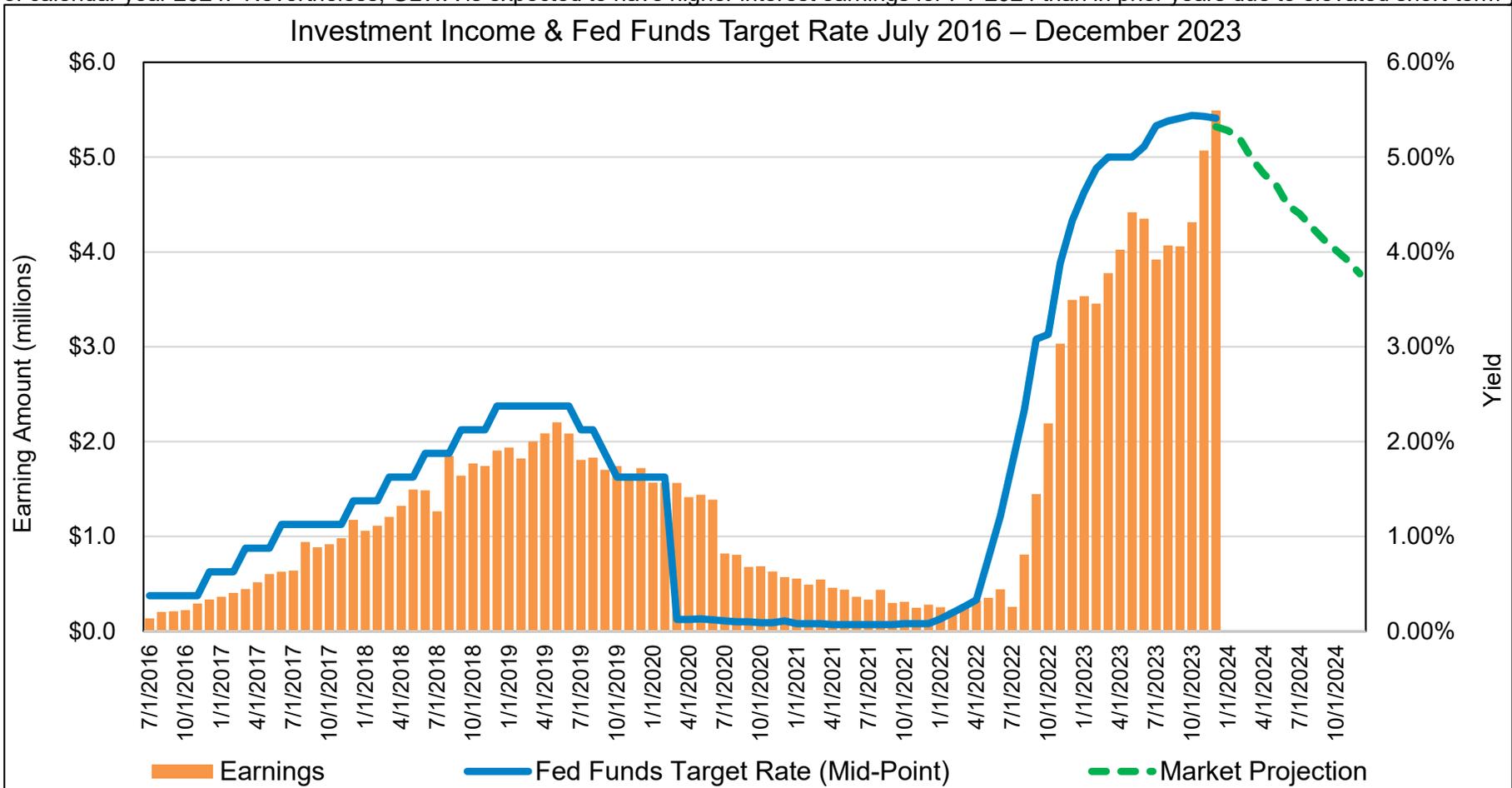
- GLWA earned \$26,923,027 in investment income for the first six months of fiscal year 2024 on a book value basis compared to \$11,228,223 for the first six months of fiscal year 2023.
- Projected investment income for fiscal year 2024 was originally forecasted to be around \$41 million for all fund types (both restricted and unrestricted funds combined). Based on current market assumptions, the addition of assets and proceeds from GLWA’s recent bond fund issue, and the expectation of a “higher-for-longer” Fed Funds target rate over the next few months, actual total investment income for fiscal year 2024 is now forecasted to be approximately \$55.7 million (~\$26.3 million in restricted fund income and ~\$29.4 million in unrestricted fund income).



Portfolio Snapshot

Monthly Investment Income Compared to Fed Funds Rate

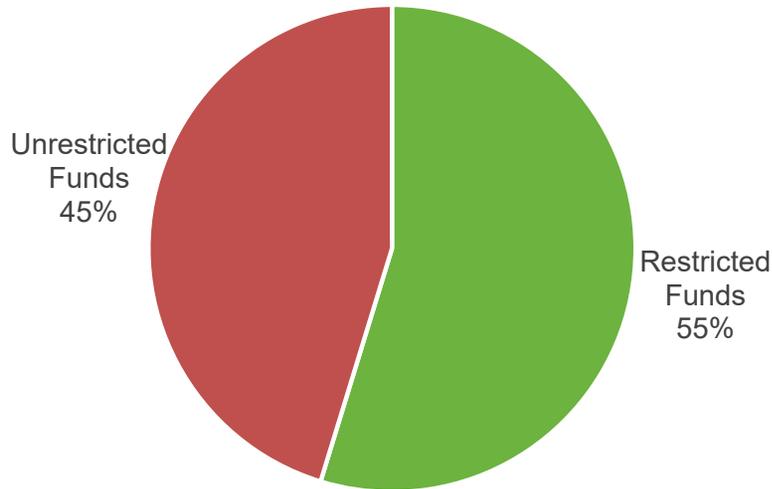
- At least 50% or more of the GLWA portfolio is designated for obligations that are 12 months or less. As a result of the short-term duration of GLWA’s portfolio, it is heavily impacted by changes in the Fed Funds target rate; the chart below illustrates that GLWA’s income has consistently followed the trend of the Fed Funds rate.
- At the conclusion of its last meeting, a surprisingly dovish Federal Reserve suggested it had likely reached the end of its historic rate-hiking cycle. Though the Fed has maintained the overnight target rate at its current range of 5.25% to 5.50%, it is anticipating a total of three 25 basis point rate cuts by the end of calendar year 2024. Nevertheless, GLWA is expected to have higher interest earnings for FY 2024 than in prior years due to elevated short-term yields.



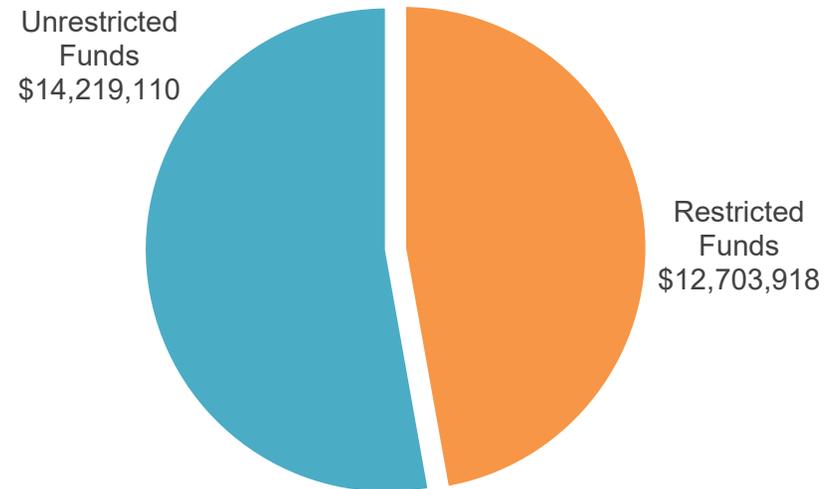
Portfolio Snapshot

Allocation and Income by Fund Type

Fund Balance as of December 31, 2023



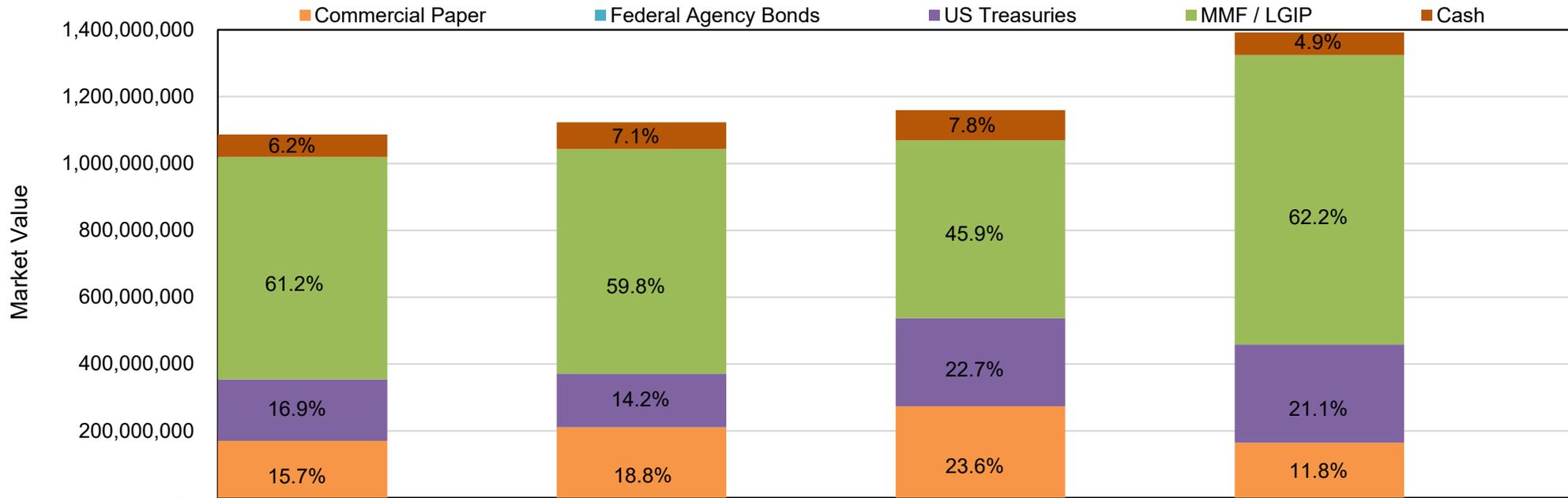
July 2023 – December 2023 Interest Earnings



Account Purpose	Restricted Principal	Unrestricted Principal	Restricted Interest	Unrestricted Interest	Notes
Construction	X		X		
Improvement & Extension		X		X	Interest is sent to the Receiving Funds and can be used for operations.
Receiving Funds (includes lockbox account)		X		X	
Debt Service	X		X		
Operating & Maintenance		X		X	
Extraordinary Repair & Replacement Funds		X		X	
Retainage	X		X		
Debt Reserves	X		X		
Evergreen Farmington Sewer District	X		X		
Pension Obligation Funds	X		X		
Budget Stabilization Funds	X			X	Interest is sent to the Receiving Funds and can be used for operations.
Flint Security Deposit Account	X		X		
WRAP Funds	X			X	Interest is sent to the Receiving Funds and can be used for operations.

Portfolio Snapshot

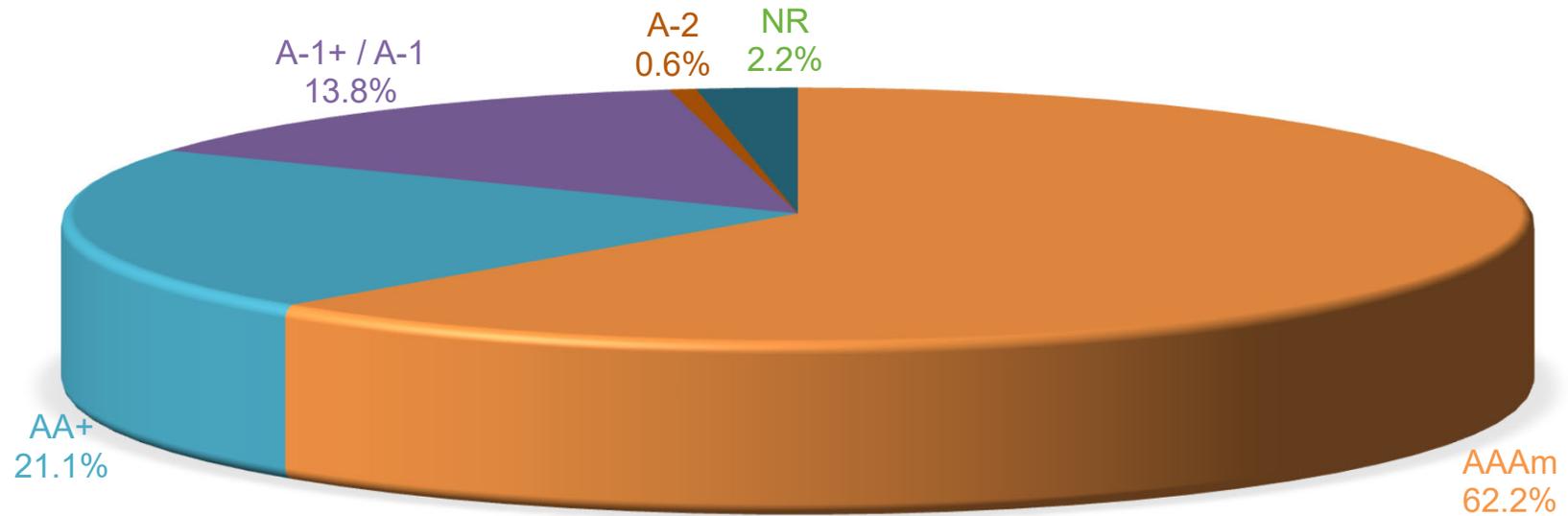
Investments – By Security Type



Security Type	September		October		November		December	
	Market Value	Asset Allocation						
Commercial Paper	170,295,243	15.7%	211,115,973	18.8%	273,464,797	23.6%	164,781,332	11.8%
Federal Agencies	-	0.0%	-	0.0%	-	0.0%	-	0.0%
U.S. Treasuries	183,720,457	16.9%	160,008,567	14.2%	263,667,192	22.7%	293,495,328	21.1%
MMF / LGIP	665,532,511	61.2%	672,116,066	59.8%	532,293,452	45.9%	866,076,046	62.2%
Cash	67,178,916	6.2%	80,260,138	7.1%	90,419,522	7.8%	67,569,347	4.9%
Total	1,086,727,127	100.0%	1,123,500,744	100.0%	1,159,844,963	100.0%	1,391,922,053	100.0%

Portfolio Snapshot

Investments – By Credit Quality

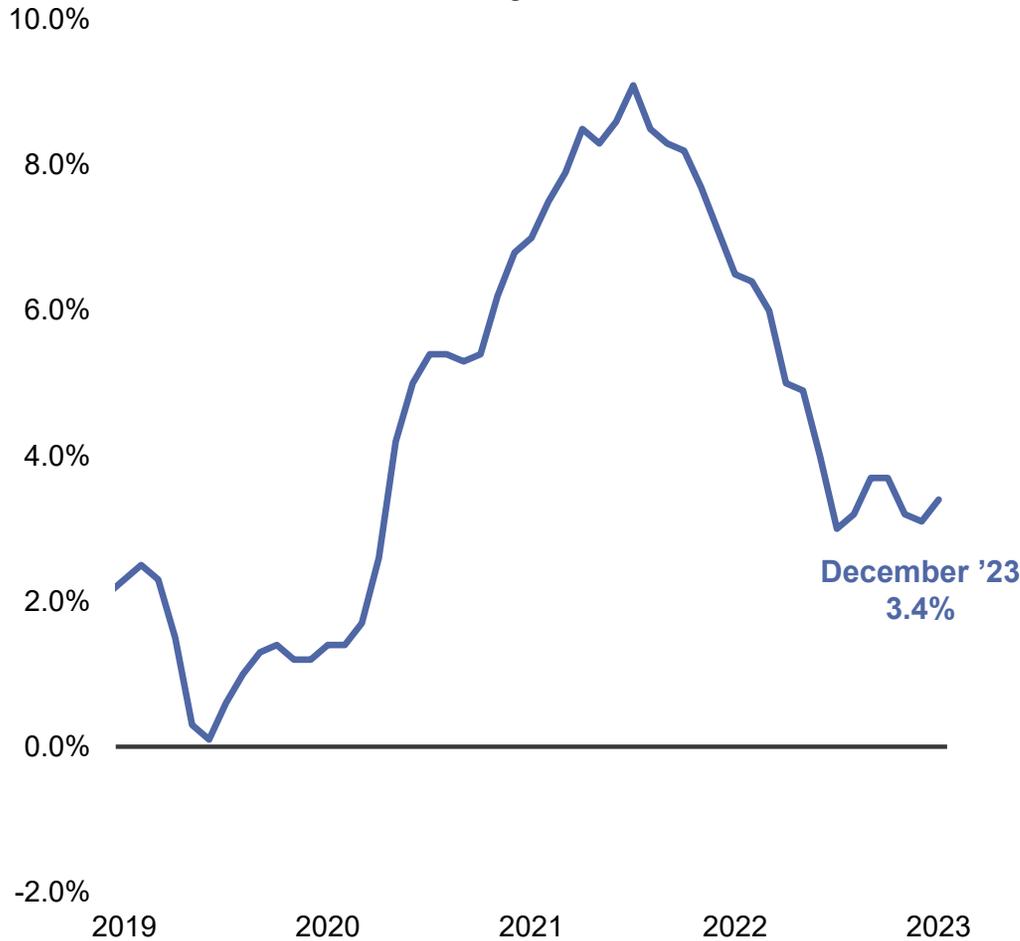


Credit Quality	Market Value	Asset Allocation
Ratings		
AAAm	866,076,046	62.2%
AA+	293,515,774	21.1%
A-1 + / A-1	192,561,796	13.8%
A-2	8,486,077	0.6%
NR	31,282,361	2.2%
Totals	1,391,922,053	100.0%

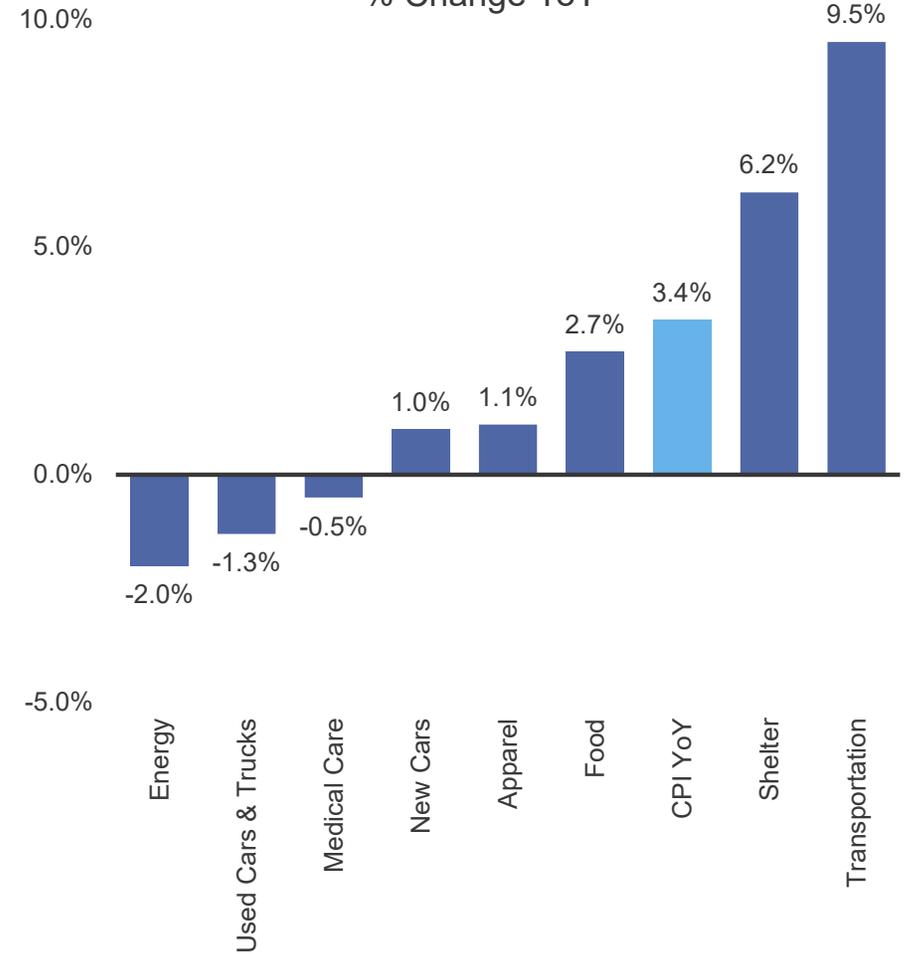
Appendix I: Economic Update

Consumer Inflation

Consumer Price Index
 % Change YoY



Key Consumer Price Index Components
 % Change YoY

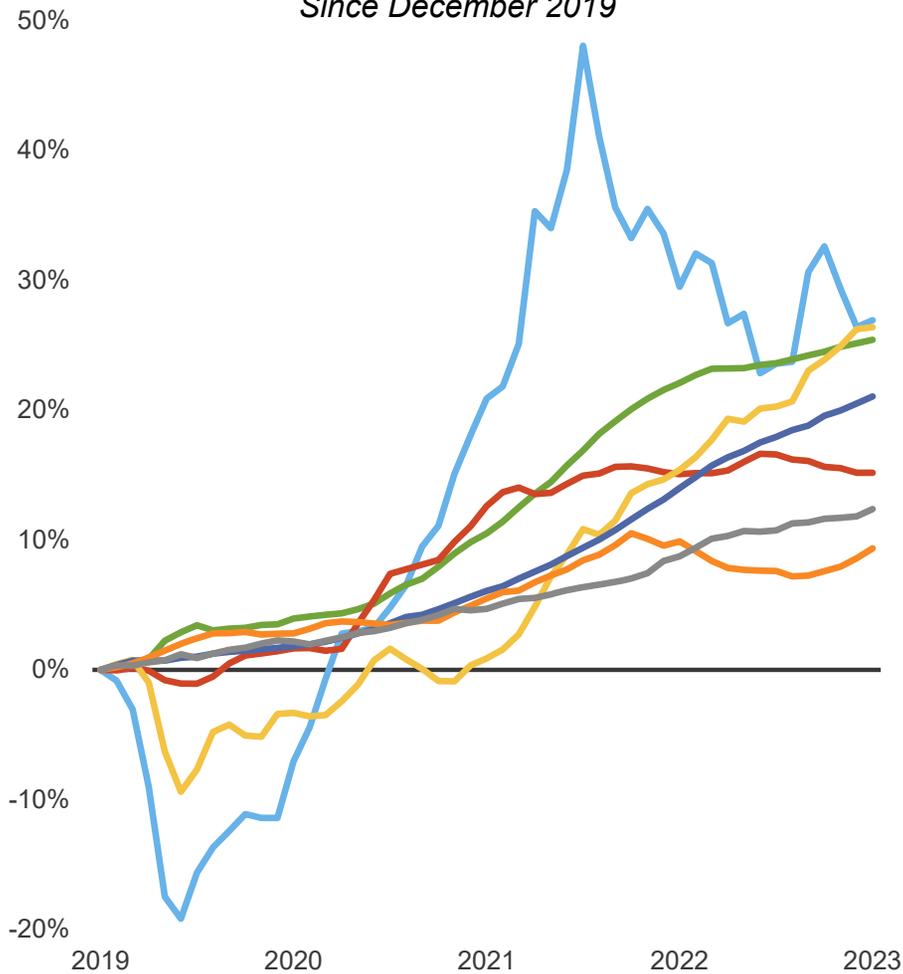


Source: Bloomberg, as of December 2023.

CPI Disinflation Signals Potential for Soft Landing

Price Change of Major CPI Components

Since December 2019



CPI Component	12-mo. Change	Weight ¹	Contribution to YoY CPI
Energy	-2.0%	6.7%	-0.1%
Food	2.7%	13.4%	0.4%
Transportation	9.5%	6.1%	0.6%
Goods	6.2%	35.2%	2.2%
Shelter	0.1%	20.8%	0.0%
Medical services	3.3%	11.4%	0.4%
Other Services ²	-0.5%	6.4%	0.0%
Overall	3.4%		

Source: Bloomberg, Bureau of Labor Statistics as of December 2023.

¹ Index weights are as of November 2023 as they are published on a one-month lag.

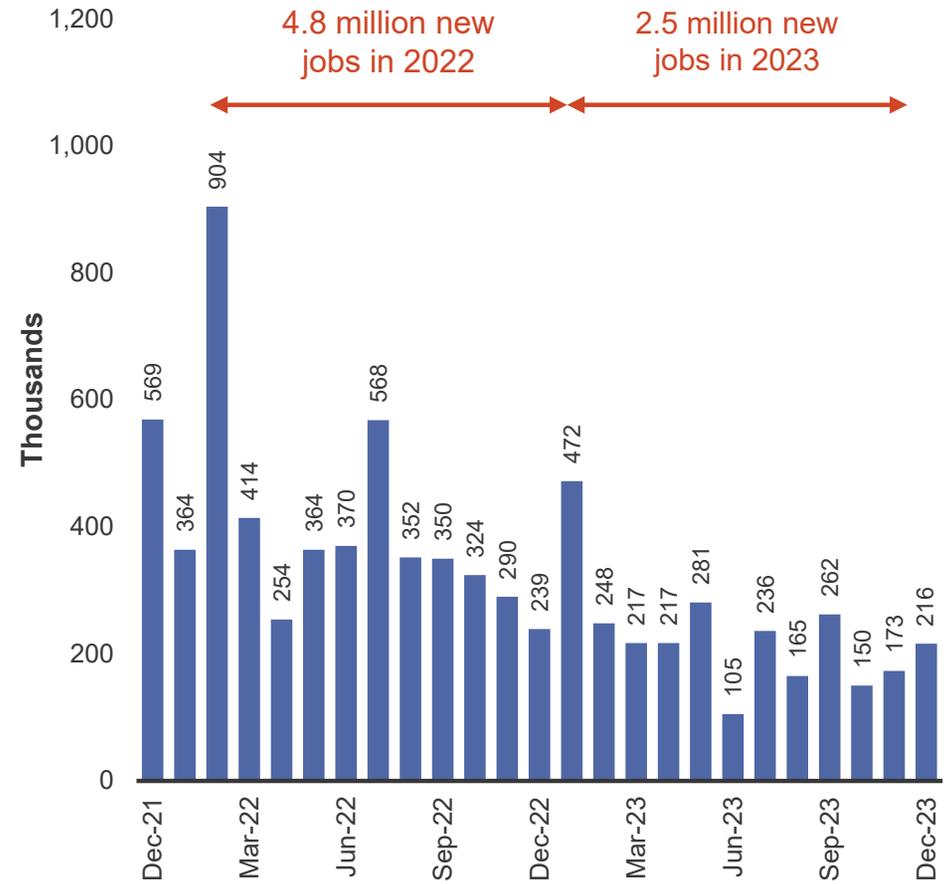
² Other services is a weighted blend of Water/Sewer/Trash, Household Operations, Recreation, and Education and Communication services.

Unemployment Rate Remained at 3.7%

Unemployment Rate



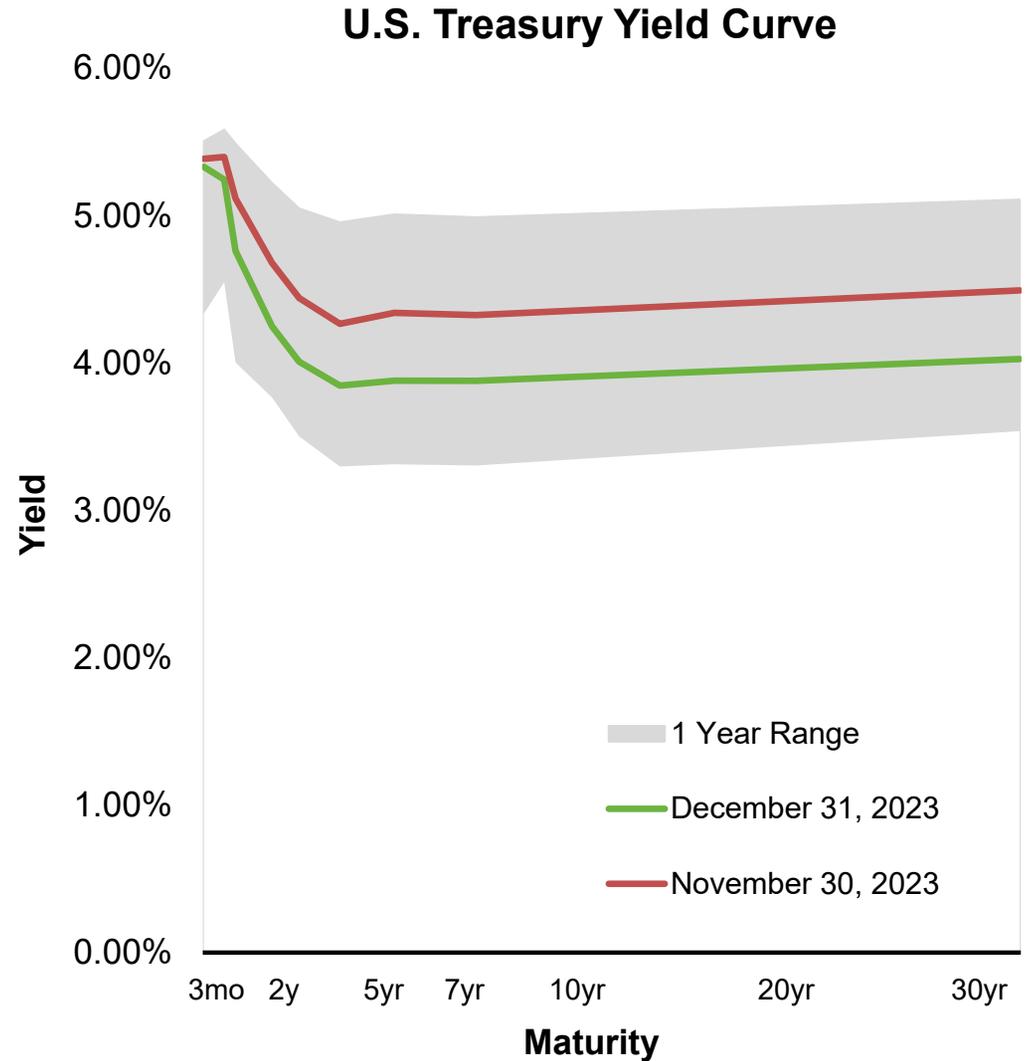
Monthly Change In Nonfarm Payrolls



Source: Bloomberg, as of December 2023. Data is seasonally adjusted.

Treasury Yield Curve

	<u>11/30/2023</u>	<u>12/31/2023</u>	<u>Change</u>
3 month	5.39%	5.33%	-0.06%
6 month	5.40%	5.25%	-0.15%
1 year	5.12%	4.76%	-0.36%
2 year	4.68%	4.25%	-0.43%
3 year	4.44%	4.01%	-0.43%
5 year	4.27%	3.85%	-0.42%
10 year	4.33%	3.88%	-0.45%
30 year	4.49%	4.03%	-0.46%



Source: Bloomberg, as of 11/30/2023 and 12/31/2023, as indicated.

Fixed Income Market Overview and Outlook

FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS

- The U.S. economy is characterized by:
 - Economic resilience but expectations for a slowdown
 - Cooling inflation that still remains above the Federal Reserve’s target
 - The labor market coming into better balance’
 - Consumers that continue to support growth through spending

- Federal Reserve signals end to rate hiking cycle
 - Fed projected to cut the short-term Fed Funds rate by 75 basis points by December of 2024, with the overnight rate falling to 4.50% to 4.75%
 - Markets are pricing a more aggressive 6 rate cuts by year end
 - Fed officials reaffirm that restoring price stability is the priority

- Treasury yields ended the quarter materially lower
 - After peaking in October, yields reversed course on dovish Fed pivot
 - Yield curve inversion persisted throughout the rally
 - Credit spreads narrowed sharply on increased expectations for a soft landing

- Over the past quarter, the yield on 2, 5, and 10-year U.S. Treasuries declined by 79 basis points, 76 basis points, and 69 basis points, respectively
 - Even the yield on a 3-month U.S. Treasury Bill declined by 11 basis points, reflecting how aggressively the markets have begun pricing in potential Fed rate cuts in the first half of 2024

Fixed Income Market Overview and Outlook

FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS

- The previous quarter was characterized by economic resilience but expectations for a modest slowdown, cooling inflation that remains above the target set by the Federal Reserve (the “Fed”), the labor market coming into better balance, and consumers that continue to support U.S. economic growth through spending
- The Fed kept the overnight target rate at its current range of 5.25% to 5.50% at its December 13th meeting and indicated that the historic 2022 – 2023 hiking cycle had likely come to an end
 - The Fed also messaged a more dovish policy stance for 2024 as its updated “dot plot” showed three 25 basis point rate cuts for the year, which was more than previously projected
 - Yields fell significantly as a result, and the quarter was defined by a strong rally in bonds
 - With the Fed pivoting to easier monetary policy and a soft-landing scenario coming into focus, yields on U.S. Treasury maturities from one to 30 years declined 65 to 80 basis points during the quarter
- After peaking in October, a more dovish Fed and an increased likelihood that the overnight target rate has reached its cycle-high drove interest rates lower through the prior quarter
 - By the end of the 2023 calendar year, the yield on a 2-year U.S. Treasury reached a 7-month low of 4.25%, while the 10-year U.S. Treasury note ended the year at 3.88%
- Market optimism also drove yield spreads on commercial paper and other non-government fixed income “spread sectors” lower in the quarter
 - Diversification benefited portfolios during the past quarter with longer duration and lower quality adding the most incremental value

Disclosure

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Financial Services Audit Committee Communication

Date: March 22, 2024

To: Great Lakes Water Authority Audit Committee

From: William Baker, Financial Management Professional, Construction Accounting & Reporting

Re: FY 2024 Q2 Construction Work-in-Progress Report through December 31, 2023 (Unaudited)

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

Analysis: The attached documents summarize the FY 2024 Q2 CWIP positions and provides a detailed snapshot to inform decision makers and stakeholders.

Proposed Action: Receive and file this report.



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

As of December 31, 2023

For questions, please contact:

William Baker
Construction Accounting and Reporting
Phone: 313.378.9760
Email: william.baker@glwater.org

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March 22, 2024**To Our Stakeholders:**

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of December 31, 2023. The information in this report presents a detailed snapshot and is important as we track the execution of the FY 2024–2028 Capital Improvement Plan (CIP) and look to inform decision makers as we evaluate the FY 2025–2029 CIP.

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

Report Contents and Organization

Construction Work-in-Progress (CWIP) Appendices: Includes breakdown by jurisdiction which provides a summary of the planned and actual project activity by the jurisdictions identified within the FY 2024 – 2028 Board Approved CIP Plan, detailed CWIP rollforward, which lists all projects in the CIP along with financial activity. These tables may be used to revisit priorities, workload, and phasing. In addition, this section contains project amendment summaries which consider the award of CIP contracts and the related execution thereof may result in deviations from the amount and timing of project activity. Project amendments are prepared to fund the related increase or decrease with either an adjustment to Capital Reserve or Program / Allowance accounts to amend the board approved fiscal year CIP accordingly and to inform decision makers in the development of future Capital Improvement Plans.

Financial Information

All project amounts are unaudited. This means that direct contractor costs are generally included in these totals with most pay estimates entered through December 31, 2023. There may, however, be some pay estimates that lag. The totals do not include indirect overhead.

Budget vs. Plan

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

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



Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2024-2028 and related CIP Plan for FY 2024 were based on anticipation of FY 2024 activity resulting in 100% of planned spend for the Water system and 100% of planned spend for the Wastewater system. In December the GLWA Board of Directors amended the Adjusted Capital Spending Ratio (SRA) to 94.0% for the Water system and 82.9% for the Wastewater system. These Adjusted Capital Spending Ratios will be revised with the upcoming Q2 FY2024 Budget Amendment Report

The Water System spend for the period ending December 31, 2023, is 69.5% of the FY 2024 board approved CIP, 86.7% of the FY 2024 board approved CIP with project amendments, 69.5% of the FY 2024 Approved Capital Spending Rate Assumption (SRA) and 73.9% of the FY 2024 Adjusted Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2024 Board Approved CIP was amended from \$239.3M to \$191.7M is provided in the subsequent Project Amendment Summary appendix of this report.

Water System Projects	FY 2023	FY 2023 Activity	FY 2023 Percentage	FY 2024	FY 2024 Prorated (Six Months)	FY 2024 Activity (Unaudited)	FY 2024 Percentage
(in millions)							
FY 2023 Board Approved CIP	\$ 194.4	\$ 196.3	101.0%				
FY 2023 Board Approved CIP With Project Amendments	199.5	196.3	98.4%				
FY 2023 Capital Spend Rate Assumption (SRA) - Approved	155.5	196.3	126.2%				
FY 2023 Capital Spend Rate Assumption (SRA) - Adjusted	208.0	196.3	94.4%				
FY 2024 Board Approved CIP				\$ 239.3	\$ 119.7	\$ 83.1	69.5%
FY 2024 Board Approved CIP With Project Amendments				191.7	95.9	83.1	86.7%
FY 2024 Capital Spend Rate Assumption (SRA) - Approved				239.3	119.7	83.1	69.5%
FY 2024 Capital Spend Rate Assumption (SRA) - Adjusted				224.9	112.5	83.1	73.9%



Executive Summary (Continued)

The Wastewater System spend for the period ending December 31, 2023, is 57.8% of the FY 2024 board approved CIP, 55.7% of the FY 2024 board approved CIP with project amendments, 57.8% of the FY 2024 Approved Capital Spending Rate Assumption (SRA) and 69.7% of the FY 2024 Adjusted Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2024 Board Approved CIP was amended from \$199.0M to \$206.5M is provided in the subsequent Project Amendment Summary appendix of this report.

Wastewater System Projects	FY 2023	FY 2023 Activity	FY 2023 Percentage	FY 2024	FY 2024 Prorated (Six Months)	FY 2024 Activity (Unaudited)	FY 2024 Percentage
<i>(in millions)</i>							
FY 2023 Board Approved CIP	\$ 125.9	\$ 104.7	83.2%				
FY 2023 Board Approved CIP With Project Amendments	136.0	104.7	77.0%				
FY 2023 Capital Spend Rate Assumption (SRA) - Approved	94.4	104.7	110.9%				
FY 2023 Capital Spend Rate Assumption (SRA) - Adjusted	108.5	104.7	96.5%				
FY 2024 Board Approved CIP				\$ 199.0	\$ 99.5	\$ 57.5	57.8%
FY 2024 Board Approved CIP With Project Amendments				206.5	103.3	57.5	55.7%
FY 2024 Capital Spend Rate Assumption (SRA) - Approved				199.0	99.5	57.5	57.8%
FY 2024 Capital Spend Rate Assumption (SRA) - Adjusted				165.0	82.5	57.5	69.7%



Appendix A - Construction Work-in-Progress Rollforward Summaries by Jurisdiction

The purpose of the construction work-in-progress (CWIP) summary rollforward by jurisdiction is to provide a high-level overview of the financial status of the projects identified within the current board approved CIP by their jurisdiction. Within the FY 2024 – 2028 Board Approved CIP Plan, projects are identified and categorized as either City of Detroit, Wayne County - Outside Detroit, Lapeer County, Macomb County, Oakland County, Saint Clair County or Multiple Counties and reflected accordingly in this report.

\$454.1 million is in CWIP as of December 31, 2023 as shown for the Water System in A1 - Water - CWIP Rollforward by Jurisdiction

\$320.8 million is in CWIP as of December 31, 2023 as show for the Wastewater System in A2 - Wastewater - CWIP Rollforward by Jurisdiction

The order of these appendices on the subsequent pages are in ascending by jurisdiction alphabetically.

Construction Work-in-Progress Quarterly Report

As of December 31, 2023

Great Lakes Water Authority

A1 - Water System Construction Work-in-Progress (CWIP) FY 2024 Rollforward Summary By Jurisdiction

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Jurisdiction	Total Project Plan Estimate	CWIP Balance July 1, 2023	FY 2024 Board Approved CIP	FY 2024 Board Approved CIP With Project Amendments	FY 2024 Activity through December 31, 2023	CWIP Balance December 31, 2023
City of Detroit	\$ 638,107,597	\$ 106,551,466	\$ 40,250,349	\$ 40,875,349	\$ 19,649,435	\$ 126,200,901
Lapeer County	143,765,078	5,451,155	902,113	902,113	(100,705)	5,350,450
Mutiple Counties	806,054,995	94,920,092	103,273,696	53,298,096	21,578,349	116,442,821
Oakland County	526,779,159	101,425,208	35,809,598	35,122,298	21,598,386	123,023,594
Saint Clair County	357,322,501	10,362,274	16,975,870	17,974,870	5,834,585	16,196,859
Wayne County - Outside Detroit	1,271,890,345	55,533,758	42,047,936	43,573,336	14,538,993	66,916,257
Grand Total	\$ 3,743,919,674	\$ 374,243,953	\$ 239,259,562	\$ 191,746,062	\$ 83,099,043	\$ 454,130,882

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Great Lakes Water Authority

A2 - Wastewater System Construction Work-in-Progress (CWIP) FY 2024 Rollforward Summary By Jurisdiction

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Jurisdiction	Total Project Plan Estimate	CWIP Balance July 1, 2023	FY 2024 Board Approved CIP	FY 2024 Board Approved CIP With Project Amendments	FY 2024 Activity through December 31, 2023	CWIP Balance December 31, 2023
City of Detroit	\$ 2,431,678,757	\$ 209,701,082	\$ 129,495,209	\$ 135,255,509	\$ 26,090,469	\$ 210,339,604
Mutiple Counties	1,503,643,833	78,549,059	69,338,051	71,068,551	31,213,433	109,762,492
Wayne County - Outside Detroit	139,547,775	438,459	227,885	227,885	284,217	722,676
Grand Total	\$ 4,074,870,364	\$ 288,688,600	\$ 199,061,145	\$ 206,551,945	\$ 57,588,119	\$ 320,824,772



Appendix B - Construction Work-in-Progress Rollforwards

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

As part of our project life cycle review the Construction Accounting team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service. Capitalization of project cost occurred in the FY 2024 2nd quarter for the following projects:

<u>Project</u>	<u>Contract</u>	<u>Description</u>
211002	PC-795	Pump Station No. 2 Pumping Improvements
213007	CON-197	Modification to Incinerator Sludge Feed
216004	1802410	WRRF & PS2 Grit and Screening Rehab

\$454.1 million is in CWIP as of December 31, 2023, as shown for the Water System in B1 - Water - Detailed CWIP Rollforward

\$320.8 million is in CWIP as of December 31, 2023, as shown for the Wastewater System in B2 - Wastewater - Detailed CWIP Rollforward

Construction Work-in-Progress Quarterly Report

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Great Lakes Water Authority

B1 - Water System Construction Work-in-Progress (CWIP) FY 2024 Rollforward

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Total Project Plan Estimate	FY 2024 Board	FY 2024 Board	CWIP Balance July 1, 2023	FY 2024	FY 2024 Capitalizations	CWIP Balance December 31, 2023	Life to Date	Life to Date	Life to Date
		Approved CIP	With Project Amendments		Activity through December 31, 2023	And Other Activity Through December 31, 2023		Capitalizations And Other Activity	Activity Through December 31, 2023	Activity / Total Project Plan Estimate
Field Services - Water	605,748,307	121,118,374	70,251,574	119,596,676	42,237,917	-	161,834,593	98,677,166	260,511,758	43%
Programs - Water	563,390,417	21,421,981	23,311,681	50,259,310	4,991,957	55,620	55,195,647	32,388,171	87,583,818	16%
Security	5,258,442	-	-	-	-	-	-	10,357,757	10,357,757	197%
Systems Control Center	738,918,834	10,385,609	9,894,909	53,505,887	2,419,324	-	55,925,210	5,973,851	61,899,061	8%
Water Treatment Plants & Facilities	1,797,962,260	85,654,045	87,608,345	150,882,080	33,395,274	3,156,493	181,120,861	204,602,263	385,723,125	21%
Programs - Centralized Services	32,634,746	679,554	679,554	-	54,570	-	54,570	-	54,570	0%
Energy Mangement	6,667	-	-	-	-	-	-	-	-	0%
Energy Mangement Total	6,667	-	-	-	-	-	-	-	-	0%
Grand Total	3,743,919,674	239,259,562	191,746,062	374,243,953	83,099,043	3,212,113	454,130,882	351,999,208	806,130,089	22%

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Great Lakes Water Authority

B2 - Wastewater System Construction Work-in-Progress (CWIP) FY 2024 Rollforward

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Total Project Plan Estimate	FY 2024 Board		CWIP Balance July 1, 2023	FY 2024 Activity through December 31, 2023	FY 2024		CWIP Balance December 31, 2023	Life to Date Capitalizations And Other Activity	Life to Date Activity through December 31, 2023	Life to Date Activity / Total Project Plan Estimate
		FY 2024 Board Approved CIP	With Project Amendments			Capitalizations And Other	Activity Through				
		Approved CIP				Activity Through	December 31, 2023				
CSO Facilities	223,462,073	9,578,136	9,578,136	5,277,057	4,692,126	-	9,969,183	737,296	10,706,479	5%	
Facilities	1,123,056	-	-	-	-	-	-	1,123,056	1,123,056	100%	
Field Services - Wastewater	203,493,821	19,775,025	19,775,025	53,673,024	2,823,725	-	56,496,748	-	56,496,748	28%	
Programs	1,598,544,588	92,767,210	94,497,710	95,169,871	38,634,259	-	133,804,130	46,853,855	180,657,986	11%	
Programs - Water	-	-	-	-	-	-	-	83,000	83,000	0%	
Security	2,362,970	-	-	-	-	-	-	3,200,851	3,200,851	135%	
Systems Control Center	591,551,929	24,295,387	24,295,387	56,087,591	2,494,735	-	58,582,326	6,103,686	64,686,012	11%	
Water Resource Recovery Facility	1,454,331,929	52,645,387	58,405,687	78,481,057	8,943,275	25,451,948	61,972,384	192,369,824	254,342,208	17%	
Grand Total	4,074,870,364	199,061,145	206,551,945	288,688,600	57,588,119	25,451,948	320,824,772	250,471,569	571,296,340	14%	

Construction Work-in-Progress Quarterly Report

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Great Lakes Water Authority
 B3 - Water System Construction Work-in-Progress (CWIP) FY 2024 Rollforward
 Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board	FY 2024 Board	CWIP Balance July 1, 2023	FY 2024	FY 2024 Capitalizations	CWIP Balance December 31, 2023	Life to Date	Life to Date	Life to Date	
				Approved CIP	Approved CIP		Activity through December 31, 2023	And Other Activity Through December 31, 2023		Capitalizations And Other Activity	Activity Through December 31, 2023	Activity / Total Project Plan Estimate	
Field Services - Water	122003	New Waterworks Park to Northeast Transmission Main	38,764,909	144,420	144,420	-	-	-	-	29,790,267	29,790,267	77%	
	122004	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	235,133,772	85,217,371	33,352,071	50,857,698	18,112,388	-	68,970,086	148,741	69,118,827	29%	
	122005	Replacement Schoolcraft Watermain	18,645,713	-	-	3,396,485	(97,615)	-	3,298,870	13,656,834	16,955,705	91%	
	122006	Transmission System Water Main Work-Wick Road Parallel Water Main	26,261,331	-	373,500	4,301,439	986,437	-	5,287,876	20,751,264	26,039,140	99%	
	122007	Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Ch	26,209,246	-	-	-	-	-	-	-	-	-	0%
	122011	Park-Merriman Water Main-Final Phase	10,202,576	-	-	-	101	-	101	6,832,945	6,833,045	67%	
	122012	36-inch Water Main in Telegraph Road	9,986,284	-	-	-	-	-	-	9,986,284	9,986,284	100%	
	122013	Lyon Township Transmission Main Extension Project	113,979,416	27,027,177	27,027,177	57,111,557	19,160,179	-	76,271,736	17,510,830	93,782,567	82%	
	122016	Downriver Transmission Loop	69,991,506	5,308,831	5,308,831	2,831,943	218,423	-	3,050,366	-	3,050,366	4%	
	122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	13,118,300	3,389,881	4,014,881	-	3,821,606	-	3,821,606	-	3,821,606	29%	
	122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation	3,319,270	30,693	30,693	-	-	-	-	-	-	-	0%
	122019	Jefferson Main Replacement	40,135,983	-	-	1,097,554	36,397	-	1,133,951	-	1,133,951	3%	
	Field Services - Water Total			605,748,307	121,118,374	70,251,574	119,596,676	42,237,917	-	161,834,593	98,677,166	260,511,758	43%
	Programs - Water	170102	Water Production Plant Flow Metering Improvements at NE, SP & SW WTP	373,640	-	-	-	-	-	-	373,640	373,640	100%
		170109	Inspection of Raw Water Intakes and Tunnels	1,787,968	-	-	-	-	-	-	-	-	0%
170300		Water Treatment Plant Automation Program	23,317,393	-	-	-	-	-	-	-	-	0%	
170301		Water Plant Automation	1,755,142	-	-	-	-	-	-	-	-	0%	
170302		SW WTP SCADA Improvements	8,284,006	4,731,318	4,731,318	5,541,977	982,977	-	6,524,954	-	6,524,954	79%	
170303		WWP WTP Power Monitoring Installation	1,862,773	-	-	-	-	-	-	1,811,356	1,811,356	97%	
170304		WWP WTP SCADA Upgrade	500,906	-	-	654,940	(3,956)	-	650,984	-	650,984	130%	
170305		WWP SCADA Network Upgrade	7,542,009	-	-	-	-	-	-	-	-	0%	
170306		SPW SCADA PLC Network Upgrade	6,780,215	-	-	-	-	-	-	-	-	0%	
170400		Water Transmission Improvement Program	32,174,788	-	-	-	-	-	-	-	-	0%	
170401		Emergency Bypass Around Ypsilanti Station	2,633,282	-	-	-	-	-	-	2,633,282	2,633,282	100%	
170500		Transmission System Valve Assessment and Rehabilitation/Replacement Program	59,296,473	1,616,517	(83)	-	-	-	-	-	-	-	0%
170502		Transmission System Valve Assessment and Rehabilitation/Replacement A	5,608,711	-	-	-	-	-	-	7,689,584	7,689,584	137%	
170503		Transmission System Valve Assessment and Rehabilitation/Replacement B	14,966,270	919,721	3,789,621	13,180,210	1,226,084	-	14,406,294	-	14,406,294	96%	
170504		Repair of WTM, Valves, & Priority Repair	18,400,000	549,168	2,713,568	9,219,808	237,588	-	9,457,396	-	9,457,396	51%	
170600		Water Transmission Main Asset Assessment Program	80,112,552	30,935	30,935	-	-	-	-	-	-	-	0%
170601		Linear System Integrity Program	47,607,411	111,943	111,943	-	103,243	-	103,243	-	103,243	0%	
170801		Reservoir Inspection, Design and Rehabilitation	25,385,252	2,570,361	2,570,361	14,494,537	1,529,241	55,620	15,968,158	8,822,454	24,790,612	98%	
170802		Reservoir Inspection, Design	47,175,002	9,292,018	7,764,018	2,460,276	315,235	-	2,775,511	-	2,775,511	6%	
170803		Reservoir Inspection, Design, and Construction Mangement Services Phase III	94,432,172	-	-	-	-	-	-	-	-	-	0%
170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement Program	33,108,255	-	-	-	-	-	-	-	-	-	0%	
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	12,410,811	-	-	4,707,563	-	-	4,707,563	7,703,013	12,410,576	100%		
170902	Brownstown Meter Pit Rehabilitation	175,992	-	-	-	-	-	-	-	-	-	0%	
170904	Phase II Wholesale Water Meter Pit Rehab	15,686,352	1,600,000	1,600,000	-	601,545	-	601,545	-	601,545	4%		
171500	Roof Replacement - Var Facilities Program	15,948,441	-	-	-	-	-	-	-	-	-	0%	

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Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board Approved CIP			FY 2024 Activity through December 31, 2023	FY 2024 Capitalizations And Other Activity Through		Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2023	Life to Date Activity / Total Project Plan Estimate
				FY 2024 Board Approved CIP	With Project Amendments	CWIP Balance July 1, 2023		December 31, 2023	December 31, 2023			
Programs - Water	171501	Roof Replacements - Var Facilities Program	3,354,843	-	-	-	-	-	-	3,354,843	3,354,843	100%
	171502	Lake Huron and Southwest Roof Replacement	2,709,759	-	-	-	-	-	-	-	-	0%
Programs - Water Total			563,390,417	21,421,981	23,311,681	50,259,310	4,991,957	55,620	55,195,647	32,388,171	87,583,818	16%
Security	341001	Security Infrastructure Improvements	5,258,442	-	-	-	-	-	-	10,357,757	10,357,757	197%
Security Total			5,258,442	-	-	-	-	-	-	10,357,757	10,357,757	197%
Systems Control Center	132003	Isolation Gate Valves for Line Pumps for West Service Center Pumping Station	1,742,479	-	-	-	-	-	-	1,742,479	1,742,479	100%
	132006	Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chica	3,227,776	-	-	-	-	-	-	3,226,045	3,226,045	100%
	132007	Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station	5,754,204	902,113	902,113	5,180,944	(100,705)	-	5,080,240	-	5,080,240	88%
	132010	West Service Center/Duval Rd Division Valve Upgrades	47,770,838	4,758,831	4,071,531	42,921,051	1,819,812	-	44,740,863	-	44,740,863	94%
	132012	Ypsilanti PS Improvements	43,394,088	701,075	897,675	2,443,545	81,604	-	2,525,150	-	2,525,150	6%
	132014	Adams Road Booster Pumping Improvements	61,777,803	-	-	102,450	-	-	102,450	-	102,450	0%
	132015	Newburgh BPS	46,396,137	-	-	1,232,925	218	-	1,233,143	30,000	1,263,143	3%
	132016	North Service Center BPS Improvements	239,583,663	4,023,590	4,023,590	1,195,463	618,394	-	1,813,857	-	1,813,857	1%
	132018	Schoolcraft BPS	24,690,695	-	-	-	-	-	-	-	-	0%
	132019	Wick Road BPS - Switchgear	24,788,064	-	-	64,610	-	-	64,610	-	64,610	0%
	132020	Franklin BPS - Isolation Gate Valves	60,919,247	-	-	94,688	-	-	94,688	-	94,688	0%
	132021	Imlay BPS - Replace VFDs, Pumps & Motors	138,010,874	-	-	270,211	-	-	270,211	-	270,211	0%
	132022	Joy Road BPS - Replace Reservoir Pumps	39,857,253	-	-	-	-	-	-	-	-	0%
	132025	Northwest Booster Station Yard Piping Improvements	19,335	-	-	-	-	-	-	-	-	0%
	132026	Franklin Pumping Station Valve Replacement	986,376	-	-	-	-	-	-	975,327	975,327	99%
Systems Control Center Total			738,918,834	10,385,609	9,894,909	53,505,887	2,419,324	-	55,925,210	5,973,851	61,899,061	8%
Water Treatment Plants & Facilities	111001	Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements	140,410,608	1,553,101	1,553,101	3,536,463	338,962	-	3,875,424	-	3,875,424	3%
	111002	LHWTP Backflow Replacement	8,717,768	-	-	-	-	-	-	8,717,768	8,717,768	100%
	111004	Electrical Tunnel Rehabilitation at Lake Huron WTP	3,806,475	-	-	-	-	-	-	3,892,299	3,892,299	102%
	111006	Water Supply Pumping Assessment Study	85,824	-	-	-	-	-	-	-	-	0%
	111007	Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	40,356,342	1,026,425	2,025,425	1,381,273	1,368,536	-	2,749,809	-	2,749,809	7%
	111008	LHWTP Architectural Programming - Lab	8,867,103	-	-	-	-	-	-	8,867,103	8,867,103	100%
	111009	Lake Huron WTP-35 MGD HLP, Flow Meters	782,112	-	-	-	-	-	-	-	-	0%
	111010	Lake Huron Water Treatment Plant -Filtration and Pretreatment Improvements	31,003,499	12,609,506	12,609,506	4,699,252	3,919,581	-	8,618,833	-	8,618,833	28%
	111011	Lake Huron WTP Pilot Plant	58,638,596	-	-	-	-	-	-	-	-	0%
	111012	LHWTP-Flocculation Improvements	3,267,770	-	-	-	-	-	-	3,076,105	3,076,105	94%
	111013	LH WTP Fireloop & Plant Water Improvements	51,331,404	1,786,838	1,786,838	741,978	206,571	-	948,548	-	948,548	2%
	112001	Yard Piping Replacement at Northeast Water Treatment Plant	10,055,000	-	-	3,308	936	-	4,244	-	4,244	0%
	112002	Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP	0	-	-	-	-	-	-	-	-	0%
	112003	NE WTP High Lift Pumping Electrical	1,169,962	-	-	-	-	-	-	1,169,962	1,169,962	100%
	112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits	171,678,100	-	-	557,608	123	-	557,731	-	557,731	0%
	112006	Northeast Water Treatment Plant Flocculator Replacements	937,879	-	-	-	-	-	-	937,879	937,879	100%
	112006	Northeast Water Treatment Plant Flocculator Replacements	13,446,475	2,637,134	2,637,134	4,066,122	996,721	-	5,062,843	-	5,062,843	38%

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Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board	FY 2024 Board	CWIP Balance July 1, 2023	FY 2024	FY 2024 Capitalizations	CWIP Balance December 31, 2023	Life to Date	Life to Date	Life to Date
				Approved CIP	With Project Amendments		Activity through December 31, 2023	And Other Activity Through December 31, 2023		Capitalizations And Other Activity	Activity Through December 31, 2023	Activity / Total Project Plan Estimate
Water Treatment Plants & Facilities	112007	NE WTP Structural Repair of Slab and Bea	6,685,115	140,039	140,039	235,924	-	-	235,924	-	235,924	4%
	113001	Southwest Water Treatment Plant, Sludge Treatment & Waste Wash water Treatment Facilit	23,765	-	-	-	-	-	-	171,079	171,079	720%
	113002	High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP	5,798,925	-	-	-	-	-	-	5,798,535	5,798,535	100%
	113003	Replacement of Butterfly Valves	162,109,919	-	-	-	-	-	-	-	-	0%
	113006	SW WTP Chloring Scrubber	7,326,664	12,674	12,674	3,156,493	436	3,156,493	436	6,107,634	6,108,070	83%
	113007	Architectural and Building Mechanical	8,640,647	-	-	-	1,920	-	1,920	-	1,920	0%
	113009	SW WTP Flight and Chain Upgrades	5,127,222	1,454,020	1,454,020	20,182	-	-	20,182	-	20,182	0%
	114001	Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities	99,764,892	-	-	-	-	-	-	99,764,892	99,764,892	100%
	114002	Springwells Water Treatment Plant - Low Lift and High Lift Pump Station	315,711,970	22,554,711	22,554,211	26,617,698	6,949,503	-	33,567,201	-	33,567,201	11%
	114003	Water Production Flow Metering Improvements at NE, SW, and SPW WTP	8,208,286	-	-	-	-	-	-	8,167,884	8,167,884	100%
	114005	Springwells WTP Admin Building Improvements	7,138,425	-	-	1,320,522	-	-	1,320,522	-	1,320,522	18%
	114008	1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP	14,105,567	-	-	404,500	1,020,373	-	1,424,873	11,738,479	13,163,351	93%
	114010	Yard Piping Improvements	218,637,731	-	-	1,807,946	-	-	1,807,946	-	1,807,946	1%
	114011	Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP	28,264,192	1,281,100	1,281,100	1,328,244	909,461	-	2,237,704	24,356,450	26,594,154	94%
	114012	Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement	3,911,148	-	-	-	-	-	-	3,911,148	3,911,148	100%
	114013	Springwells Reservoir Fill Line Improvements	4,731,850	-	-	-	-	-	-	4,706,751	4,706,751	99%
	114016	Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement Replacement	1,567,531	-	-	-	-	-	-	1,566,470	1,566,470	100%
	114017	Springwells Water Treatment Plant Flocculator Drive Replacement	27,798,446	6,004,206	6,960,006	1,065,249	3,485,154	-	4,550,403	-	4,550,403	16%
	114018	Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements	2,340,568	-	-	-	-	-	-	-	-	0%
	115001	Yard Piping, Valves and Venturi Meters Replacement at Water Works Park	56,073,058	10,657,254	10,657,254	29,220,784	5,168,105	-	34,388,889	-	34,388,889	61%
	115003	Comprehensive Condition Assessment at Waterworks Park WTP	514,004	-	-	-	-	-	-	-	-	0%
	115004	Water Works Park WTP Chlorine System Upgrade	6,966,596	-	-	-	-	-	-	6,966,596	6,966,596	100%
	115005	WWP WTP Building Ventilation Improvements	16,541,211	5,579,579	5,579,579	5,941,878	4,183,286	-	10,125,163	-	10,125,163	61%
	115006	Water Works Park Site/Civil Improvements	5,895,650	-	-	-	-	-	-	-	-	0%
	115007	Water Works Park High Lift Pumping Station Modernization	115,089,667	-	-	-	-	-	-	-	-	0%
	115009	Water Works Park Sedimentation Basins Structural Upgrades	16,845,902	-	-	-	-	-	-	-	-	0%
	116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on	99,061,811	15,334,209	15,334,209	64,619,456	4,758,361	-	69,377,817	4,685,231	74,063,048	75%
	116005	Belle Isle Seawall Rehabilitation	2,294,679	737,140	737,140	157,201	87,245	-	244,447	-	244,447	11%
	116006	Belle Isle Intake System Rehabilitation and Improvements	2,221,841	-	-	-	-	-	-	-	-	0%
	116007	System Electrical Power Improvements	4,010,060	2,286,109	2,286,109	-	-	-	-	-	-	0%
Water Treatment Plants & Facilities	Total		1,797,962,260	85,654,045	87,608,345	150,882,080	33,395,274	3,156,493	181,120,861	204,602,263	385,723,125	21%

Construction Work-in-Progress Quarterly Report

As of December 31, 2023

Great Lakes Water Authority
 B3 - Water System Construction Work-in-Progress (CWIP) FY 2024 Rollforward
 Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board	FY 2024 Board	CWIP Balance July 1, 2023	FY 2024	FY 2024 Capitalizations	CWIP Balance December 31, 2023	Life to Date	Life to Date	Life to Date
				Approved CIP	With Project Amendments		Activity through December 31, 2023	And Other Activity Through December 31, 2023		Capitalizations And Other Activity	Activity Through December 31, 2023	Activity / Total Project Plan Estimate
Programs - Centralized Services	380700	As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services Allowance	10,820	-	-	-	-	-	-	-	-	0%
	381000	Energy Management: Electric Metering Improvement Program	5,125,444	679,554	679,554	-	-	-	-	-	-	0%
	381001		2,498,482	-	-	-	-	-	-	-	-	0%
	383300	Masonry Replacement and Rehabilitation Program	25,000,001	-	-	-	-	-	-	-	-	0%
	399900	CS-272 - Capital Allocation	-	-	-	-	54,570	-	54,570	-	54,570	0%
Programs - Centralized Services Total			32,634,746	679,554	679,554	-	54,570	-	54,570	-	54,570	0%
Energy Mangement	351001	Water Facility Lighting Renovations	6,667	-	-	-	-	-	-	-	-	0%
Energy Mangement Total			6,667	-	-	-	-	-	-	-	-	0%
Grand Total			3,743,919,674	239,259,562	191,746,062	374,243,953	83,099,043	3,212,113	454,130,882	351,999,208	806,130,089	22%

Construction Work-in-Progress Quarterly Report

As of December 31, 2023

Great Lakes Water Authority
 B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2024
 Rollforward Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board			FY 2024 Capitalizations			Life to Date Capitalizations And Other Activity	Life to Date Activity through December 31, 2023	Life to Date Activity / Total Project Plan Estimate
				FY 2024 Board Approved CIP	With Project Amendments	CWIP Balance July 1, 2023	FY 2024 Activity through December 31, 2023	And Other Activity Through December 31, 2023	CWIP Balance December 31, 2023			
CSO Facilities	270001	Pilot CSO Netting Facility	37,884,356	-	-	2,207	11,465	-	13,672	-	13,672	0%
		Meldrum Sewer Diversion and VR-15 Improvements	6,400,507	-	-	-	-	-	-	-	-	0%
	270003	Long Term CSO Control Plan	12,058,497	2,268,939	2,268,939	-	467,181	-	467,181	-	467,181	4%
	270004	Oakwood Lieb CSO Facility Improvement	42,595,642	2,284,906	2,284,906	2,070,852	866,721	-	2,937,574	-	2,937,574	7%
	270006	Control System Upgrades - Baby Creek/Belle	20,538,416	1,477,523	1,477,523	1,103,959	701,869	-	1,805,827	-	1,805,827	9%
	270007	Disinfection System Improvements at CSO	8,345,855	-	-	1,247	38,956	-	40,203	-	40,203	0%
	270008	Flushing System Improvements at Conner Creek and St. Aubin CSO Facilities	7,070,077	-	-	-	-	-	-	-	-	0%
	270009	Site Improvements at St. Aubin, Belle Isle, and Baby Creek CSO Facilities	1,389,999	-	-	-	-	-	-	-	-	0%
	270010	HVAC Improvements at Puritan Fenkell and Seven Mile CSO Facilities	1,579,434	15,754	15,754	8,756	10,028	-	18,784	-	18,784	1%
	270011	HVAC Improvements at Conner Creek and Belle Isle CSO Facilities	418,049	-	-	-	-	-	-	-	-	0%
	270012	Control System Upgrades at Conner Creek, Oakwood, and Puritan Fenkell CSO Facilities	5,974,808	-	-	-	-	-	-	-	-	0%
	270013	Facility Improvements at Puritan Fenkell and Seven Mile CSO Facilities	902,132	-	-	-	-	-	-	-	-	0%
	270014	Convert to Complete Capture Basin CSO Fa	4,482,478	-	-	-	-	-	-	-	-	0%
	273001	Hubbell Southfield CSO Facility Improvement	54,621,097	227,885	227,885	438,459	284,217	-	722,676	-	722,676	1%
	273002	CSO Hubbell Southfield VR-8 Gate Improvements	1,785,839	-	-	-	-	-	-	-	-	0%
	276002	Replacement Make-up Air Unit at CON	357,212	-	-	611	-	-	611	347,996	348,607	98%
	277001	Baby Creek Outfall Improvements Project	16,312,714	3,303,128	3,303,128	1,650,965	2,311,689	-	3,962,654	389,300	4,351,954	27%
	277002	Baby Creek CSO Facility Influent Flushing System	744,959	-	-	-	-	-	-	-	-	0%
CSO Facilities Total			223,462,073	9,578,136	9,578,136	5,277,057	4,692,126	-	9,969,183	737,296	10,706,479	5%
Facilities	331002	Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	1,123,056	-	-	-	-	-	-	1,123,056	1,123,056	100%
Facilities Total			1,123,056	-	-	-	-	-	-	1,123,056	1,123,056	100%
Field Services - Wastewater	222001	Intercommunity Relief Sewer Modifications in Detroit Oakwood District	81,428,171	-	-	2,609,882	83,979	-	2,693,861	-	2,693,861	3%
	222002	Detroit River Interceptor Evaluation and Rehabilitation	117,561,404	17,254,477	17,254,477	51,063,141	2,739,746	-	53,802,887	-	53,802,887	46%
	222004	Collection System Valve Remote Operation Structures Improvements	4,246	-	-	-	-	-	-	-	-	0%
	222008	North Interceptor East Arm (NIEA)	4,500,000	2,520,548	2,520,548	-	-	-	-	-	-	0%
Field Services - Wastewater Total			203,493,821	19,775,025	19,775,025	53,673,024	2,823,725	-	56,496,748	-	56,496,748	28%
Programs	260200	Sewer and Interceptor Evaluation and Rehabilitation Program	9,171,910	17,224	17,224	-	-	-	-	-	-	0%
	260201	Conveyance System Interceptor Rehab	41,527,234	1,107,291	1,107,291	20,225,624	141,168	-	20,366,792	18,542,127	38,908,919	94%
	260202	Conveyance System Interceptor Rehab	4,457	-	-	1,904	-	-	1,904	-	1,904	43%
	260204	Energy Services for Rehabilitation of Conveyance Sewer System	57,525,481	16,922,618	17,695,018	10,043,555	4,168,386	-	14,211,941	-	14,211,941	25%
	260205	NWI Outfall Rehabilitation	7,734,426	4,232,450	4,232,450	2,303,696	2,167,293	-	4,470,989	-	4,470,989	58%
	260206	Conveyance System Rehabilitation - Interceptors	23,141,361	8,166,750	8,166,750	1,197,436	2,160,198	-	3,357,634	-	3,357,634	15%
	260207	Rehabilitation of Woodward Sewer System	23,229,319	6,721,768	7,216,568	12,008,292	10,206,049	-	22,214,341	-	22,214,341	96%
	260208	Linwood/Lonyo/Ashland/2nd Ave/Shiawassee	36,754	-	-	-	-	-	-	-	-	0%
	260209	Sewer Repair Contract - As Needed	14,965,035	7,479,694	7,479,694	2,098,083	823,121	-	2,921,204	-	2,921,204	20%
	260210	Linwood/Lonyo/Ashland/2nd Ave/Shiawassee	36,341,245	1,521,537	1,521,537	320,171	656,301	-	976,472	-	976,472	3%
	260211	#N/A	-	-	-	-	1,513	-	1,513	-	1,513	0%
	260500	CSO Outfall Rehab	7,636,110	-	-	-	-	-	-	-	-	0%
	260504	Rehabilitation of Outfalls - Phase II	4,923,589	-	-	-	-	-	4,923,589	-	4,923,589	100%
	260505	Rehabilitation of Outfalls - Phase IV	5,709,224	-	-	-	-	-	5,709,659	-	5,709,659	100%

Construction Work-in-Progress Quarterly Report

As of December 31, 2023

Great Lakes Water Authority
 B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2024
 Rollforward Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board Approved CIP			FY 2024 Capitalizations			Life to Date Capitalizations And Other Activity	Life to Date Activity through December 31, 2023	Life to Date Total Project Activity / Plan Estimate
				FY 2024 Board Approved CIP	With Project Amendments	CWIP Balance July 1, 2023	FY 2024 Activity through December 31, 2023	And Other Activity Through December 31, 2023	CWIP Balance December 31, 2023			
Programs	260506	Pilot Regulator Orifice Expansion	(78,641)	-	-	-	-	-	-	-	0%	
	260508	B-39 Outfall Rehab	10,705,611	4,377,004	4,377,004	6,031,942	3,796,926	-	9,828,868	9,828,868	92%	
	260509	B-40 Outfall Rehab	112,591	-	-	112,591	-	-	112,591	112,591	100%	
	260510	Conveyence System Rehabilitation - Outfalls	24,947,182	4,826,857	4,826,857	1,871,607	1,182,461	-	3,054,068	3,054,068	12%	
	260600	CSO Facilities Improvements	1,021,441,117	2,120,493	2,120,493	-	-	-	-	-	0%	
	260601	Oakwood Drain Valve Improvements	804,574	-	-	-	-	-	804,574	804,574	100%	
	260602	CSO Fire Alarm System Improvements	1,017,691	-	-	-	-	-	997,619	997,619	98%	
	260603	Conner Creek CSO Basin Rehab	7,982,176	-	-	-	-	-	7,675,407	7,675,407	96%	
	260606	Puritan Fenkell Roof Replacement	346,540	-	-	-	-	-	346,540	346,540	100%	
	260607	Lieb SDF Electrical Improvements	1,032,508	-	-	-	-	-	1,032,508	1,032,508	100%	
	260608	Seven Mile RTB - Roof Replacement	496,699	-	-	-	-	-	496,699	496,699	100%	
	260609	Seven Mile RTB - Parking Lot / Sitework	429,557	-	-	-	-	-	429,557	429,557	100%	
	260610	Baby Creek MAU Replacement	275,151	-	-	-	-	-	275,151	275,151	100%	
	260611	HVAC Improvements At Lieb SDF	412,590	-	-	-	-	-	412,590	412,590	100%	
	260613	Baby Creek HVAC Improvements	545,401	-	-	-	-	-	545,401	545,401	100%	
	260614	CSO Facilities Structural Improvements	15,427,766	2,346,731	2,810,031	12,303,538	1,525,442	-	13,828,980	13,828,980	90%	
	260615	PF & Lieb CSO Facilities Site & Drainage Improvements	457,982	-	-	-	-	-	582,444	582,444	127%	
	260616	Baby Creek SCO Anchor & Wedge Improvements	771,846	-	-	-	-	-	770,114	770,114	100%	
	260617	St. Aubin Chemical Disinfection Improvements	417,052	-	-	-	-	-	-	-	0%	
	260618	Oakwood HVAC Improvements	6,933,584	-	-	5,620,944	489,767	-	6,110,711	6,110,711	88%	
	260619	Control System Upgrade At St. Aubin, Lieb and 7 Mile	7,972,657	3,868,475	3,868,475	1,050,133	657,407	-	1,707,539	1,707,539	21%	
	260620	Baby Creek Roof Replacement	984,552	-	-	-	-	-	984,552	984,552	100%	
	260621	Connor Creek Berm Improvements	2,255,349	-	-	4,749	(2,374)	-	2,374	2,244,862	100%	
	260622	CSO Facilities Emergency Generator Improvements	1,376,296	-	-	978,411	4,743	-	983,154	983,154	71%	
	260623	Baby Creek Screen Rehabilitation	2,393,230	1,048,740	1,048,740	1,447,517	320,024	-	1,767,540	1,767,540	74%	
	260700	Sewer System Infrastructure Improvements & Pumping Stations	1,025,068	49,456	49,456	-	-	-	-	-	0%	
	260701	Conveyance System Infrastructure Improvements	58,453,030	19,310,035	19,310,035	13,177,646	9,250,749	-	22,428,395	22,428,395	38%	
	260702	Pump Station Assets Updates	10,065,000	-	-	-	-	-	-	-	0%	
	260800	WRRF Roof Replacement Program	14,833,388	-	-	-	-	-	-	-	0%	
	260801	WRRF Sludge Pump Station #3 Roof Replacement	80,463	-	-	-	-	-	80,463	80,463	100%	
	260802	2022 WRRF Roof Improvements Project	5,071,571	2,349,455	2,349,455	302,060	134,144	-	436,203	436,203	9%	
	260900	WRRF Facility Optimization Program	85,771,290	52,706	52,706	-	-	-	-	-	0%	
	260901	Rehab. Hazmat Facility at WRRF	3,506,846	1,409,318	1,409,318	329,597	538,970	-	868,567	868,567	25%	
	260902	WRRF Renovation of 4th Floor	3,719,708	1,043,763	1,043,763	3,143,292	307,354	-	3,450,646	3,450,646	93%	
	260903	WRRF Front Entrance Rehab.	7,817,069	2,475,342	2,475,342	367,597	28,240	-	395,837	395,837	5%	
	260904	WRRF 3rd Floor Renovation	3,546,009	14,026	14,026	68,417	33,638	-	102,055	102,055	3%	
	260905	WRRF Plumbing Shop Rehab	2,669,399	1,144,117	1,144,117	134,360	29,964	-	164,324	164,324	6%	
	261000	WRRF Rehabilitation of Secondary Clarifiers	41,637,242	-	-	-	-	-	-	-	0%	
	261001	Rehabilitation of Secondary Clarifiers	18,941,302	161,360	161,360	26,712	12,776	-	39,488	39,488	0%	
Programs Total			1,598,544,588	92,767,210	94,497,710	95,169,871	38,634,259	-	133,804,130	46,853,855	180,657,986	11%
Programs - Water	171501	Roof Replacements - Var Facilities Program	-	-	-	-	-	-	83,000	83,000	0%	
Programs - Water Total			-	-	-	-	-	-	83,000	83,000	0%	
Security	341002	Security Infrastructure Improvements	2,362,970	-	-	-	-	-	3,200,851	3,200,851	135%	
Security Total			2,362,970	-	-	-	-	-	3,200,851	3,200,851	135%	
Systems Control Center	232001	Fairview Pumping Station - Replace Four Sanitary Pumps	46,124,283	2,479,602	2,479,602	43,849,170	945,438	-	44,794,607	44,794,607	97%	
	232002	Freud and Connor Creek Pump Station Improvements	464,091,911	21,815,785	21,815,785	12,238,422	1,549,297	-	13,787,719	6,103,686	19,891,405	4%
	233003	Rouge River In-system Storage Devices	81,335,735	-	-	-	-	-	-	-	-	0%
Systems Control Center Total			591,551,929	24,295,387	24,295,387	56,087,591	2,494,735	-	58,582,326	6,103,686	64,686,012	11%

Construction Work-in-Progress Quarterly Report

As of December 31, 2023

Great Lakes Water Authority
 B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2024
 Rollforward Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project Category	Project	Project Name	Total Project Plan Estimate	FY 2024 Board	FY 2024 Board	CWIP Balance July 1, 2023	FY 2024	FY 2024 Capitalizations	CWIP Balance December 31, 2023	Life to Date	Life to Date	Life to Date
				Approved CIP	With Project Amendments		Activity through December 31, 2023	And Other Activity Through December 31, 2023		Capitalizations And Other Activity	Activity through December 31, 2023	Activity / Total Project Plan Estimate
Water Resource Recovery Facility	211001	Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	54,737,713	-	-	-	-	-	-	54,748,738	54,748,738	100%
	211002	Pump Station No. 2 Pumping Improvments	3,737,135	164,894	164,894	2,654,703	50,580	2,654,703	50,580	2,654,703	2,705,283	72%
	211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	28,488,884	-	-	-	-	-	-	27,895,001	27,895,001	98%
	211005	Pump Station No. 2 Improvements	83,607,696	1,642,063	1,642,063	379,595	19,239	-	398,834	-	398,834	0%
	211006	Pump Station No. 1 Improvements	110,959,522	15,843,863	22,296,763	11,410,932	2,683,603	-	14,094,535	-	14,094,535	13%
	211007	Replacement of Bar Racks and Grit Collection System at Pump Station No. 2	122,757,265	4,814,699	5,310,899	8,777,838	24,777	-	8,802,615	-	8,802,615	7%
	211008	Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines	12,756,072	1,540,577	1,540,577	10,478,819	1,101,456	-	11,580,276	-	11,580,276	91%
	211009	Rehabilitation of the Circular Primary Clarifier Scum Removal System	23,215,192	-	-	549,344	-	-	549,344	-	549,344	2%
	211010	Rehabilitation of Sludge Processing Complexes A and B	14,104,223	-	-	94,337	-	-	94,337	-	94,337	1%
	211011	WRRF PS1 Screening and Grit Improvements	99,386,498	1,637,866	1,637,866	27,289	670,702	-	697,991	-	697,991	1%
	212003	Aeration System Improvements	16,524,875	-	-	-	-	-	-	16,524,875	16,524,875	100%
	212004	ProjectChlorination/Dechlorination Process Equipment Improvements	5,650,501	-	-	-	-	-	-	5,652,101	5,652,101	100%
	212006	PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	43,788,731	-	-	-	-	-	-	43,788,731	43,788,731	100%
	212007	Rehabilitation of the Secondary Clarifiers	2,645	-	-	-	-	-	-	-	-	0%
	212008	WRRF Rehabilitation of Intermediate Lift	194,787,461	10,876,684	10,876,684	1,195,891	64,884	-	1,260,775	-	1,260,775	1%
	212009	WRRF Aeration Improvements 3 and 4	69,528,226	-	-	-	-	-	-	-	-	0%
	212010	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite	6,231,557	-	-	-	-	-	-	-	-	0%
	213006	Improvements to Sludge Feed Pumps at Dewatering Facilities	17,944,119	1,050,206	1,050,206	746,836	523,624	-	1,270,460	-	1,270,460	7%
	213007	Construction of the Improved Sludge Conveyance and Lighting System at the WWTP	25,470,489	709,475	709,475	22,852,865	191,912	22,852,865	191,912	22,852,865	23,044,777	90%
	213008	Rehabilitation of the Wet and Dry Ash Handling Systems	7,183,909	-	-	151,058	-	-	151,058	-	151,058	2%
	213009	Phosphorous Recovery Facility at the WRRF	335,447,898	-	-	10,848	(454)	-	10,394	-	10,394	0%
	214001	Relocation of Industrial Waste Division and Analytical Laboratory Operations	14,791,656	-	-	-	-	-	-	14,300,183	14,300,183	97%
	216004	Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP	8,555,862	195,840	195,840	7,723,935	238,594	(55,620)	8,018,149	(55,620)	7,962,529	93%
	216006	Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System	31,871,434	8,215,922	6,538,522	5,982,678	572,919	-	6,555,597	-	6,555,597	21%
	216007	DTE Primary Electric 3rd Feed Supply Line to the WRRF	3,996,247	-	-	-	-	-	-	4,008,247	4,008,247	100%
	216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	101,100,651	2,693,951	3,182,551	3,711,028	538,948	-	4,249,976	-	4,249,976	4%
	216009	Logistics & Material Facility	289,862	-	-	-	-	-	-	-	-	0%
	216010	WRRF Facility Optimization	2,003	-	-	-	-	-	-	-	-	0%
	216011	WRRF Structural Improvements	17,185,482	3,259,348	3,259,348	1,733,060	2,262,490	-	3,995,550	-	3,995,550	23%
	216012	WRRF Research Facility	228,119	-	-	-	-	-	-	-	-	0%
Water Resource Recovery Facility Total			1,454,331,929	52,645,387	58,405,687	78,481,057	8,943,275	25,451,948	61,972,384	192,369,824	254,342,208	17%
Grand Total			4,074,870,364	199,061,145	206,551,945	288,688,600	57,588,119	25,451,948	320,824,772	250,471,569	571,296,340	14%



Appendix C - Project Amendment Summaries

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

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, project amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the current fiscal year board approved Capital Improvement Plan accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the project amendments prepared for the Capital Reserve, project amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded, and other project information becomes available additional project amendments to and from the Capital Reserve will be prepared to amend the board approved FY 2023 Capital Improvement Plan.

(\$47,513,500) of Capital Reserve project amendments have been prepared as of December 31, 2023, as shown for the Water System in C1 – Water FY 2023 Project Amendment Summary with project amendments detailing the assignment of funding within Program and Allowance accounts.

\$7,490,800 of Capital Reserve project amendments have been prepared as of December 31, 2023, as shown for the Wastewater system in C2 – Wastewater FY 2023 Project Amendment Summary with project amendments detailing the assignment of funding within Program and Allowance accounts.

The order of these appendices on the subsequent pages are in ascending order by CIP project number.

Great Lakes Water Authority

C1 - Water System Project Amendment Summary

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project	Project Name	Capital Reserve	Grand Total
111006	Replace Instrumentation: LHWTP	999,000	999,000
114002	Springwells WTP Low and High Lift Improv	(500)	(500)
114017	SPW WTP Flocculator Drive Replacement	955,800	955,800
122004	96" Main Relocation, Isolation Valve Ins	(51,865,300)	(51,865,300)
122006	Transmission Work: Wick Road Parallel	373,500	373,500
122017	7 Mile/NV TM Rehab and Carrie/NV Flow CS	625,000	625,000
132010	Division Valves at West Service Center	(687,300)	(687,300)
132012	Ypsilanti Pumping Station Improvements	196,600	196,600
170500	Program: Transmission Valve Assessment	(1,616,600)	(1,616,600)
170503	Transmission System Valve Replacement Pa	2,869,900	2,869,900
170504	Repair of WTM, Valves, & Priority Repair	2,164,400	2,164,400
170802	Reservoir Inspection, Design	(1,528,000)	(1,528,000)
Grand Total		\$ (47,513,500)	\$ (47,513,500)

Great Lakes Water Authority

C2 - Wastewater System Project Amendment Summary

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2023

Project	Project Name	Capital Reserve	Grand Total
211006	Pump Station #1 Main Lift Pumps Rehab	6,452,900	6,452,900
211007	Replacement of Bar Rack at Pump Station 2	496,200	496,200
216006	WRRF Yard Piping & Utility Rehab	(1,677,400)	(1,677,400)
216008	Rehabilitation of SFE Pump Station	488,600	488,600
260204	Eng Svcs for Rehab of Convey Sewer System	772,400	772,400
260207	Rehabilitation of Woodward Sewer System	494,800	494,800
260614	CSO Facilities - Structural Improvements	463,300	463,300
Grand Total		\$ 7,490,800	\$ 7,490,800



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).

Procurement Tip of the Month: How to Submit a Successful B.I.D. Program Vendor Diversity Plan

A key part of fulfilling the requirements for GLWA's Business Inclusion and Diversity (B.I.D.) Program includes submitting a successful Vendor Diversity Plan. This written document is scored on a pass/fail basis and becomes part of the executed contract. [B.I.D. Program Requirements](#), which are provided in Bonfire for all B.I.D. qualifying solicitations, helps guide Vendors through the process of creating your Diversity Plan. In addition, Vendors should note that a successful Diversity Plan:

- ✓ Documents the strategies used to encourage participation by small, minority-owned, and disadvantaged certified subcontractors. If not directly subcontracting services, Vendors may also consider encouraging the participation of certified businesses when sourcing any materials or supplies to fulfill the contract.
- ✓ Focuses directly on the specific solicitation to which your company is responding. While you may include information on your company's internal diversity and inclusion efforts, note that this does not fulfill the targeted outreach efforts requested by GLWA.
- ✓ Provides a copy of any diversity certification that your company holds along with any proposed subcontractor's. Certifications may include but are not limited to: Minority-owned Business Enterprise (MBE), Woman-owned Business Enterprise (WBE), Disadvantaged Business Enterprise (DBE), and Small Business Enterprise (SBE). Certification from any federal, state, or governmental unit is accepted.

Resources are available in [B.I.D. Program Requirements](#) for vendors seeking certified subcontractors. GLWA also advises that vendors

attend pre-bid/proposal meetings for additional networking opportunities. Details on these meetings, as well as attendee lists, are published in Bonfire. Questions about the B.I.D. Program may be sent to GLWAVendorOutreach@glwater.org.

Where to Meet GLWA

GLWA welcomes you to visit us at the following upcoming vendor outreach events.

- Diverse Connections. March 20, 2024 from 8:15 a.m. to 12 p.m. in Novi, MI. Event details and registration available [here](#).
- Michigan Public Purchasing Officers Association Reverse Trade Fair. April 26, 2024 from 10:30 a.m. to 3:30 p.m. in Novi, MI. Event details and registration available [here](#).

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 any GLWA solicitation.

Keeping up with GLWA

Our Chief Executive Officer (CEO) Monthly Report provides a wealth of information and news about important initiatives within GLWA's service territory that impact GLWA, its member partners, and the public. To read the February 2024 Monthly Report, please [click 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 2024

Category	CIP #	Description/Project Title	Budget Estimate
Water System (next four to nine months)			
Construction	111001	Lake Huron Water Treatment Plant – LH-401 Switchgear and Low Lift Improvements	100,000,000
Construction	112008	Northeast WTP Filter Rehabilitation	\$85,550,000
Design	113010	Southwest WTP Flocculation Improvements	\$4,933,000
Construction	122016	Downriver Transmission Main Loop – Phase 1 – Inkster Rd	\$21,000,000
Wastewater Systems (next four to nine months)			
Construction	260510	CSO Outfall Rehabilitation Phase VI	\$10,000,000
Construction	211005.2	WRRF Pump Station 2 VFD Replacements	\$12,000,000
Design	270007	CSO Facility Disinfection Improvements	\$3,900,000
Construction	270006	CSO Facility Improvements II	\$15,000,000
Water System (next three months)			
Construction (Design Build)	122004	96-Inch Water Transmission Main Relocation - Phase III	\$90,000,000
Design	270001	Pilot Netting and Disinfection Facilities at B03, B04, and B05	\$8,000,000
Design	270010	Puritan Fenkell and Seven Mile HVAC improvements	\$1,200,000
Projects moved to Procurement Team (Preparing for solicitation on Bonfire)			
Professional Services	O&M	Emergency Standby Generator Preventative Maintenance	\$2,910,225
Construction	170306	Instrumentation and Control System Plant - wide SCADA Upgrade	\$3,340,000
Professional Services	O&M	Water and Wastewater Services Charges Consultant	\$300,000
Professional Services	O&M	Internal Auditor	\$650,000
Professional Services	O&M	Environmental Health and Safety Assistance	\$2,000,000
Professional Services	O&M	Refuse and Recycling Waste Pickup and Disposal Services	\$655,000
Professional Services	O&M	Fleet Management Services Including Leasing and Upfitting Vehicles	\$14,667,500
Supplies	O&M	Sodium Bisulfite	\$2,315,000
Professional Services	O&M	Water and Wastewater Pumping Stations LED Lighting Upgrades	\$7,500,000

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: February 26, 2024

To: Great Lakes Water Authority Audit Committee

From: Kim Garland, CPA, Deputy Chief Financial Officer

Re: Pollutant Surcharge Management Portal Launch

Background: As part of the Great Lakes Water Authority initiative to implement the new Workday financial system, staff has reviewed existing business processes and integrations to help ensure the success of the implementation. One area staff has long sought to improve is the collection of pollutant surcharge meter information from member partners and certain end users. This is needed to support the invoicing of Industrial Waste Control which includes monitoring certain pollutants discharged by some commercial and industrial users above the levels supported by standard GLWA wastewater processes.

Analysis: Over the past eighteen months a collaborative internal GLWA team made up of information technology and financial services area team members has developed a custom portal that will allow the approximately 30 member partners and end users reporting monthly meter data to do so through an online portal accessible on the www.glwater.org website. This will replace the need to email scanned forms, Microsoft Word, or Microsoft Excel files in various formats. The portal provides simple, administrative functions for the GLWA Billing & Collection team and will provide key data to support the GLWA Charges Outreach & Modeling team in their analysis and reporting.

Development of this portal and the billing files it provides has helped alleviate the need to purchase a separate, utility billing module to complement the Workday system. The attached presentation summarizes this project, the resulting portal tool, and functionality.

A formal communication plan is in progress to reach out to each individual member partner or end user impacted to provide their licensed access and train them on use of the portal. The team anticipates training and communication will be fully completed by March 31, 2024 with the first pollutant surcharge cycles processed using the new portal by April 30, 2024.

Proposed Action: Receive and file this update.

Pollutant Surcharge Project – Go Live

February 2024



Overview

- Pollutant Surcharge (PS) billing is a low revenue, GLWA Billing team.
- For FY 2023 and consistent with prior years, PS represents overall Sewerage Disposal Fund operating revenue.
- However, this program is necessary under the GLWA Industrial Waste Control program and requirements established as part of the use of federal funds to support the development of the WRRF.
- Payment terms and billing process for PS are not specified within the ordinances established for the Industrial Waste Program.
- The current process works, but has flaws—some inherited at bi-furcation and some newly encountered when implementing BS&A (for example, Faygo billing challenges, and BS&A invoice formats)
- The purpose of this discussion is to:
 1. Review the new Pollutant Surcharge data collection process and tool
 2. Request approval to go-live with this new system – that is, formally post the data collection link to the GLWA website and begin rolling out to the 24 member partners and customers impacted



New Process Transition

Over the past year a cross-functional GLWA project team has designed, developed and fully tested a new process for data collection and billing for Pollutant Surcharge. The following table summarizes these key changes:

Current Process	New Process
Manual Collection of meter read data in the form of scanned forms or individual member partner MS Excel files emailed to GLWA Billing team	Online Portal for Member Partners to enter meter read data directly and upload support for those counts
BS&A houses excess levels and read data	Pollutant Surcharge Management Portal will house excess level data, current and historic read data
Complex, custom invoices calculate monthly surcharge amounts for billing	Monthly surcharge amounts are calculated within the portal and printed on what becomes the second page of the customer invoice monthly
Limited historic data available for charges analysis, that limited data is not available in a user-friendly format	Excess levels, current and historic read information as well as calculated surcharge amounts are easily downloadable in PDF or MS Excel formats

Lay of the Land

- There are approximately 145 individual PS customer accounts with GLWA.
- There are 6 billing cycles with different timing and processes. For example:

Billing Cycle	Count
PS-1 (monthly)	21
PS-2 (monthly)	55
PS-3 (quarterly)	5
PS-4 (quarterly)	21
PS-5 (every other month)	12
PS-6 (quarterly)	31
Grand Total	145

- PS-2 is Detroit-specific
- PS-6 is for Breweries (and charges are calculated uniquely)
- PS-1, 3, 4 & 5 timing is based on meter read timing in communities

- Although there are 145 accounts, these are reported by approximately 30 member partners and end users – as these users report on multiple accounts.
- Breweries submit individual reports to GLWA. The reports are copies of the quarterly production reports due to the State of Michigan.



Key Process Steps



Monthly Invoicing

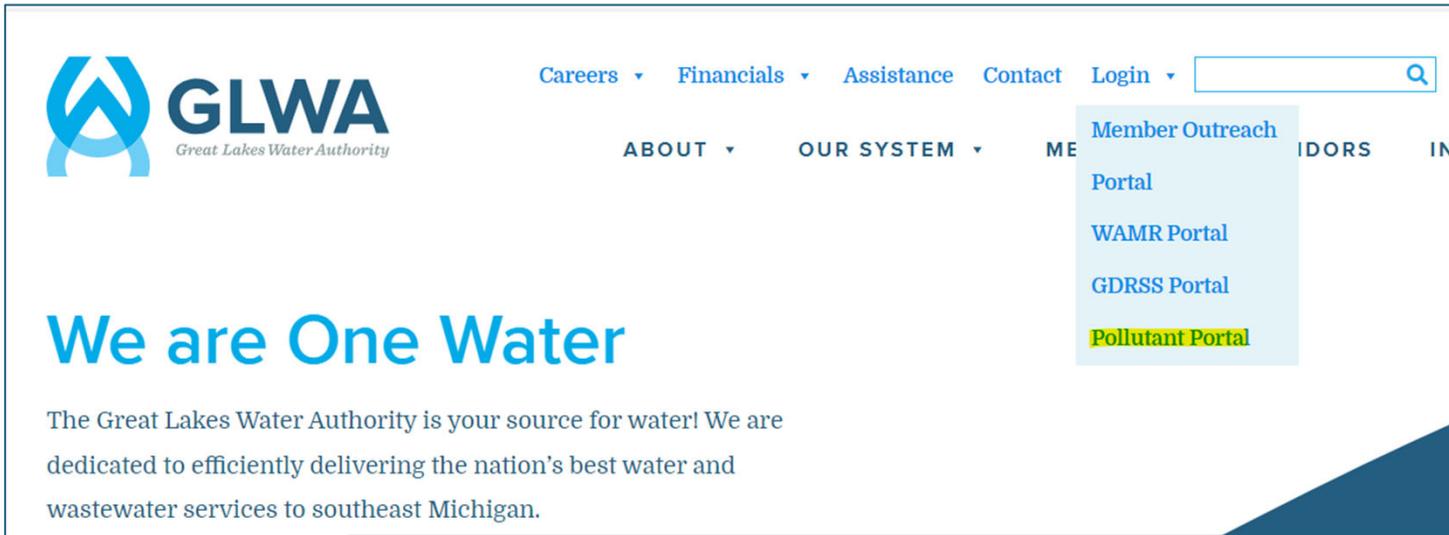
1. Users enter data utilizing the new portal monthly
 - Unique licenses and account validation checks ensure that only the appropriate customer can enter read data
2. The GLWA Billing Clerk monitors each cycle to confirm reads are entered
 - Follow up calls completed where customers are delinquent – no different from current
3. The GLWA Billing Clerk reviews read data online or using a download of the meter read information by cycle or account
4. Once all data is reviewed the GLWA Billing Clerk generates a download file that is uploaded into BS&A to generate page 1 of the invoices and later entered in Workday via to generate the page 1 invoices
5. The GLWA Billing Clerk then emails or mails via USPS pages 1 and 2 to each customer.

Key Process Steps (continued)

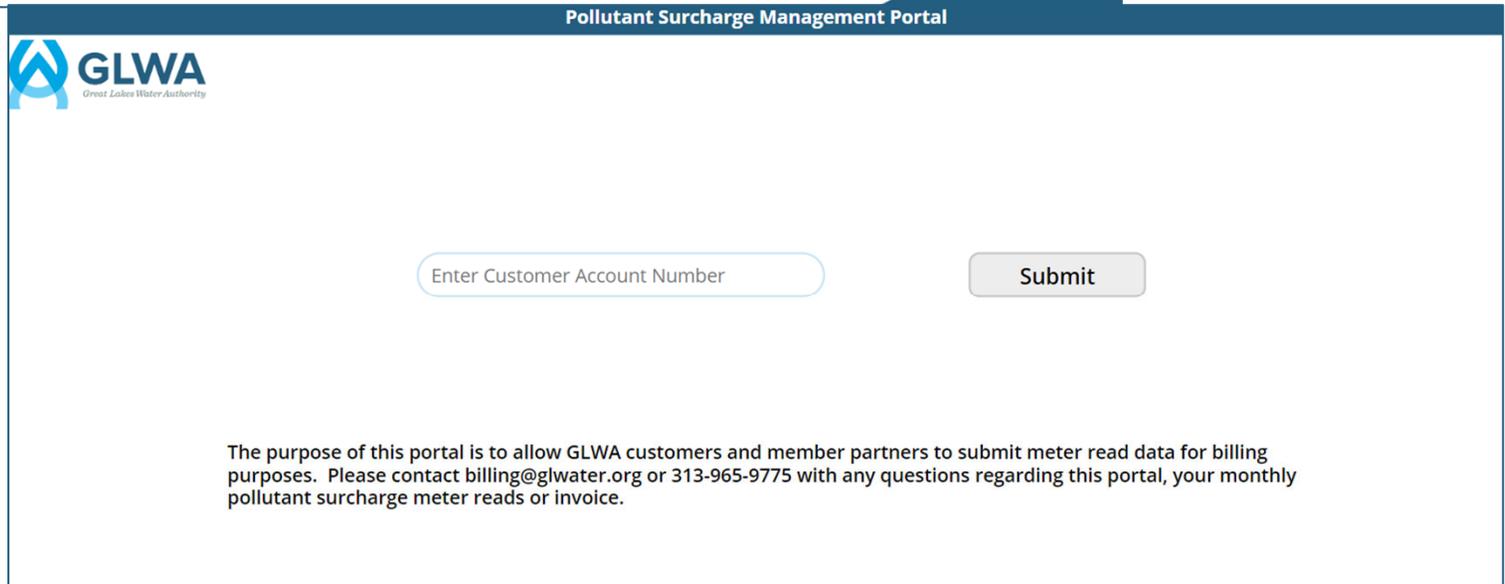
Customer Maintenance

1. The GLWA Billing Clerk will upload and change excess levels in the new portal using the Admin function – based on formal communication from the GLWA IWC team – in line with current practice
2. The GLWA Billing Clerk can assist member partners with meter changes and new customer additions via the portal

Production



The screenshot shows the top portion of the GLWA website. On the left is the GLWA logo with the tagline "Great Lakes Water Authority". To the right is a navigation menu with items: "Careers", "Financials", "Assistance", "Contact", "Login", and a search bar. Below the navigation is a secondary menu with "ABOUT", "OUR SYSTEM", "MEMBERSHIP", "REGULATORS", and "INVESTORS". A dropdown menu is open under "MEMBERSHIP", listing "Member Outreach Portal", "WAMR Portal", "GDRSS Portal", and "Pollutant Portal" (which is highlighted in yellow). Below the navigation is the main heading "We are One Water" followed by a paragraph: "The Great Lakes Water Authority is your source for water! We are dedicated to efficiently delivering the nation's best water and wastewater services to southeast Michigan."



The screenshot shows the "Pollutant Surcharge Management Portal" interface. At the top left is the GLWA logo. The main content area features a text input field with the placeholder "Enter Customer Account Number" and a "Submit" button. Below the input field is a paragraph of text: "The purpose of this portal is to allow GLWA customers and member partners to submit meter read data for billing purposes. Please contact billing@glwater.org or 313-965-9775 with any questions regarding this portal, your monthly pollutant surcharge meter reads or invoice."

Pollutant Surcharge Next Steps

Project Approval – **Feb 21**

Contact Users & Schedule Training – **Feb 26**

Complete Training & Rollout – **Mar 31**

Begin Using New Collection Process – **Apr 1**

First Monthly Cycles Complete – **Apr 30**

Communication Plan

How: Individually contact each Member Partner or Customer

- Set up 30-minute timeframe for one-on-one training
- Provide PowerPoint video guide (*copy included with meeting invite*)
- Provide PDF of User Guide (*copy included with meeting invite*)

Work with IT to assign a user license and email address

Who: Pam Fladger & Haran Stanley

When: Upon approval of the portal and tool today



Closing

This collaborative, cross functional effort is the work of a dedicated project team.

Team Member	Position
Hajra Noor	Applications Analyst
Sivagopalvarma Kakarlaupudi	IT Consultant/Programmer
Michelle Burt	Billing & Collection Manager
Pam Fladger	Billing Clerk
Eddie Haidar	IT Project Manager
Kim Garland	Deputy Chief Financial Officer

