



Audit Committee Meeting
Monday, April 29, 2024 at 8:00 a.m.
www.glwater.org

[Join Zoom Meeting](#)

Meeting ID: **824 6921 9358** Passcode: **395690**

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. March 22, 2024 (Page 1)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
7. NEW BUSINESS
 - A. *Action Item:* Resolution to Adopt the Detroit Water and Sewerage (Page 8)
Department Water System Improvements Project Plan for FY 2025 Drinking
Water State Revolving Fund (DWSRF) Consideration
 - B. *Action Item:* 2nd Quarter Budget Amendments (Page 38)
8. REPORTS
 - A. CFO Report (Page 69)
 - B. Monthly Financial Report for January 2024 (Page 85)
 - C. Affordability & Assistance Update (Page 86)
 - D. Gifts, Grants & Other Resources Report (Page 87)
 - E. Quarterly BID Report through March 31, 2024 (Page 94)
 - F. Semiannual Debt Report through March 31, 2024 (Page 98)
 - G. General Retirement System Financial Report and Annual Actuarial (Page 113)
Valuation for Year End June 30, 2023 (City of Detroit Component II)
9. COMMUNICATIONS
 - A. The Procurement Pipeline for April 2024 (Page 320)
10. LOOK AHEAD
 - A. Next Audit Committee Meeting: May 24, 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

Friday, March 22, 2024

8:00 AM

Zoom Telephonic Meeting

1. Call To Order

Acting Chairperson Brown called the meeting to order at 8:07 a.m.

2. Quorum Call

Present: 2 - Director Gary Brown, and Director Jaye Quadrozzi

Excused: 1 - Chairperson Brian Baker

3. Approval of Agenda

Acting Chairperson Brown requested a Motion to Approve the Agenda.

Motion By: Jaye Quadrozzi

Support: Gary Brown

Action: Approved

The motion carried unanimously.

4. Approval of Minutes

A. [2024-136](#) Minutes of February 26, 2024

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [4A Minutes - February 26, 2024 Audit Committee Meeting.pdf](#)

Acting Chairperson Brown requested a Motion to Approve the February 26, 2024 Audit Committee Meeting Minutes.

Motion By: Jaye Quadrozzi

Support By: Gary Brown

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. [2024-111](#) 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**

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7A1 AC Memo - Approval of DWSD FY2025 CWSRF Project Plan.pdf](#)

[7A3 Resolution to Adopt the DWSD FY2025 CWSRF Project Plan.docx](#)

[7A4 DWSD - FY2025 CWSRF Project Plan Summary and Resolution.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors

Agenda of April 24, 2024

The motion carried by a unanimous vote.

B. [2024-117](#) Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2025 Clean Water State Revolving Fund (CWSRF) Funding Consideration

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7B1 AC Memo - Request to Approve Resolution to Adopt FY 2025 CWSRF Project Plans.pdf](#)

[7B2a Attachment 1 - Tables.pdf](#)

[7B3 Resolution to Adopt GLWA FY 2025 CWSRF Project Plans.docx](#)

[7B4a FY2025 CWSRF Project Plan Summary - CSO Outfall Rehab \(CIP 260510\).pdf](#)

[7B4b FY2025 CWSRF Project Plan Summary - Oakwood Leib CSO \(CIP 270004\).pdf](#)

[7B4c FY2025 CWSRF Project Plan Summary - 7 Mile Rehab \(CIP 260206\).pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors

Agenda of April 24, 2024

The motion carried by a unanimous vote.

C. [2024-118](#) **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)**

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7C1 Audit Committee Memo- Water Revenue Refunding Series Ordinance.pdf](#)
[7C3 Series Ordinance \(2024 Water Refunding\).docx](#)
[7C4 Resolution Approving 2024 Water Series Ordinance \(Refunding\).docx](#)
[7C5 GLWA Audit Committee Financing Update March 2024 vF1](#)
[7C6 GLWA Audit Committee DSRF Considerations March 2024 v1](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors
Agenda of April 24, 2024

The motion carried by a unanimous vote.

D. [2024-119](#) **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)**

Sponsors: Nicolette Bateson

Indexes: Board of Directors

Attachments: [7D1 Audit Committee Memo- Sewer Revenue Refunding Series Ordinance.pdf](#)
[7D3 Series Ordinance \(2024 Sewer Refunding\).docx](#)
[7D4 Resolution Approving 2024 Sewer Series Ordinance \(Refunding\).docx](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors
Agenda of April 24, 2024

The motion carried by a unanimous vote.

E. [2024-120](#) Water Residential Assistance Program Delivery Service Partner Funding Authorization for FY 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7E WRAP FY 2025 Funding Authorization.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Recommended for Approval to the Board of Directors

Agenda of April 24, 2024

The motion carried by a unanimous vote.

F. [2024-122](#) Presentation: 2024 Municipal Market Outlook and GLWA Debt Management Considerations

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7F1 AC Memo - Municipal Bond Market Update.pdf](#)

[7F2 GLWA Audit Committee Financing Update March 2024 vF1.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

G. [2024-123](#) Presentation: Debt Service Reserve Fund Background and Considerations

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [7G1 AC Memo - Debt Service Reserve Fund Background and Considerations Update.pdf](#)

[7G2 GLWA Audit Committee DSRF Considerations March 2024 v1.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

8. Reports

- A. [2024-129](#) CFO Report
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8A1 CFO Report March 2024.pdf](#)
[8A2 FY-2025-Budget-Charges-Communications-Toolkit-3.4.2024.pdf](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- B. [2024-130](#) Monthly Financial Report for December 2023
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8B December 2023 Financial Report.pdf](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- C. [2024-131](#) Annual Procurement Report for the year ending June 30, 2023
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8C1 Annual Procurement Report FY 2023 with Invoice Spend 1.12.2024 \(V2\).pdf](#)
[8C2 Combined Appendix A-B-C-D FY 2023 Procurement Report.pdf](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- D. [2024-079](#) Affordability & Assistance Update
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8D Affordability & Assistance Update-March.pdf](#)
- Motion By:** Jaye Quadrozzi
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

E. [2024-132](#) Gifts, Grants & Other Resources Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8E Grants Gifts and Other Resources Report.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

F. [2024-133](#) Quarterly Investment Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8F1 Quarterly Investment Report Cover Memo March 2024.pdf](#)

[8F2 GLWA Quarterly Investment Report December 2023_v3.19.2024.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

G. [2024-134](#) Quarterly Construction Work in Progress Report through December 31, 2023

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [8G Quarterly CWIP Report FY 2024 Q2.pdf](#)

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Received and Filed

The motion carried by a unanimous vote.

9. Communications**A.** [2024-135](#) The Procurement Pipeline for March 2024

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [9A The Procurement Pipeline for March 2024.pdf](#)

No Action Taken

B. [2024-081](#) Pollutant Surcharge Management Portal Launch

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [9B1 Pollutant Surcharge Mgmt Portal Launch.pdf](#)
[9B2 Feb 2024 Pollutant Surcharge Process Improvement Project AC version.pdf](#)

No Action Taken

10. Look Ahead

A. Next Audit Committee Meeting:

April 26, 2024 at 8:00 a.m.

11. Other Matters

There were no other matters.

12. Adjournment

Acting Chairperson Brown requested a Motion to Adjourn.

Motion By: Jaye Quadrozzi

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 9:48 a.m.



Financial Services Audit Committee Communication

Date: April 29, 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) Water System Improvements Project Plan for Fiscal Year (FY) 2025 Drinking Water State Revolving Fund (DWSRF) Funding Consideration.

Background & Analysis: Attached are the following materials.

1. Draft Great Lakes Water Authority ("GLWA") Board Letter
2. DWSD - DWSRF 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) Water System Improvements Project Plan for FY 2025 Drinking Water State Revolving Fund (DWSRF) funding consideration.

DRAFT for Audit Committee Review Only

..Title

Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD) Water System Improvements Project Plan for Fiscal Year (FY) 2025 Drinking Water State Revolving Fund (DWSRF) Funding Consideration

..Body

Agenda of: May 22, 2024

Item No.: 2024-160

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: May 22, 2024

RE: **Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD) Water System Improvements Project Plan for Fiscal Year (FY) 2025 Drinking Water State Revolving Fund (DWSRF) Funding Consideration**

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA) **approve the attached resolution to adopt the City of Detroit Water and Sewerage Department (DWSD) Water System Improvements Project Plan for FY 2025 Drinking Water State Revolving Fund (DWSRF) 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 (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 Water System Improvements project for submittal to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for FY 2025 DWSRF funding consideration. The

DRAFT for Audit Committee Review Only

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

The FY 2025 DWSRF Project Plan and public hearing notice for DWSD Water System Improvements project was posted on the DWSD website and can be found at: www.detroitmi.gov/dwsd. The project plan was presented at that DWSD public hearing on March 20, 2024 and adopted by the DWSD Board of Water Commissioners on the same date.

The Water Systems Improvements project is comprised of water main replacement including the removal of certain lead service lines in the Evergreen-Outer Drive, Crary/St. Mary's, and Cadillac Community (WS-741); and Conant Gardens, Greenwich, Hawthorne Park, Oak Grove, Pembroke, and Sherwood Forest (WS-742) neighborhoods in the City of Detroit. The impact of this project will be improved customer satisfaction and safe, reliable service delivery of potable water to customers. The total cost of this project is currently estimated at \$39 million.

JUSTIFICATION

Pursuant to Section 7.2(b) of the Regional Water Supply 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 DWSRF 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, printed, and submitted to EGLE by the deadline of June 1, 2024.

GLWA concurs with the DWSD Water System Improvements Project Plan adoption, and as the DWSRF applicant, is seeking low interest loan assistance from the DWSRF 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 DWSRF 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 \$23.9 million based on a DWSRF loan amount of \$39 million.

DRAFT for Audit Committee Review Only

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

BUDGET IMPACT

GLWA will be the loan applicant on DWSRF loans issued on behalf of DWSD, and DWSD will be the DWSRF loan recipient as determined by EGLE. All project costs financed by GLWA, on behalf of DWSD, through the DWSRF 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 April 29, 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) Water System Improvements Project Plan for FY 2025 Drinking Water State Revolving Fund (CWSRF) funding consideration.

SHARED SERVICES IMPACT

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

Great Lakes Water Authority
Resolution 2024-160

RE: Resolution to Adopt the City of Detroit Water and Sewerage Department (DWSD)
Water System Improvements Project Plan for Fiscal Year (FY) 2025 Drinking Water State
Revolving Fund (DWSRF) Funding Consideration

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 water supply 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 Water Supply 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 Water System Improvements Project Plan for fiscal year (FY) 2025 Drinking Water State Revolving Fund (DWSRF) funding consideration has been prepared by DWSD; and

Whereas: The Water Systems Improvements project is comprised of water main replacement including the removal of certain lead service lines in the Evergreen-Outer Drive, Crary/St. Mary's, and Cadillac Community (WS-741); and Conant Gardens, Greenwich, Hawthorne Park, Oak Grove, Pembroke, and Sherwood Forest (WS-742) neighborhoods in the City of Detroit;

Whereas: The Project Plan was presented by DWSD at a public hearing held on March 20, 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 water system improvements, 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 DWSRF program.

Now Therefore Be It:

Resolved The GLWA Board hereby accepts and approves the DWSD Water System Improvements Project Plan as approved by the DWSD BOWC at its March 20, 2024, meeting; and Be It Further

Resolved The GLWA concurs with the DWSRF Project Plan adoption and agrees to serve as the DWSRF loan applicant on behalf of the City of Detroit, the loan recipient, for all activities required by DWSRF 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 DWSRF 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 project plan for FY 2025 DWSRF funding consideration for the Water System Improvements 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 EGLE's DWSRF procedures so that the project can proceed expeditiously to construction.

Adopted by the Great Lakes Water Authority Board on:

March 2024

FY2025 DWSRF Projects

*Samuel A. Smalley, PE, S-1, F-1,
Chief Operating Officer*



**Water & Sewerage
Department**



DWSRF FY 2025 Water Main Replacement

- DWSD will be seeking low-interest Drinking Water State Revolving Fund (DWSRF) loan assistance for FY2025.
- The projects are titled WS-741(Project A) and WS-742(Project B).
- Construction will include:
 - Excavation of existing water mains;
 - Hydro-vac excavation of service lines;
 - Installation of new pipes and rehabilitation of pipes;
 - Replacement of Lead (Pb) service lines;
 - Pressure testing;
 - Backfill of the excavation required for piping work; and
 - Restoration of each work site.
- All work to be performed within the existing road right-of-way. **The impact of the project will be improved customer satisfaction and provide safe, reliable service delivery of potable water to customers.**

DWSRF FY 2025 Water Main Replacement

- 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 will consistently and reliably provide high quality potable water to Detroit residents.
- **The Project Plan describes water mains in critical need of replacement or rehabilitation.**
- The total project cost of this project is currently estimated at \$38.8 Million of which 100% is being requested through the DWSRF.
 - Approximately \$19.45 Million for Project A
 - Nearly \$19.35 Million for Project B.

DWSRF Program Overview

Drinking Water State Revolving Fund (DWSRF)

- Low-interest state loan program

City of Detroit is well positioned to receive funding based on need.

- 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 or 40-year term option instead of 20-year. DWSD will choose a 30-year term.
- Principal forgiveness subsidy:
 - Previous loan for \$10,000,000 with 100% loan forgiveness for Lead service line replacement.
 - Booker Funding from EGLE-State of Michigan.

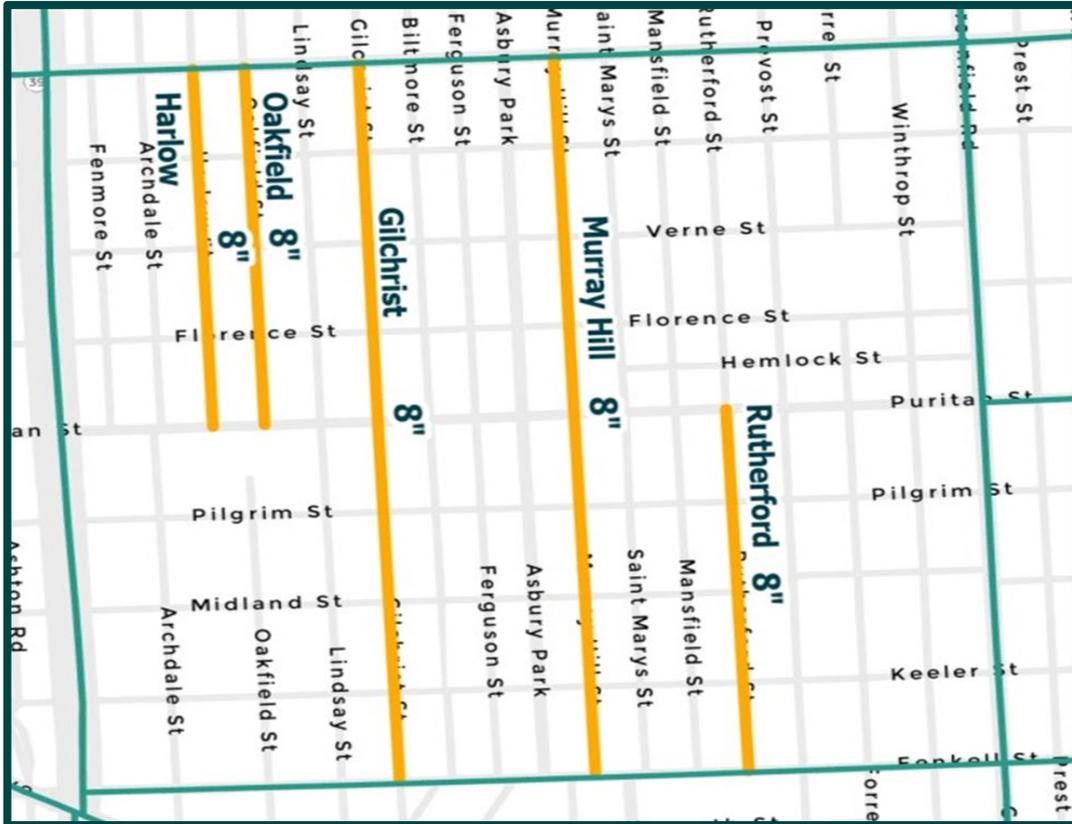
Project Locations and Scope of Work



WS-741: Water Main Replacement and Rehabilitation in District 1

- DWSD proposes to develop contract number WS-741 with a project scope that includes **replacing and rehabilitating approximately 28,700 linear feet of vintage cast iron water main** of pipe size 6-inches and 8-inches in diameter.
 - Full Lead service line replacements (forecasted 458 lead services)
 - **Estimated cost: \$19.45 M**
- **Project locations:** Evergreen-Outer Drive, Crary/St Marys, Cadillac Community.

WS-741 Overview Map - Crary/St. Marys



WS-741 Overview Map – Cadillac Community



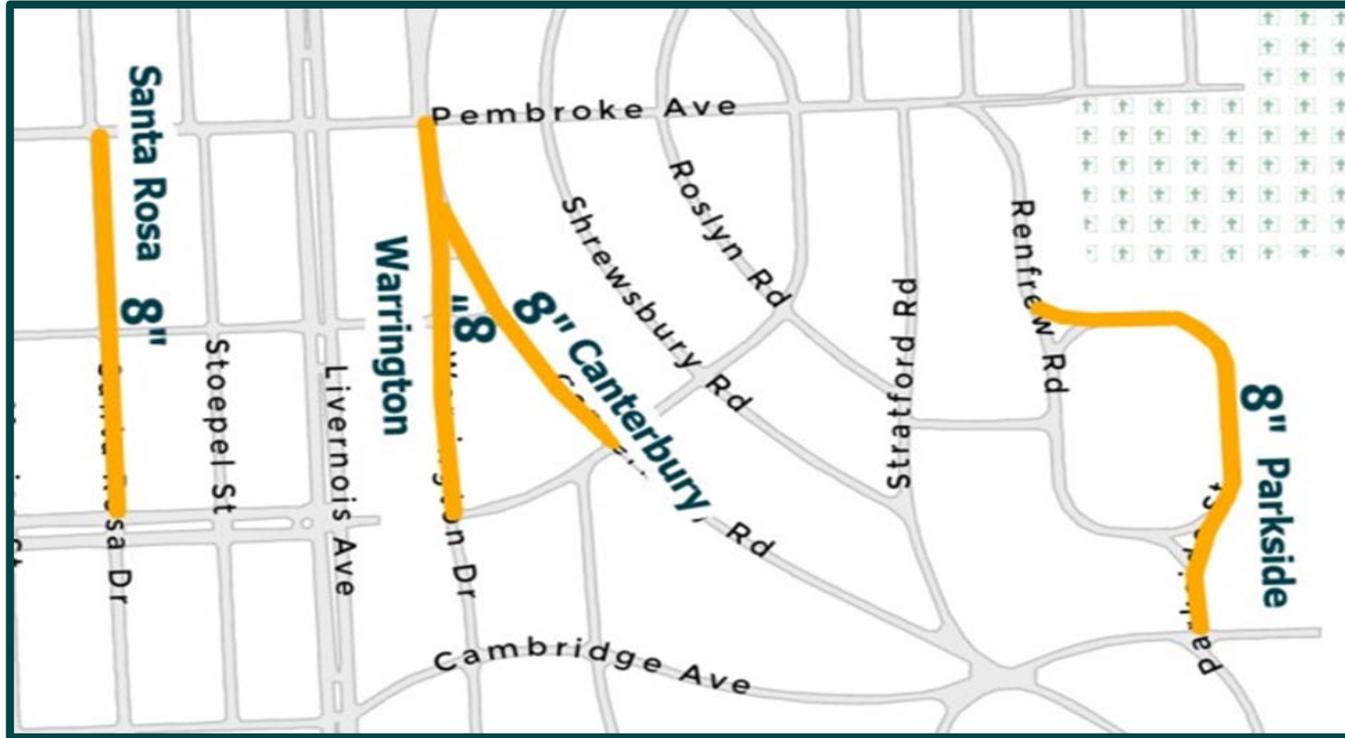
WS-742: Water Main Replacement and Rehabilitation, Districts 2 and 3

- DWSD proposes to develop a contract number WS-742 with a Project scope that includes **replacing and rehabilitating approximately 30,300 linear feet of vintage cast iron water main** of pipe size 6-inches through 12-inches in diameter.
 - Full Lead service line replacements (forecasted 475 lead services)
 - **Estimated cost: \$19.35 M**
- **Project Locations:** Greenwich, San Bernando, Pembroke, Sherwood Forest, McDowell, Oak Grove District 2, Hawthorne Park, and Conant Gardens.

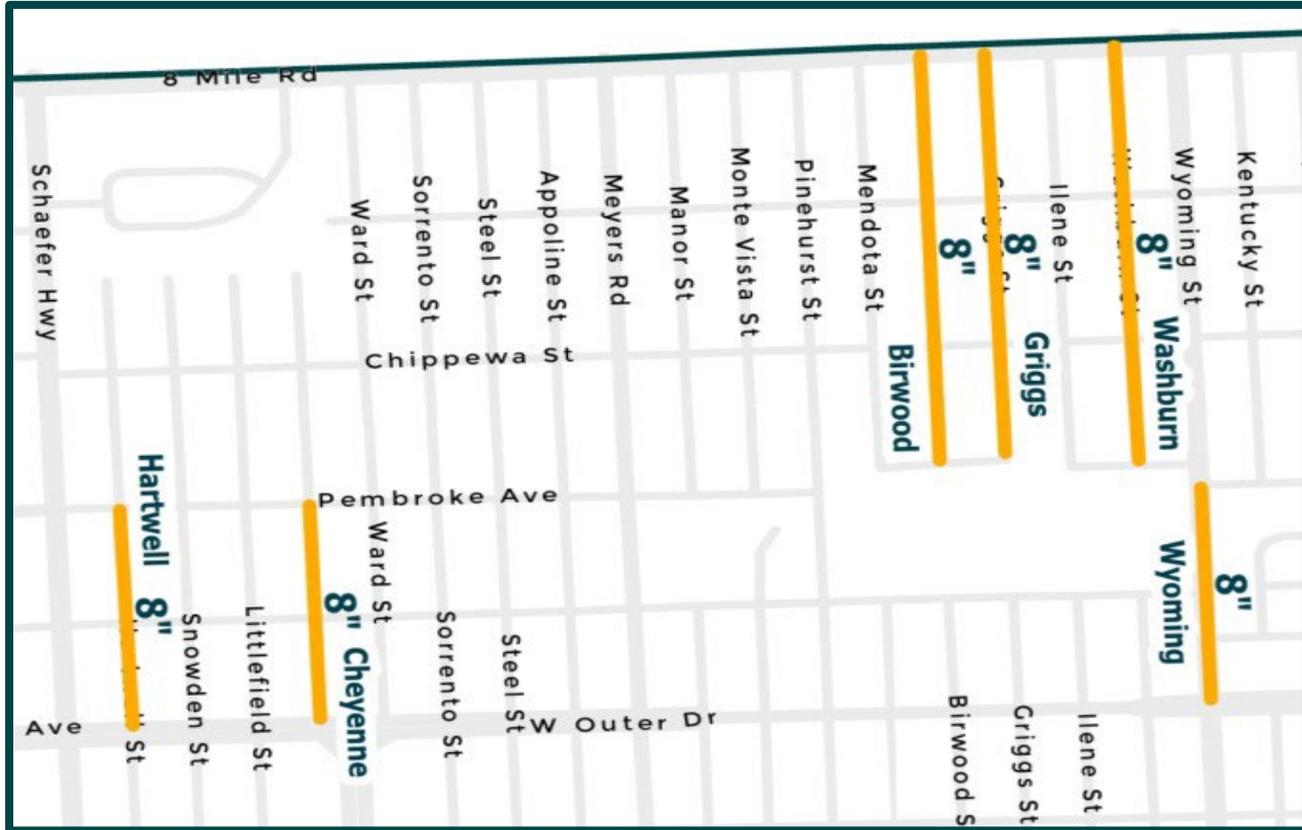
WS-742 Overview Map - Hawthorne Park and Conant Gardens



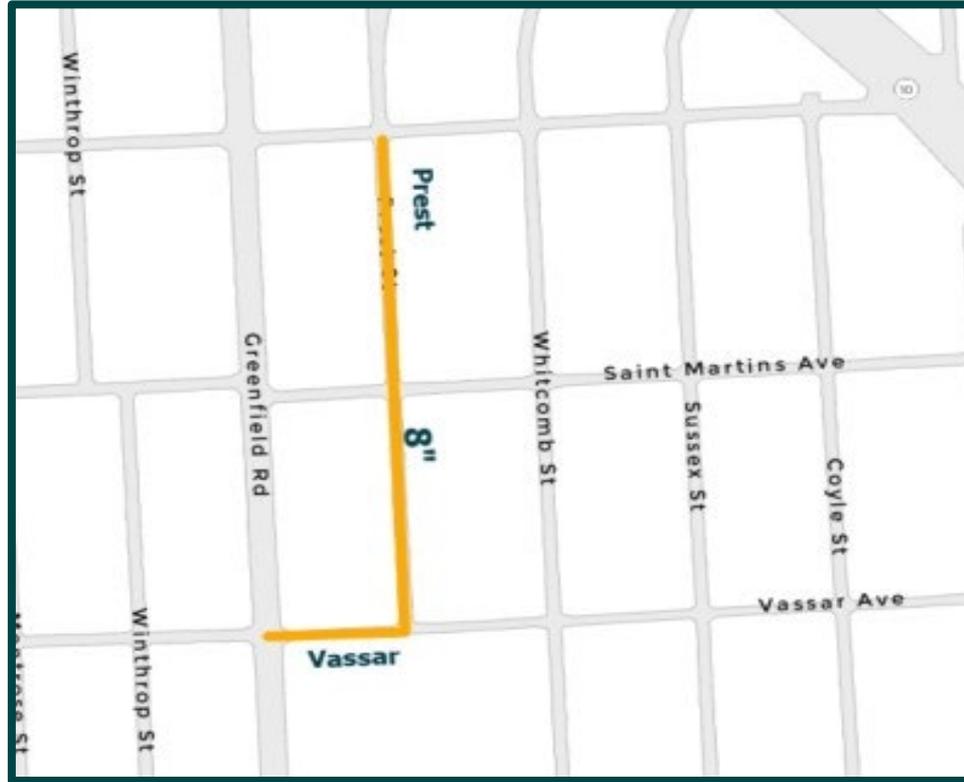
WS-742 Overview Map - Oak Grove and Sherwood Forest



WS-742 Overview Map – Greenwich, McDowell and Pembroke



WS-742 Overview Map – San Bernardo



Schedule

Project Plan, Design and Construction



DWSRF Project Plan Schedule

Draft Project Plan Public Meeting and Board Resolution

• March 20, 2024

GLWA Board Meeting and Board Resolution

• April 24, 2024

Final Project Plan Submitted to EGLE

• June 1, 2024

Bid Ad Published

• January 2025

Construction Begins

• April 2025

Full Board Approval Action

Resolution Approving the Project Planning Document

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

Thank You



313-267-8000



dwsd-publicaffairs@detroitmi.gov



www.detroitmi.gov/dwsd



Water & Sewerage
Department



**A RESOLUTION ADOPTING A FINAL PROJECT PLAN FOR THE DETROIT WATER AND
SEWERAGE DEPARTMENT FOR WATER SYSTEM IMPROVEMENTS FY25 DRINKING
WATER STATE REVOLVING FUND (DWSRF) PROJECT**

WHEREAS, Detroit Water and Sewerage Department (DWSD) and the Great Lakes Water Authority (GLWA) recognize the need to make improvements to its existing water distribution 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 Drinking Water State Revolving Fund (DWSRF) Project Plan, which recommends water main replacement and associated appurtenances, including removal of certain lead service lines, in the Evergreen-Outer Drive, Crary/St Marys, and Cadillac Community neighborhoods in the City of Detroit, further referenced as WS-741; and

WHEREAS, DWSD has prepared a Drinking Water State Revolving Fund (DWSRF) Project Plan, which recommends water main replacement and associated appurtenances, including removal of certain lead service lines, in the Conant Gardens, Greenwich, Hawthorne Park, Oak Grove, Pembroke and Sherwood Forest neighborhoods in the City of Detroit, further referenced as WS-742; and

WHEREAS, said Project Plan was presented at the public meeting held on - Wednesday, March 20, 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 water main and lead service line replacements 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 Drinking Water State Revolving Fund Loan to assist in the implementation of the selected alternative

Yeas (names of Members voting Yes): Commissioners: Michael Einheuser, Mary Blackmon, Lane Coleman, John Henry Davis, Linda Forte, Jane Garcia, Jonathan Kinloch

Nays (names of Members voting No):

I certify that the above Resolution was adopted by Great Lakes Water Authority and Detroit Water and Sewerage Department on March 20, 2024 .

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

Board Secretary
Title
3/21/2024
Date



Detroit Water and Sewerage Department Certified Copy

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

Resolution, BOWC: 2024-47

File Number: 2024-47

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 Water Main Replacement and Full Lead Service Line Replacement and Designating an Authorized Project Representative FY 2025 Drinking Water State Revolving Fund (DWSRF)”**. 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 March 20, 2024

Item No. 2024-47

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

FROM: Gary Brown, Director
Water and Sewerage Department

RE: Final Project Plan for Water Main Replacement and Full Lead Service Line Replacement and Designating an Authorized Project Representative FY 2025 Drinking Water State Revolving Fund (DWSRF)

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 Water Main Replacement and Full Lead Service Line Replacement and Designating an Authorized Project Representative FY 2025 Drinking Water State Revolving Fund (DWSRF)”** 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.

DETROIT WATER AND SEWERAGE DEPARTMENT NOTICE

PUBLIC MEETING FOR WATER MAIN REPLACEMENT

FY25 DRINKING WATER STATE REVOLVING FUND (DWSRF) PROJECT

The Detroit Water and Sewerage Department (DWSD) announces a Public Meeting regarding its Project Plan for proposed Water Main Replacement in the City of Detroit. DWSD is seeking low interest Drinking Water State Revolving Fund (DWSRF) loan assistance for FY2025. These projects are comprised of replacing aging water mains at select locations in the neighborhoods of Evergreen-Outer Drive, Crary/St Marys, and Cadillac Community of Council District 1, the Greenwich, San Bernardo, Pembroke, Sherwood Forest, McDowell, and Oak Grove of Council District 2, and the Hawthorne Park, Conant Gardens neighborhoods of Council Districts 2 and 3. The projects are respectively titled WS-741 (Project A) and WS-742 (Project B). Construction will include excavation of existing water mains, installation of new pipes, select rehabilitation of existing pipes, replacement valves and hydrants, replacement of lead (Pb) water service lines of two inches diameter or less to connect from the water main to the customer water meter, pressure testing, backfill of the excavation required for piping work, and restoration of each work site. All work to be performed within the existing road right-of-way. The impact of the project will be improved customer satisfaction and safe, reliable service delivery of potable water to customers. 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 will consistently and reliably provide high quality potable water to Detroit residents. The Project Plan describes water mains in critical need of replacement or rehabilitation. The total cost of this project is currently estimated at approximately \$19.5 million for Project A and \$19.5 million for Project B; a total of \$39 million which is being sought through the DWSRF program. The water main replacement/rehabilitation inclusive of lead water service line replacement work is eligible for participating under the State of Michigan low interest DWSRF loan program. The Public Meeting will present a description of the recommended projects, estimated costs, noting no potential impact for customers. The current rate structure and lease agreement payments will cover the cost. 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 BOARD OF WATER COMMISSIONERS MEETING ON:

DATE: Wednesday, March 20, 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

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 March 1, 2024 at the following locations:

1. City Website: detroitmi.gov/dwsd
2. By email request: 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: 313-782-2477
Email: 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, March 20, 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: April 29, 2024

To: Great Lakes Water Authority Audit Committee

From: David T. Slowik, Manager, Financial Planning & Analysis

Re: FY 2024 Second Quarter Budget Amendments through December 31, 2023, and Proposed Budget Amendment Resolution

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

Analysis: See attached report.

Proposed Action: The Audit Committee recommends that the Board of Directors for the Great Lakes Water Authority adopt the proposed budget resolution for the second quarter FY 2024 budget amendments.

..Title

Resolution to Approve the FY 2024 Second Quarter Budget Amendments

..Body

Agenda of: May 22, 2024

Item No.: **2024-121**

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: May 22, 2024

RE: Resolution to Approve the FY 2024 Second Quarter Budget Amendments

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), approves the **FY 2024 Second Quarter Budget Amendments as presented**; and authorizes the Chief Executive Officer to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

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

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

JUSTIFICATION

Attached is the communication to the Audit Committee, dated April 26, 2024, which presents the proposed budget amendment report for the second quarter of FY 2024. The report includes the following.

1. Quarterly Budget Amendment Report for FY 2024 ending December 31, 2023.
2. Resolution Adopting the Budget Amendments through the Second Quarter of FY 2024.

BUDGET IMPACT

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

COMMITTEE REVIEW

This matter was reviewed by the Audit Committee at its meeting on April 29, 2024. The Audit Committee [*insert action*] that the Board of Directors for the Great Lakes Water Authority adopt the proposed FY 2024 second quarter budget amendments.

SHARED SERVICES IMPACT

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



**FY 2024 Second Quarter
Budget Amendment Report
Through December 31, 2023
& Proposed Budget Amendment
Resolution**

Presented to the Audit Committee
April 29, 2024

Background: In accordance with the budget amendment policy, articles, and by-laws for the Great Lakes Water Authority, a quarterly budget amendment report is presented for review by the Audit Committee in addition to a corresponding budget amendment resolution.

Analysis: The budget amendment report is presented with a table followed by commentary in the following order.

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

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

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

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

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

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

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

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

5. Proposed Budget Amendment Resolution

* Denotes Supplemental information



Quarterly Budget Amendment Report
FY 2024 Ending December 31, 2023

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

Water System	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Revenues					
Suburban Wholesale Customer Charges	\$ 340,540,600	\$ (4,000,000)	\$ (811,000)	\$ 335,729,600	\$ 170,780,890
Less: Bad Debt Expense	-	-	-	-	-
Less: Pending Bad Debt Recovery Credit	-	-	(5,026,500)	(5,026,500)	-
Retail Service Charges	25,537,200	-	-	25,537,200	12,768,600
<i>Investment Earnings - Unrestricted</i>	<i>3,067,000</i>	<i>5,463,200</i>	<i>800,000</i>	<i>9,330,200</i>	<i>6,323,600</i>
<i>Investment Earnings - Restricted for Debt Service</i>	<i>994,700</i>	<i>2,536,800</i>	<i>1,200,000</i>	<i>4,731,500</i>	<i>2,218,300</i>
Investment Earnings	4,061,700	8,000,000	2,000,000	14,061,700	8,541,900
Other Revenues	175,000	265,000	418,200	858,200	613,100
Total Revenues	\$ 370,314,500	\$ 4,265,000	\$ (3,419,300)	\$ 371,160,200	\$ 192,704,490
Revenue Requirements					
Operations & Maintenance Expense	\$ 152,906,400	\$ 10,194,100	\$ 3,782,400	\$ 166,882,900	\$ 79,635,300
Debt Service	159,482,800	3,151,200	(397,900)	162,236,100	79,741,400
General Retirement System Pension	3,395,500	(1,890,000)	-	1,505,500	1,697,700
Extraordinary Repair & Replacement Deposit	-	-	-	-	-
Water Residential Assistance Program Contribution	1,851,600	-	-	1,851,600	925,800
Regional System Lease	22,500,000	-	-	22,500,000	11,250,000
Receiving Fund Working Capital Requirement	-	1,400,000	(1,400,000)	-	-
Improvement & Extension Fund Transfer Pending	30,178,200	(8,590,300)	(5,403,800)	16,184,100	13,861,900
Total Revenue Requirements	\$ 370,314,500	\$ 4,265,000	\$ (3,419,300)	\$ 371,160,200	\$ 187,112,100
Net Actual to Date	\$ -	\$ -	\$ -	\$ -	\$ 5,592,390



Water System – Revenues (Table 1A)

Net decrease to the Water System revenues of \$3.4 million

- *\$0.8 million wholesale revenue decrease* – Due to the impact of the City of Highland Park settlement on wholesale revenues related to FY 2024 activity.
- *\$5.0 million revenue decrease* – Due to the contingent funding for member partner bad debt recovery credits based on the framework of the settlement agreement between the City of Highland Park, the State of Michigan, and GLWA related to the water system [as approved by the Board of Directors on November 16, 2023 \(Action #2023-427\)](#) pending certain conditions precedent.
- *\$2.0 million revenue increase* – Investment earnings adjustment based on revised interest rates provided by the Authority’s investment manager.
- *\$0.4 million revenue increase* – Other earnings adjustment based on activity to date for energy rebates, radio tower lease payments received, scrap metal sales, grants (apprentice program and COVID-19), and other miscellaneous receipts. The source of revenue for this category fluctuates from year to year.

Water System – Revenue Requirements (Table 1A)

A. **Operations & Maintenance Expense** - Increase to the Water Operations & Maintenance (O&M) Expense of \$3.8 million (Table 1A). The primary drivers for this increase are as follows:

- *Utilities – \$1.2 million increase* – Primarily driven by current fiscal year increases in electricity charges (kWh) in the water plants of \$0.6 million, offset by the restructured natural gas contract with the State of Michigan. The additional \$0.6 million increase is due to electricity charges for pumping stations.
- *Personnel – \$0.9 million increase* – Driven by increase in filled positions and increased costs related to the accelerated timing of the Apprentice Program in Workforce Development.
- *Supplies and Other – \$0.8 million increase* – Related increased costs related to maintenance requirements for lift and pump repairs.
- *Contractual Services – \$0.7 million increase* – Primarily driven by the significant increase in phosphoric acid usage to comply with new Environmental Protection Agency (EPA) lead and copper regulations for mobile dredging.



This budget impact aligns with the new requirements outlined in the Corrosion Control Study Updates and Draft Recommendations presented to the Board of Directors on February 28, 2024 (Action Item # 2024-064).

- The remaining amount of \$0.1 million is due to other minor variances including general insurance premiums.
- B. **Debt Service** – Budget amendment is related to the timing impact of actual versus forecasted state revolving fund (SRF) loan draws.
- C. **General Retirement System Pension** – No amendment is required.
- D. **Extraordinary Repair & Replacement Deposit** - No amendment is required.
- E. **Water Residential Assistance Program Contribution** - No amendment is required.
- F. **Regional System Lease** – No amendment is required.
- G. **Receiving Fund Working Capital Requirement** – This amendment appropriately restores working capital reserve to zero based on actual and forecasted activity.
- H. **Improvement & Extension Fund Transfer Pending** – Represents annual funding for pay-as-you-go capital improvement program. The net effect of budget amendments to revenues, bad debt, investment earnings, and operations & maintenance expense affect this line item.



Quarterly Budget Amendment Report
FY 2024 Ending December 31, 2023

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

Sewer System	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Revenues					
Suburban Wholesale Customer Charges	\$ 282,687,600	\$ -	\$ 191,000	\$ 282,878,600	\$ 140,600,900
Less: Bad Debt Expense	-	-	-	-	-
Less: Pending Bad Debt Recovery Credit	-	-	(15,000,000)	(15,000,000)	-
Retail Service Charges	196,569,600	-	-	196,569,600	98,284,800
Industrial Waste Control Charges	8,584,200	-	(24,000)	8,560,200	4,361,100
Pollutant Surcharges	5,328,300	-	-	5,328,300	2,163,800
<i>Investment Earnings - Unrestricted</i>	<i>5,567,000</i>	<i>7,832,700</i>	<i>-</i>	<i>13,399,700</i>	<i>8,095,200</i>
<i>Investment Earnings - Restricted for Debt Service</i>	<i>1,490,300</i>	<i>1,167,300</i>	<i>1,000,000</i>	<i>3,657,600</i>	<i>2,866,400</i>
Investment Earnings	7,057,300	9,000,000	1,000,000	17,057,300	10,961,600
Other Revenues	400,000	317,000	301,000	1,018,000	520,600
Total Revenues	\$ 500,627,000	\$ 9,317,000	\$ (13,532,000)	\$ 496,412,000	\$ 256,892,800
Revenue Requirements					
Operations & Maintenance Expense	\$ 205,643,700	\$ 14,484,700	\$ 1,897,100	\$ 222,025,500	\$ 102,771,700
Debt Service	228,328,300	3,453,300	(806,100)	230,975,500	114,164,100
General Retirement System Pension	6,479,300	(3,382,500)	-	3,096,800	3,239,700
Extraordinary Repair & Replacement Deposit	-	-	-	-	-
Water Residential Assistance Program Contribution	2,503,100	-	-	2,503,100	1,251,600
Regional System Lease	27,500,000	-	-	27,500,000	13,750,000
Improvement & Extension Fund Transfer Pending	30,172,600	(5,238,500)	(14,623,000)	10,311,100	14,337,900
Total Revenue Requirements	\$ 500,627,000	\$ 9,317,000	\$ (13,532,000)	\$ 496,412,000	\$ 249,515,000
Net Actual to Date	\$ -	\$ -	\$ -	\$ -	\$ 7,377,800



Sewer System – Revenues (Table 1B)

Net decrease to Sewer System revenues of \$13.5 million (Table 1B)

- *\$0.2 million wholesale revenue increase* – Due to the impact of the City of Highland Park settlement on wholesale revenues related to FY 2024 activity.
- *\$15.0 million revenue decrease* – Due to the contingent funding for member partner bad debt recovery credits based on the framework of the settlement agreement between the City of Highland Park, the State of Michigan, and GLWA related to the water system [as approved by the Board of Directors on November 16, 2023 \(Action #2023-427\)](#) pending certain conditions precedent.
- *\$1.0 million revenue increase* – Investment earnings adjustment based on revised interest rates provided by the Authority’s investment manager.
- *\$0.3 million revenue increase* – Other earnings adjustment based on activity to date for septic tank disposal fees, energy rebates, fire remediation insurance proceeds, scrap metal sales, grants (COVID-19), and other miscellaneous receipts. The source of revenue for this category fluctuates from year to year.

Sewer System – Revenue Requirements (Table 1B)

- A. **Operations & Maintenance Expense** - Increase to the Sewer Operations & Maintenance Expense of \$1.9 million. The primary drivers for this increase are as follows:
 - One-time incinerator rebuild cost in the amount of \$1.5M for Incinerator #11 in Wastewater Incineration Process department.
 - The remaining amount of \$0.4 million is due to other minor variances including general insurance premiums.
- B. **Debt Service** – Budget amendment is related to the timing impact of actual versus forecasted state revolving fund (SRF) loan draws.
- C. **General Retirement System Pension** – No amendment is required.
- D. **Extraordinary Repair & Replacement Deposit** - No amendment is required.
- E. **Water Residential Assistance Program Contribution** - No amendment is required.
- F. **Regional System Lease** – No amendment is required.



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G. Improvement & Extension Fund Transfer Pending – Represents annual funding for pay-as-you-go capital improvement program. The net effect of budget amendments to revenues, bad debt, investment earnings, and operations & maintenance expense affect this line item.

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

System	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Water System	\$ 152,906,400	\$ 10,194,100	\$ 3,782,400	\$ 166,882,900	\$ 79,635,300
Sewer System	205,643,700	14,484,700	1,897,100	222,025,500	102,771,700
Total	\$ 358,550,100	\$ 24,678,800	\$ 5,679,500	\$ 388,908,400	\$ 182,407,000

Totals may be off slightly due to rounding.

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



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

O&M Major Budget Categories (Core Groups)	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
A Water System Operations	\$ 82,732,800	\$ 5,005,400	\$ 3,025,400	\$ 90,763,600	\$ 42,683,500
B Wastewater System Operations	132,934,300	8,721,500	2,692,800	144,348,600	68,649,700
C Centralized Services	106,900,500	9,636,900	(602,200)	115,935,200	53,141,900
D Administrative & Other Services	35,982,500	1,315,000	563,500	37,861,000	17,931,900
Total	\$ 358,550,100	\$ 24,678,800	\$ 5,679,500	\$ 388,908,400	\$ 182,407,000

Totals may be off slightly due to rounding.

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

Through the second quarter FY 2024, the following amendments are being proposed (details can be found along with the discussion for Tables 1A and 1B).

- Category A - Water System Operations - The Water O&M budget is being increased an additional \$3.0 million to cover the cost increases projected for FY 2024.
- Category B - Wastewater System Operations - The Sewer O&M budget is being increased \$2.7 million to cover the cost increases projected for FY 2024.



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- Category C - Centralized Services - The Centralized Services O&M budget is being decreased by \$0.6 million in various categories to cover the cost increases related to Water and Wastewater System Operations and Administrative & Other Services. The costs in this category are allocated to the water and sewer systems.
- Category D - Administrative & Other Services - The Administrative & Other Services O&M budget is being increased \$0.6 million to cover the cost increases projected for FY 2024. The costs in this category are allocated to the water and sewer systems.

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

O&M Expense Categories (Account Type)	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Personnel Costs	\$ 120,887,100	\$ 285,000	\$ 1,834,800	\$ 123,006,900	\$ 62,435,800
Utilities	63,395,200	8,220,300	(426,100)	71,189,400	35,677,000
Chemicals	30,451,800	2,656,800	(1,148,300)	31,960,300	13,912,800
Supplies & Other	34,019,500	8,642,500	3,344,300	46,006,300	17,709,400
Contractual Services	106,889,200	4,874,200	2,154,300	113,917,700	55,054,900
Capital Program Allocation	(4,232,700)	-	471,600	(3,761,100)	(1,185,200)
Shared Services	(1,655,800)	-	(551,100)	(2,206,900)	(1,197,700)
Unallocated Reserve	8,795,800	-	-	8,795,800	-
Total	\$ 358,550,100	\$ 24,678,800	\$ 5,679,500	\$ 388,908,400	\$ 182,407,000

Totals may be off slightly due to rounding.

The table above presents the Operations & Maintenance budget by the major expense categories (account type) to further identify the O&M expense categories that are impacted by budget amendments.



Quarterly Budget Amendment Report
FY 2024 Ending December 31, 2023

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

	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget
O&M Unallocated Reserves				
Water System Operations	\$ 3,331,400	\$ 9,900	\$ -	\$ 3,341,300
Wastewater System Operations	3,089,900	(9,900)	-	3,080,000
Centralized Services	1,722,200	-	-	1,722,200
Administrative & Other Services	652,300	-	-	652,300
Total	\$ 8,795,800	\$ -	\$ -	\$ 8,795,800

Totals may be off slightly due to rounding.

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



Quarterly Budget Amendment Report
FY 2024 Ending December 31, 2023

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

Water System - Debt Service Coverage Calculation	1st Quarter		1Q		2nd Quarter		2Q		FY 2024 Amended Budget
	FY 2024 Adopted Budget	FY 2024 Amendments Regional System	1st Quarter FY 2024 Amendments Local System	Adjustment to Local System Budget	FY 2024 Amendments Regional System	2nd Quarter FY 2024 Amendments Local System	Adjustment to Local System Budget	FY 2024 Amended Budget	
Revenues									
1 Regional System Wholesale Revenues	\$ 366,077,800	\$ (4,000,000)	\$ -	\$ -	\$ 362,077,800	\$ (5,837,500)	\$ -	\$ -	\$ 356,240,300
2 Local System Revenues	89,140,400	-	-	-	89,140,400	-	-	-	89,140,400
3 Miscellaneous Revenue (Local System)	4,210,000	-	-	-	4,210,000	-	-	-	4,210,000
4 Non-Operating Revenue (Regional System)	4,236,700	8,265,000	-	-	12,501,700	2,418,200	-	-	14,919,900
5 Total Revenues	\$ 463,664,900	\$ 4,265,000	\$ -	\$ -	\$ 467,929,900	\$ (3,419,300)	\$ -	\$ -	\$ 464,510,600
Revenue Requirements									
Operations & Maintenance Expense									
6 Regional System Wholesale Expenses	\$ 152,906,400	\$ 10,194,100	\$ -	\$ -	\$ 163,100,500	\$ 3,782,400	\$ -	\$ -	\$ 166,882,900
7 Local System Expenses	44,756,000	-	-	-	44,756,000	-	-	-	44,756,000
8 GRS Pension allocable to Regional System	-	-	-	-	-	-	-	-	-
9 GRS Pension allocable to Local System	-	-	-	-	-	-	-	-	-
10 Total Operations & Maintenance Expense	197,662,400	10,194,100	-	-	207,856,500	3,782,400	-	-	211,638,900
11 Net Revenues after Operations & Maintenance Expense	\$ 266,002,500	\$ (5,929,100)	\$ -	\$ -	\$ 260,073,400	\$ (7,201,700)	\$ -	\$ -	\$ 252,871,700
Debt Service by Lien									
12 Senior Lien Bonds	\$ 136,224,100	\$ 3,653,400	\$ -	\$ -	\$ 139,877,500	\$ -	\$ -	\$ -	\$ 139,877,500
13 Second Lien Bonds	51,754,500	-	-	-	51,754,500	-	-	-	51,754,500
14 SRF Junior Lien Bonds	16,469,500	(502,200)	-	169,300	16,136,600	(397,900)	-	(63,900)	15,674,800
15 Total Debt Service	\$ 204,448,100	\$ 3,151,200	\$ -	\$ 169,300	\$ 207,768,600	\$ (397,900)	\$ -	\$ (63,900)	\$ 207,306,800
Debt Service Coverage									
16 Senior Lien Bonds (11)/(12)	1.95	(0.09)	0.00	0.00	1.86	(0.05)	0.00	0.00	1.81
17 Second Lien Bonds (11)/[(12)+(13)]	1.42	(0.06)	0.00	0.00	1.36	(0.04)	0.00	0.00	1.32
18 SRF Junior Lien Bonds (11)/(15)	1.30	(0.05)	0.00	0.00	1.25	(0.03)	0.00	0.00	1.22

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget. The approved GLWA budget was based on preliminary DWSD budget information.

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

**Table 2A - Appropriation Level – Debt Service – Water System Debt Service Coverage Calculation Budget Amendment Explanation**

For purposes of Debt Service coverage, the combined Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense is calculated to determine net revenues to for Debt Service Coverage. The Board adopts the Debt Service amount shown on line 15 of the Water System Debt Service Coverage Calculation table on the previous page. This is the amount necessary to pay the principal and interest on all Regional Water System bonds and to restore any reserves therefore established in the Master Bond Ordinance.



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

Sewer System - Debt Service Coverage Calculation	1st Quarter FY 2024		1Q Adjustment to Local System		FY 2024 Amended Budget		2nd Quarter FY 2024		2Q Adjustment to Local System		FY 2024 Amended Budget	
	Adopted Budget	Amendments Regional System	Amendments Local System	Budget	Budget	Amendments Regional System	Amendments Local System	Budget	Budget			
Revenues												
1 Regional System Wholesale Revenues	\$ 493,169,700	\$ -	\$ -	\$ -	\$ 493,169,700	\$ (14,833,000)	\$ -	\$ -	\$ -	\$ 478,336,700		
2 Local System Revenues	83,940,300	-	-	-	83,940,300	-	-	-	-	83,940,300		
3 Miscellaneous Revenue (Local System)	8,500,000	-	-	-	8,500,000	-	-	-	-	8,500,000		
4 Non-Operating Revenue (Regional System)	7,457,300	9,317,000	-	-	16,774,300	1,301,000	-	-	-	18,075,300		
5 Total Revenues	\$ 593,067,300	\$ 9,317,000	\$ -	\$ -	\$ 602,384,300	\$ (13,532,000)	\$ -	\$ -	\$ -	\$ 588,852,300		
Revenue Requirements												
Operations & Maintenance Expense												
6 Regional System Wholesale Expenses	\$ 205,643,700	\$ 14,484,700	\$ -	\$ -	\$ 220,128,400	\$ 1,897,100	\$ -	\$ -	\$ -	\$ 222,025,500		
7 Local System Expenses	55,655,400	-	-	-	55,655,400	-	-	-	-	55,655,400		
8 GRS Pension allocable to Regional System	-	-	-	-	-	-	-	-	-	-		
9 GRS Pension allocable to Local System	-	-	-	-	-	-	-	-	-	-		
10 Total Operations & Maintenance Expense	261,299,100	14,484,700	-	-	275,783,800	1,897,100	-	-	-	277,680,900		
11 Net Revenues after Operations & Maintenance Expense	\$ 331,768,200	\$ (5,167,700)	\$ -	\$ -	\$ 326,600,500	\$ (15,429,100)	\$ -	\$ -	\$ -	\$ 311,171,400		
Debt Service by Lien												
12 Senior Lien Bonds	\$ 155,429,200	\$ 3,510,900	\$ -	\$ -	\$ 158,940,100	\$ -	\$ -	\$ -	\$ -	\$ 158,940,100		
13 Second Lien Bonds	53,273,500	106,600	-	-	53,380,100	-	-	-	-	53,380,100		
14 SRF Junior Lien Bonds	51,847,200	(164,200)	-	(48,600)	51,634,400	(806,100)	-	(59,500)	(59,500)	50,828,300		
15 Total Debt Service	\$ 260,549,900	\$ 3,453,300	\$ -	\$ (48,600)	\$ 263,954,600	\$ (806,100)	\$ -	\$ (59,500)	\$ (59,500)	\$ 263,148,500		
Debt Service Coverage												
16 Senior Lien Bonds (11)/(12)	2.13	(0.08)	0.00	0.00	2.05	(0.10)	0.00	0.00	0.00	1.96		
17 Second Lien Bonds (11)/[(12)+(13)]	1.59	(0.05)	0.00	0.00	1.54	(0.07)	0.00	0.00	0.00	1.47		
18 SRF Junior Lien Bonds (11)/(15)	1.27	(0.04)	0.00	0.00	1.24	(0.05)	0.00	0.00	0.00	1.18		

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget. The approved GLWA budget was based on preliminary DWSD budget information.

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

**Table 2B - Appropriation Level - Debt Service - Sewer System Debt Service Coverage Calculation Budget Amendment Explanation**

For purposes of Debt Service coverage, the combined Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense is calculated to determine net revenues to for Debt Service Coverage. The Board adopts the Debt Service amount shown on line 15 of the Sewer System Debt Service Coverage Calculation table on the previous page. This is the amount necessary to pay the principal and interest on all Regional Sewer System bonds and to restore any reserves therefore established in the Master Bond Ordinance.



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

Water Improvement & Extension Fund	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Inflows					
Water System Transfers In from General Operating	\$ 30,178,200	\$ (8,590,300)	\$ (5,403,800)	\$ 16,184,100	\$ 13,861,900
Earnings on Investments (a)	1,694,800	510,400	860,000	3,065,200	3,624,600
Net Use (Increase) of Reserves	(10,926,100)	26,139,300	(16,568,100)	(1,354,900)	-
Total Inflows	\$ 20,946,900	\$ 18,059,400	\$ (21,111,900)	\$ 17,894,400	\$ 17,486,500
Outflows					
Water System Revenue Transfers Out (a)	\$ 1,694,800	\$ 510,400	\$ 860,000	\$ 3,065,200	\$ 2,797,600
Capital Spending - Other	-	-	-	-	1,690,200
Capital Outlay	11,539,100	(3,488,000)	2,278,100	10,329,200	3,945,200
Revenue Financed Capital - Transfer to/(from) Construction Fund	7,713,000	21,037,000	(24,250,000)	4,500,000	-
Total Outflows	\$ 20,946,900	\$ 18,059,400	\$ (21,111,900)	\$ 17,894,400	\$ 8,433,000

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



Table 3A - Appropriation Level – Improvement & Extension Fund – Water System Budget Amendment Explanation

Revenues/Inflows

- A. **Transfers In from General Operating** - The proposed budget amendment is to match the amount available for transfer from the FY 2024 revenue requirement based upon general operating fund performance. (see I&E Fund Transfer Pending line on the Appropriation Level-Revenue Requirement-Water System General Operating table).
- B. **Earnings on Investments** - The increase is based on the revised interest rates. Note: There is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. The net effect on the I&E Fund is zero as the earnings are budgeted and accounted for in the operating fund to lower revenue requirement for charges.
- C. **Net Use (Increase) of Reserves** - This amount represents the net amount of revenues less expenses. A negative amount represents an increase in reserves from current year activity rather than a use of reserves.

Expenditures/Outflows

- A. **Water System Revenue Transfers Out (Earnings on Investments)** - The increase is based on the revised interest rates. Note: This line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. Any variance in activity between the two lines represents a timing difference.
- B. **Capital Spending – Other** - No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing as well as other unique, nonrecurring projects/purchases for the betterment of the system. Note that the amount in the actual column at December 31, 2023 was reclassified to a more appropriate category in February 2024.
- C. **Capital Outlay** - The proposed budget amendment reflects an increase in spending of \$2.2 million due to power supply upgrades and the ovation system project.
- D. **Revenue Financed Capital** – Transfer to/(from) Construction Fund - The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for Capital Projects.



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

Sewer Improvement & Extension Fund	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Inflows					
Sewer System Transfers In from General Operating	\$ 30,172,600	\$ (5,238,500)	\$ (14,623,000)	\$ 10,311,100	\$ 14,337,900
Sewer System Transfers In from Construction Fund	-	-	12,775,200	12,775,200	-
Earnings on Investments (a)	2,133,000	2,426,700	1,870,700	6,430,400	3,412,400
Net Use (Increase) of Reserves	(15,202,100)	40,795,300	(35,025,900)	(9,432,700)	-
Total Inflows	\$ 17,103,500	\$ 37,983,500	\$ (35,003,000)	\$ 20,084,000	\$ 17,750,300
Outflows					
Sewer System Revenue Transfers Out (a)	\$ 2,133,000	\$ 2,426,700	\$ 1,870,700	\$ 6,430,400	\$ 3,232,000
Capital Spending - Other	-	-	-	-	2,717,300
Capital Outlay	14,970,500	(3,443,200)	1,126,300	12,653,600	3,142,400
Revenue Financed Capital - Transfer to/(from) Construction Fund	-	39,000,000	(38,000,000)	1,000,000	-
Total Outflows	\$ 17,103,500	\$ 37,983,500	\$ (35,003,000)	\$ 20,084,000	\$ 9,091,700

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

**Table 3B - Appropriation Level – Improvement & Extension Fund – Sewer System Budget Amendment Explanations****Revenues/Inflows**

- A. Transfers In from General Operating - The proposed budget amendment is to match the amount available for transfer from the FY 2024 revenue requirement based upon general operating fund performance. (see I&E Fund Transfer Pending line on the Appropriation Level-Revenue Requirement-Sewer System General Operating table).
- B. Transfers in from Construction Fund – The proposed budget amendment is the portion of the \$25 million PA 53 ARPA grant for capital project expenditures that were paid with I&E funds.
- C. Earnings on Investments - The increase is based on the revised interest rates. Note: There is a corresponding transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. The net effect on the I&E Fund is zero as the earnings are budgeted and accounted for in the operating fund to lower revenue requirement for charges.
- D. Net Use (Increase) of Reserves - This amount represents the net amount of revenues less expenditures. A negative amount represents an increase in reserves from current year activity rather than a use of reserves.

Expenditures/Outflows

- A. Sewer System Revenue Transfers Out (Earnings on Investments) - The increase is based on the revised interest rates. Note that this line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as allowed by the Master Bond Ordinance. Any variance in activity between the two lines represents a timing difference.
- B. Capital Spending – Other - No budget amendment is required. This line represents an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing as well as other unique, nonrecurring projects/purchases for the betterment of the system. Note that the amount in the actual column at December 31, 2023 was reclassified to a more appropriate category in February 2024.
- C. Capital Outlay - The proposed budget amendment reflects an increase in spending of \$1.2 million primarily due to flow meter replacements for circular primary clarifiers within the wastewater primary process.



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D. Revenue Financed Capital – Transfer to/(from) Construction Fund - The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for Capital Projects.

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

Water Construction Fund	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Inflows					
Transfer (to)/from Improvement & Extension Fund	\$ 7,713,000	\$ 21,037,000	\$ (24,250,000)	\$ 4,500,000	\$ -
Bond Proceeds	-	150,000,000	-	150,000,000	150,570,000
Bond Fund Earnings on Investments	1,864,700	3,500,000	1,500,000	6,864,700	3,312,000
Grant Revenues (SRF Loans)	97,102,000	(34,297,000)	(497,900)	62,307,100	22,894,300
Grant Revenues	-	-	5,000,000	5,000,000	-
Net Use (Increase) of Reserves	132,580,300	(154,500,000)	(16,752,100)	(38,671,800)	-
Total Inflows	\$ 239,260,000	\$ (14,260,000)	\$ (35,000,000)	\$ 190,000,000	\$ 176,776,300
Outflows					
Transfer Out	\$ -	\$ -	\$ -	\$ -	\$ 206,000
Capital Improvement Plan (a)	239,260,000	-	-	239,260,000	83,098,900
Capital Spend Rate Adjustment	-	(14,260,000)	(35,000,000)	(49,260,000)	-
Total Outflows (a)	\$ 239,260,000	\$ (14,260,000)	\$ (35,000,000)	\$ 190,000,000	\$ 83,304,900
<i>Capital Spending Ratio</i>	<i>100.0%</i>	<i>94.0%</i>	<i>79.4%</i>	<i>79.4%</i>	

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

**Appropriation Level – Construction Fund – Water System Budget Amendment Explanations****Revenues/Inflows**

- A. Transfers (to)/from Improvement & Extension Fund - The proposed budget amendment is to match the amount available for transfer to the FY 2024 Improvement & Extension Fund (see Revenue Financed Capital-Operating Transfer to/from Construction Fund line on the Appropriation Level-Improvement & Extension Fund-Water System table). The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for Capital Projects.
- B. Bond Proceeds - Bond Proceeds - No budget amendment is proposed at this time – a final analysis is being prepared for the November 2023 transaction that closed in December 2023. An amendment will be needed for FY 2024 Q3 based on settlement of final cost of issuance expenses.
- C. Earnings on Investments - The proposed budget amendment reflects an adjustment based on the revised interest rates provided by the Authority’s investment advisor.
- D. Grant Revenues - (State Revolving Fund Loans) - State Revolving Fund (SRF) loan disbursements are on a reimbursement basis. The amount and timing of revenues fluctuates with project expenditures incurred. The proposed amendment reflects the timing of project design and construction activity.
- E. Grant Revenues – Other – The proposed budget is for an anticipated \$5 million PA53 ARPA grant from the State of Michigan.
- F. Net Use (increase) of Reserves - This amount represents the net amount of revenues less expenditures. A “use of reserves” indicates a spend down of prior year reserves. The amount has been amended to reflect the anticipated decrease in the Capital spend rate from 94.0% to 79.4% as well as the changes in revenues from Bond proceeds, SRF loans, and transfer (to)/from the I&E fund.



Expenditures/Outflows

- A. Transfers Out – The actual amount is the cost of issuance expenses that were paid on the 2023 bond issue. - No budget amendment is proposed at this time – a final analysis is being prepared for the November 2023 transaction that closed in December 2023. An amendment will be needed for FY 2024 Q3 based on settlement of final cost of issuance expenses.
- B. Capital Improvement Plan - This line represents an adjustment to the Capital Spend Ratio for the Water Capital Improvement Plan which is forecasted to decrease from 94.0% to 79.4%. This adjustment is based on a review of the spend projections for FY 2024 and discussions with project personnel.
- C. Capital Spend Rate Adjustment (CSRA) - T The CSRA 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. 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. For FY 2024 that rate was 100%. Amendments to the spend rate assumption are made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The proposed budget amendment represents the decrease in the projected Capital Spend Rate for the Sewer CIP from 94.0% to 79.4%.



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

Sewer Construction Fund	FY 2024 Board Adopted Budget	Total 1st Quarter FY 2024 Amendments	Total 2nd Quarter FY 2024 Amendments	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023
Inflows					
Transfer (to)/from Improvement & Extension Fund	\$ -	\$ 39,000,000	\$ (38,000,000)	\$ 1,000,000	\$ -
Bond Proceeds	-	100,000,000	-	100,000,000	100,315,500
Bond Fund Earnings on Investments	2,365,600	4,500,000	1,750,000	8,615,600	4,151,000
Grant Revenues (SRF Loans)	47,253,000	7,423,000	(5,251,500)	49,424,500	15,112,200
Grant Revenues			25,000,000	25,000,000	
Net Use (Increase) of Reserves	149,442,400	(184,984,000)	4,276,700	(31,264,900)	-
Total Inflows	\$ 199,061,000	\$ (34,061,000)	\$ (12,224,800)	\$ 152,775,200	\$ 119,578,700
Outflows					
Transfer Out	\$ -	\$ -	\$ 12,775,200	\$ 12,775,200	\$ 129,200
Capital Improvement Plan (a)	199,061,000	-	-	199,061,000	57,082,200
Capital Spend Rate Adjustment	-	(34,061,000)	(25,000,000)	(59,061,000)	-
Total Outflows (a)	\$ 199,061,000	\$ (34,061,000)	\$ (12,224,800)	\$ 152,775,200	\$ 57,211,400
<i>Capital Spending Ratio</i>	100.0%	82.9%	76.7%	76.7%	

(a) The Capital Improvement Plan (CIP) amount shown agrees with the amount adopted by the Board of Directors for FY 2024 for the five-year CIP.

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

**Appropriation Level – Construction Fund – Sewer System Budget Amendment Explanations****Revenues/Inflows**

- A. Transfers (to)/from Improvement & Extension Fund - The proposed budget amendment is to match the amount available for transfer from the FY 2024 Improvement & Extension Fund (see Revenue Financed Capital-Operating Transfer to/from Construction Fund line on the Appropriation Level-Improvement & Extension Fund-Sewer System table). The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for Capital Projects.
- B. Bond Proceeds - No budget amendment is proposed at this time – a final analysis is being prepared for the November 2023 transaction that closed in December 2023. An amendment will be needed for FY 2024 Q3 based on settlement of final cost of issuance expenses.
- C. Bond Fund Earnings on Investments - The proposed budget amendment reflects an adjustment based on the revised interest rates provided by the Authority's investment advisor for these restricted assets.
- D. Grant Revenues (State Revolving Fund Loans) - State Revolving Fund (SRF) loan disbursements are on a reimbursement basis. The amount and timing of funds fluctuates with project expenditures incurred. The proposed amendment reflects the timing of project design and construction activity.
- E. Grant Revenues - The proposed budget is for the \$25 million PA53 American Rescue Plan Act) (ARPA) grant received in February 2024 from the State of Michigan to support capital program activities.
- F. Net Use (Increase) of Reserves - This amount represents the net amount of revenues less expenditures. A “use of reserves” indicates a spend down of prior year reserves. The amount has been amended to reflect the anticipated decrease in the capital spend rate offset by bond proceeds.

Expenditures/Inflows

- A. Transfers Out (to the I&E Fund)- The proposed budget amendment is the portion of the \$25 million PA 53 ARPA grant for project expenditures that were paid with I&E funds.
- B. Capital Improvement Plan – The Capital Improvement Plan (CIP) amount shown agrees with the amount adopted by the Board of Directors for FY 2024 for the five-year CIP. There is no change to this line.
- C. Capital Spend Rate Adjustment (CSRA) - T The CSRA 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



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reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established. 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. For FY 2024 that rate was 100%. Amendments to the spend rate assumption are made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The proposed budget amendment represents the decrease in the projected Capital Spend Rate for the Sewer CIP from 82.9% to 76.7%.

Great Lakes Water Authority

Resolution 2024-121

Resolution Adopting the Budget Amendments through the Second Quarter of FY 2024

By Board Member:

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

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

WHEREAS The GLWA Board adopted the FY 2024 budget on February 22, 2023, for the twelve-month fiscal year beginning July 1, 2023;

WHEREAS Following a review of the budget amendment report through the FY 2024 Second Quarter, the appropriations established with the adoption of the general operating budget for the water system and the sewer system are amended as shown in the table below;

General Operating Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Revenues				
Suburban Wholesale Customer Charges	\$ 340,540,600	\$ 335,729,600	\$ 282,687,600	\$ 282,878,600
Less: Bad Debt	-	No Change	-	No Change
Less: Pending Bad Debt Recovery Credit	-	(5,026,500)	-	(15,000,000)
Retail Service Charges	25,537,200	25,537,200	196,569,600	196,569,600
Industrial Waste Control Charges	-	No Change	8,584,200	8,560,200
Pollutant Surcharges	-	No Change	5,328,300	No Change
<i>Investment Earnings - Unrestricted</i>	<i>3,067,000</i>	<i>9,330,200</i>	<i>5,567,000</i>	<i>13,399,700</i>
Investment Earnings - Restricted for Debt Service	<u>994,700</u>	<u>4,731,500</u>	<u>1,490,300</u>	<u>3,657,600</u>
Investment Earnings	4,061,700	14,061,700	7,057,300	17,057,300
Other Revenues	175,000	858,200	400,000	1,018,000
Total Revenues	<u>\$ 370,314,500</u>	<u>\$ 371,160,200</u>	<u>\$ 500,627,000</u>	<u>\$ 496,412,000</u>
Revenue Requirements				
Operations & Maintenance Expense	\$ 152,906,400	\$ 166,882,900	\$ 205,643,700	\$ 222,025,500
Debt Service	159,482,800	162,236,100	228,328,300	230,975,500
General Retirement System Pension	3,395,500	1,505,500	6,479,300	3,096,800
Extraordinary Repair & Replacement Deposit	-	No Change	-	No Change
Water Residential Assistance Program Contribution	1,851,600	No Change	2,503,100	No Change
Regional System Lease	22,500,000	No Change	27,500,000	No Change
Operating Reserve Deposit	-	No Change	-	No Change
Receiving Fund Working Capital Requirement	-	No Change	-	No Change
Improvement & Extension Fund Transfer	<u>30,178,200</u>	<u>16,184,100</u>	<u>30,172,600</u>	<u>10,311,100</u>
Total Revenue Requirements	<u>\$ 370,314,500</u>	<u>\$ 371,160,200</u>	<u>\$ 500,627,000</u>	<u>\$ 496,412,000</u>

WHEREAS Following a review of the budget amendment report through the FY 2024 Second Quarter, the appropriations established with the adoption of the amounts necessary to pay the principal of and interest on all Regional bonds and to restore any reserves therefore established in the Master Bond Ordinance for the water system and the sewer system are amended as shown in the table below;

Debt Service Coverage Calculation				
Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Debt Service by Lien				
Senior Lien Bonds	\$ 136,224,100	\$ 139,877,500	\$ 155,429,200	\$ 158,940,100
Second Lien Bonds	51,754,500	No Change	53,273,500	53,380,100
SRF Junior Lien Bonds	16,469,500	15,674,800	51,847,200	50,828,300
Total Debt Service	\$ 204,448,100	\$ 207,306,800	\$ 260,549,900	\$ 263,148,500

WHEREAS Following a review of the budget amendment report through the FY 2024 Second Quarter, the appropriations established with the adoption of the improvement and extension fund budget for the water system and the sewer system are amended as shown in the table below;

Improvement & Extension Fund				
Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Inflows				
Transfers In from General Operating	\$ 30,178,200	\$ 16,184,100	\$ 30,172,600	\$ 10,311,100
Transfers In from Construction Fund	-	No Change	-	12,775,200
Earnings on Investments	1,694,800	3,065,200	2,133,000	6,430,400
Net Use of Reserves	(10,926,100)	(1,354,900)	(15,202,100)	(9,432,700)
Total Inflows	\$ 20,946,900	\$ 17,894,400	\$ 17,103,500	\$ 20,084,000
Outflows				
Water/Sewer System Revenue Transfers Out	\$ 1,694,800	\$ 3,065,200	\$ 2,133,000	\$ 6,430,400
Capital Spending - Other	-	No Change	-	No Change
Capital Outlay	11,539,100	10,329,200	14,970,500	12,653,600
Revenue Financed Capital -				
Transfer to/(from) Construction Fund	7,713,000	4,500,000	-	1,000,000
Total Outflows	\$ 20,946,900	\$ 17,894,400	\$ 17,103,500	\$ 20,084,000

WHEREAS Following a review of the budget amendment report through the FY 2024 Second Quarter, the appropriations established with the adoption of the construction fund budget for the water system and the sewer system are amended as shown in the table below;

Construction Fund Appropriation Category	Water System		Sewer System	
	Adopted	Amended	Adopted	Amended
Inflows				
Transfer (to)/from Improvement & Extension Fund	\$ 7,713,000	\$ 4,500,000	\$ -	\$ 1,000,000
Bond Proceeds	-	150,000,000	-	100,000,000
Earnings on Investments	1,864,700	6,864,700	2,365,600	8,615,600
Grant Revenues (SRF Loans)	97,102,000	62,307,100	47,253,000	49,424,500
Grant Revenues	-	5,000,000	-	25,000,000
Net (Use) Increase of Reserves	132,580,300	(38,671,800)	149,442,400	(31,264,900)
Total Inflows	<u>\$ 239,260,000</u>	<u>\$ 190,000,000</u>	<u>\$ 199,061,000</u>	<u>\$ 152,775,200</u>
Outflows				
Transfer Out	-	-	-	12,775,200
Capital Improvement Plan (a)	239,260,000	No Change	199,061,000	No Change
Capital Spend Rate Adjustment	-	(49,260,000)	-	(59,061,000)
Total Outflows	<u>\$ 239,260,000</u>	<u>\$ 190,000,000</u>	<u>\$ 199,061,000</u>	<u>\$ 152,775,200</u>
Capital Spending Ratio	100.0%	79.4%	100.0%	76.7%

WHEREAS The GLWA Audit Committee reviewed the budget amendments at its meeting on April 29, 2024; and

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

NOW THEREFORE BE IT:

RESOLVED That the GLWA Board approves the FY 2024 Second Quarter Budget Amendments; and be it finally

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



Financial Services Audit Committee Communication

Date: April 29, 2024

To: Great Lakes Water Authority Audit Committee

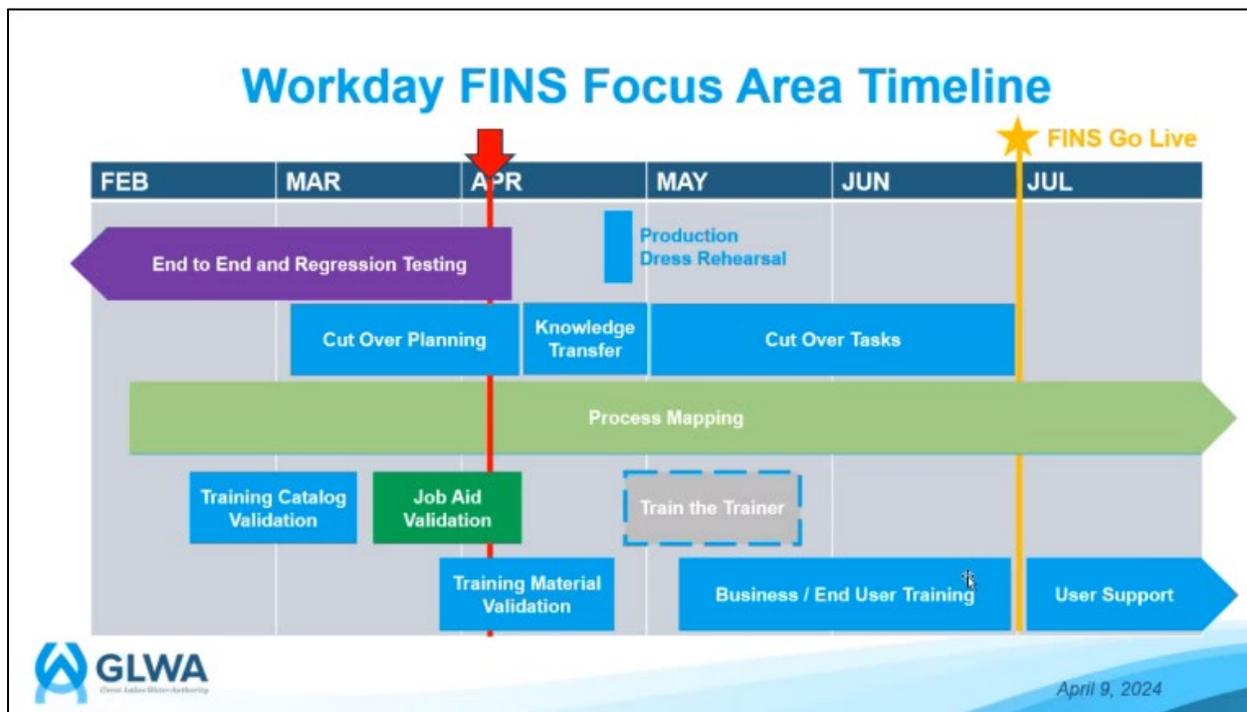
From: Nicolette N. Bateson, CPA, Chief Financial Officer & Treasurer

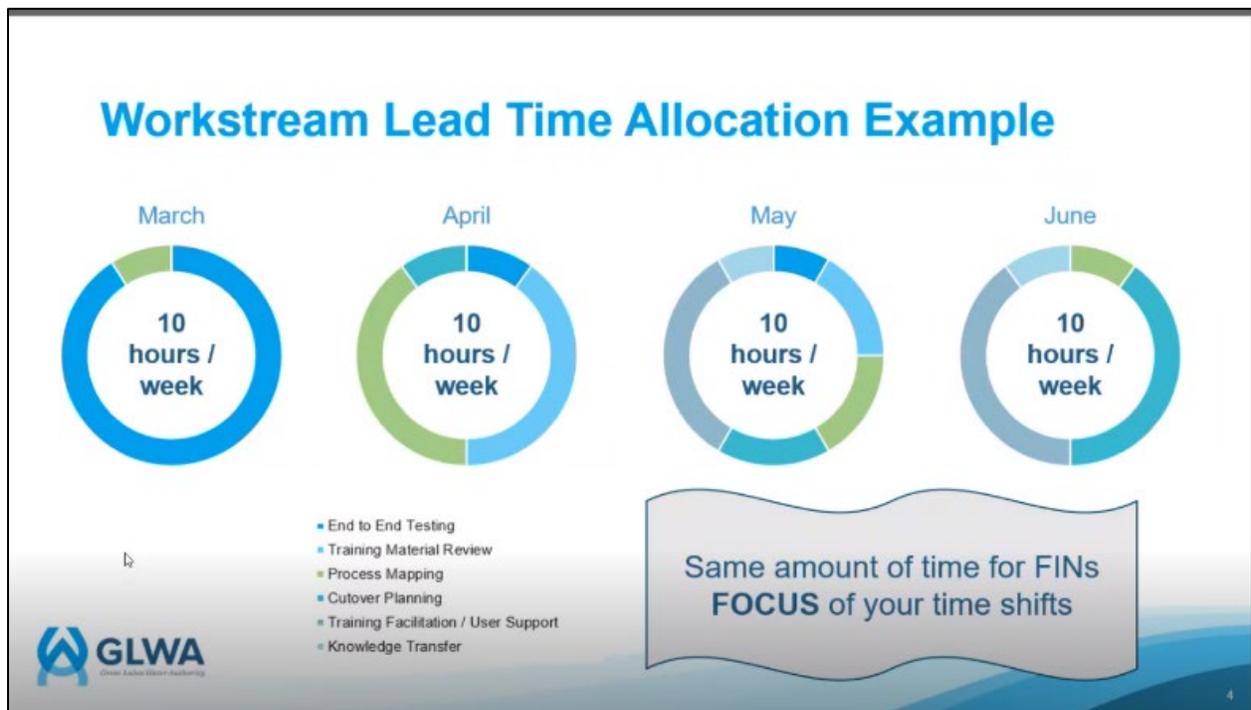
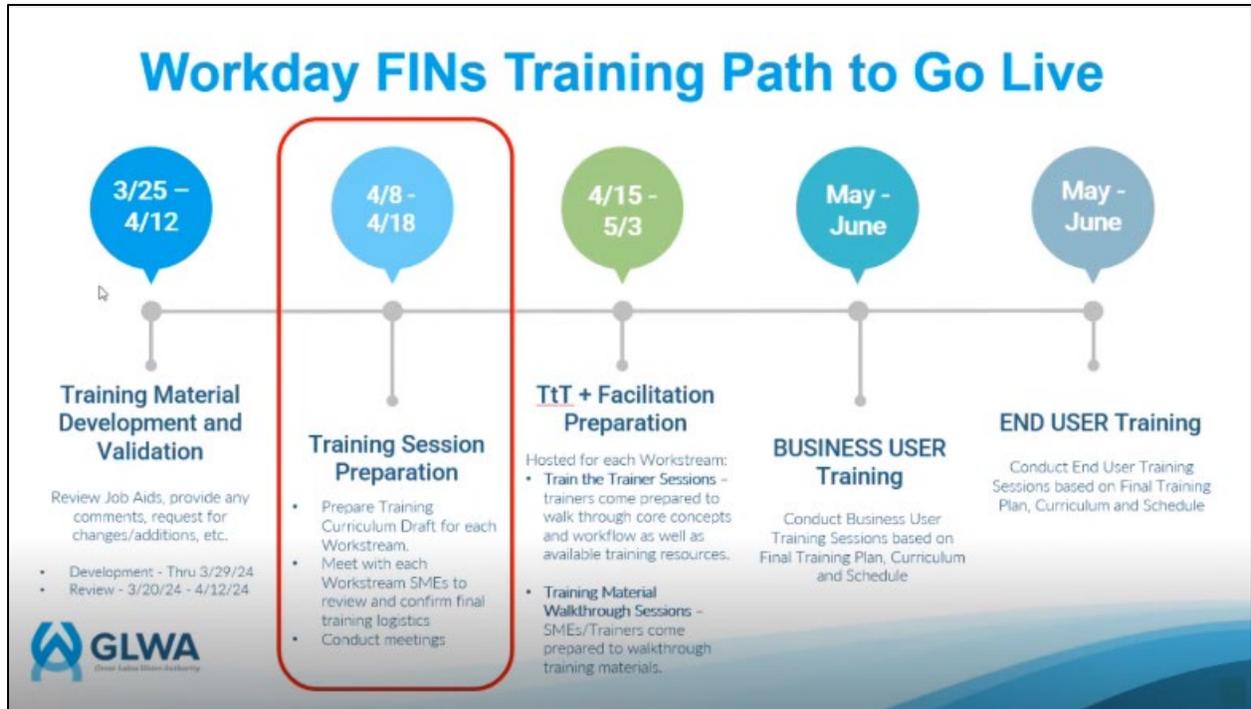
Re: CFO Update

Workday Implementation

Thanks to a *very* dedicated, energetic, and hard-working GLWA team, the Workday and Adaptive Insights team is continuing to keep the project on task, timeline, and budget. Below are some highlights from a recent weekly project update meeting via Teams.

A major focus last week was an in-person all day session on cutover planning from existing to new systems that spans the fiscal year. Twenty giant flip chart post-its covered the conference center wall to map out the cutover plan. This planning is key as some team members, particularly related to year-end accounting, will be working in both existing and new systems for July and August 2024. It also means planning data uploads and validations at various points after July 1, 2024.





Proposed Federal Low Income Water Assistance Legislation

To stay apprised of activities related to federal level consideration of water assistance programs, attached are letters of support from water sector organizations and related information.

Society of Municipal Analysts Conference in Detroit

This month the Society of Municipal Analysts met in Detroit. I was asked to speak to that group about GLWA. Bill Wolfson, Chief Administrative & Compliance Officer joined me as well. The group was very interested in the regional model of a water utility as well as hearing how well the “new” organization has progressed since beginning operations in 2016.

Welcome to New GLWA Team Members!

Joining our talented team recently are:

- Jeannette Driver – Business Inclusion & Diversity Manager
- Gerri Williams – Treasury Manager
- June White – Affordability & Assistance Manager

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Press Releases

Water Sector Organizations Applaud New Water Affordability Legislation

Apr 17, 2024

Bipartisan House proposal will continue successful Low-Income Household Water Assistance Program

Washington, DC – Today a coalition of drinking water and wastewater sector organizations offered its strong support for H.R. 8032, the [Low-Income Household Water Assistance Program Establishment Act](#), bipartisan legislation that would permanently establish low-income water assistance for families struggling to access affordable drinking water and wastewater services.

Sponsored by Reps. Eric Sorensen (D-IL) and Lori Chavez-DeRemer (R-OR), H.R. 8032 is a companion to Senate legislation, S. 3830, introduced by Sen. Alex Padilla (D-CA) earlier this year. Both proposals would permanently authorize the Department of Health and Human Services' Low-Income Household Water Assistance Program (LIHWAP), established by Congress in 2020, to promote public health by easing the burden on families struggling to afford their monthly water bills.

Since that time, the LIHWAP program has proven to be a critical lifeline, allowing more than 1.6 million households across 49 states and numerous tribes and territories to maintain water and wastewater services in the face of economic hardship.

Unfortunately, the temporary program expired at the end of 2023, leaving low-income families nationwide at risk of losing access to essential water services. This legislation would also support communities as they invest in critical drinking water and wastewater infrastructure upgrades by ensuring ratepayer affordability over time.

"Drinking water service is an essential lifeline, regardless of a person's income," said **Tom Dobbins, CEO of the Association of Metropolitan Water Agencies**.

"AMWA thanks Reps. Sorensen and Chavez-DeRemer, along with Sen. Padilla, for their leadership in the effort to extend the LIHWAP program. Just as the federal government has long-established programs to support nutrition assistance and home heating and cooling service for households in need, it is necessary to include low-income water assistance in the federal safety net as well."

“We have seen firsthand how LIHWAP has proven to be successful in getting assistance to our neighbors who need it the most,” said **Robert F. Powelson, president and CEO of the National Association of Water Companies**. “We are grateful for the leadership of Reps. Sorensen and Chavez-DeRemer, as well as Sen. Padilla, and their efforts to help consumers by introducing and championing legislation to make this assistance permanent. Now it is imperative that Congress take action to establish a permanent low-income assistance program so that the most vulnerable households have a lifeline when they are struggling.”

“LIHWAP has proven to be an essential lifeline, serving more than 1.6 million households who cannot afford clean and safe water services,” said **Adam Krantz, CEO of the National Association of Clean Water Agencies (NACWA)**. “NACWA applauds the leadership of Reps. Sorensen and Chavez-DeRemer in recognizing the need for a permanent federal water assistance program. This program helps public clean water agencies make necessary infrastructure investments while protecting households in need. We look forward to working with these Congressional water champions to get this across the finish line.”

“For two years, LIHWAP has served as a lifeline for customers struggling to keep up with their water bills,” said **Tracy Mehan, Executive Director of American Water Works Association Government Affairs Office**. “We are pleased that Reps. Sorensen and Chavez-DeRemer have joined Sen. Padilla in the next phase of moving this important legislation forward. Authorizing a permanent low-income assistance program is an important step toward assuring that all households have access to safe and reliable water service.”

“WEF is grateful for the leadership and compassion Representatives Sorensen and Chavez-DeRemer have demonstrated through the introduction of the low-income household water assistance program legislation (LIWAP). Clean, safe, and reliable drinking water, sewer, and stormwater services are critical to public health, public safety, and environmental protection” said **Aimeé Killeen, President of the Water Environment Federation (WEF)**. “Household ratepayers provide the vast majority of the funds needed to maintain, operate, and modernize our water systems. Unfortunately, many households also face financial struggles that make it difficult to pay rising utility bills. Having a sustainable financial assistance program to help these households not only ensures that all Americans receive essential water services, but also allows the entire community to benefit from investment back into our water systems.”

Water and wastewater sector organizations [endorsed](#) the Senate version of the LIHWAP Establishment Act in February. The sector is proud to support the new House legislation, which takes an identical approach to S.3830 and includes an authorization level of \$1.1 billion annually. This is the level of funding provided by Congress for the current program, the funding for which is expected to be fully expended by July 2024.

February 5, 2024

The Honorable Alex Padilla
United States Senate
Washington, DC 20510

Dear Senator Padilla,

The undersigned organizations, representing drinking water and wastewater systems serving Americans across the United States, are pleased to endorse the “Low-Income Household Water Assistance Program Establishment Act.” The legislation represents an important step toward permanently enshrining low-income water and wastewater ratepayer aid in the federal safety net.

Communities across the country face hundreds of billions of dollars of costs in the coming decades to maintain and upgrade their water and wastewater systems. These investments will be needed to confront aging infrastructure, changing climactic conditions, and to protect consumers from emerging contaminants. Despite the historic federal investments in water infrastructure made through the Bipartisan Infrastructure Law, which will help reduce the expense, the vast majority of water and wastewater system investment will continue to be borne by local water ratepayers – posing significant challenges to individuals and households at the lower end of the income scale.

Today the cost of basic water service already imposes hardships on many low-income households, particularly for those in vulnerable communities. The largest national water rate survey found that between 1996 and 2018, water and sewer charges increased about 2.5 times as fast as inflation;¹ another study concluded that household water and sewer bills more than doubled between 2000 and 2016, while household incomes remained flat.²

Congress recognized this growing water affordability challenge in 2020 when it established the Low-Income Household Water Assistance Program (LIHWAP) at the Department of Health and Human Services. This represented the first time that the federal government created a program dedicated to addressing the burden of rising water and sewer bills on low-income households, and LIHWAP quickly became an essential lifeline for millions of people and the water systems that serve them. Through the 2023 fiscal year, LIHWAP has helped more than 1.4 million households nationwide maintain or restore water service.³ Following its initial appropriation of \$638 million through the Consolidated Appropriations Act of 2021, an additional \$500 million was provided through the American Rescue Plan Act later that year.

However, LIHWAP was only established as a temporary program, and its initial \$1.1 billion appropriation expired at the end of the 2023 fiscal year. As a result, without further congressional

¹ <https://www.awwa.org/AWWA-Articles/awwas-2019-water-and-wastewater-rate-survey-reveals-increasing-utility-costs-boosting-rates>

² <https://www.brookings.edu/articles/striking-a-better-balance-between-water-investment-and-affordability/>

³ <https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-snapshot>

The Honorable Alex Padilla

February 5, 2024

Page 2 of 2

action water rate assistance will no longer be part of the federal safety net, putting hundreds of thousands of households at risk of losing their water service, and leaving tens of thousands of water and wastewater systems without needed operational revenues.

The “Low-Income Household Water Assistance Program Establishment Act” would address this problem by providing a long-term authorization for LIHWAP, allowing HHS to continue its important work of allocating funding to states and tribes for distribution to drinking water and wastewater systems to offset the bills and arrearages of qualifying low-income customers. We believe this model, which leverages the social services resources and expertise of HHS while enabling water and wastewater systems to interact with states and tribes to directly access funds for qualifying customers, holds the most promise for ensuring that LIHWAP operates as efficiently as possible.

Again, our organizations and member utilities strongly support congressional action to provide for the uninterrupted funding and operation of LIHWAP, and we appreciate that the “Low-Income Household Water Assistance Program Establishment Act” would achieve this goal. In the years ahead, following passage of this legislation, we would be eager to work with you and other lawmakers and stakeholders to review HHS’ success at program implementation and consider any necessary adjustments to ensure its long-term success.

Thank you again for your leadership in introducing the “Low-Income Household Water Assistance Program Establishment Act,” and we look forward to working with you to advance this important legislation.

Sincerely,

American Water Works Association
Association of Metropolitan Water Agencies
National Association of Clean Water Agencies
National Association of Water Companies
Water Environment Federation

.....
(Original Signature of Member)

118TH CONGRESS
2D SESSION

H. R. _____

To authorize the Low-Income Household Water Assistance Program, and
for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. SORENSEN introduced the following bill; which was referred to the
Committee on _____

A BILL

To authorize the Low-Income Household Water Assistance
Program, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Low-Income House-
5 hold Water Assistance Program Establishment Act”.

6 **SEC. 2. LOW-INCOME HOUSEHOLD WATER ASSISTANCE**
7 **PROGRAM.**

8 (a) DEFINITIONS.—In this section:

1 (1) ADMINISTRATOR.—The term “Adminis-
2 trator” means the Administrator of the Environ-
3 mental Protection Agency.

4 (2) ELIGIBLE ENTITY.—The term “eligible enti-
5 ty” means a State, or Indian tribe, that is eligible
6 to receive or previously received a grant under the
7 Low-Income Home Energy Assistance Act of 1981
8 (42 U.S.C. 8621 et seq.).

9 (3) HOUSEHOLD.—The term “household”
10 means any individual or group of individuals who
11 are living together as 1 economic unit.

12 (4) LOW-INCOME HOUSEHOLD.—The term
13 “low-income household” means a household—

14 (A) in which 1 or more individuals are re-
15 ceiving—

16 (i) assistance under the State pro-
17 gram funded under part A of title IV of
18 the Social Security Act (42 U.S.C. 601 et
19 seq.);

20 (ii) supplemental security income pay-
21 ments under title XVI of the Social Secu-
22 rity Act (42 U.S.C. 1381 et seq.);

23 (iii) supplemental nutrition assistance
24 program benefits under the Food and Nu-

1 trition Act of 2008 (7 U.S.C. 2011 et
2 seq.);

3 (iv) payments under—

4 (I) section 1315, 1521, 1541, or
5 1542 of title 38, United States Code;
6 or

7 (II) section 306 of the Veterans'
8 and Survivors' Pension Improvement
9 Act of 1978 (38 U.S.C. 1521 note;
10 Public Law 95–588); or

11 (v) assistance under the Low-Income
12 Home Energy Assistance Act of 1981; or

13 (B) that has an income that, as deter-
14 mined by the State or Indian tribe, does not ex-
15 ceed the greatest of—

16 (i) an amount equal to 150 percent of
17 the poverty level;

18 (ii) an amount equal to 60 percent of
19 the State median income for that State or
20 the State in which the Indian tribe is pri-
21 marily located; and

22 (iii) an amount equal to 60 percent of
23 the area median income for the area in
24 which the household is located.

1 (5) POVERTY LEVEL.—The term “poverty
2 level” means the poverty line determined pursuant
3 to section 673 of the Community Services Block
4 Grant Act (42 U.S.C. 9902).

5 (6) PUBLIC WATER SYSTEM.—The term “public
6 water system” has the meaning given the term in
7 section 1401 of the Safe Drinking Water Act (42
8 U.S.C. 300f).

9 (7) QUALIFIED NONPROFIT ORGANIZATION.—
10 The term “qualified nonprofit organization” includes
11 a nonprofit organization described in section
12 680(a)(3)(B) of the Community Services Block
13 Grant Act (42 U.S.C. 9921(a)(3)(B)).

14 (8) SECRETARY.—The term “Secretary” means
15 the Secretary of Health and Human Services.

16 (9) STATE.—The term “State” means any of
17 the 50 States, the District of Columbia, the Com-
18 monwealth of Puerto Rico, Guam, the United States
19 Virgin Islands, American Samoa, and the Common-
20 wealth of the Northern Mariana Islands.

21 (10) TREATMENT WORKS.—The term “treat-
22 ment works” has the meaning given the term in sec-
23 tion 212 of the Federal Water Pollution Control Act
24 (33 U.S.C. 1292).

25 (b) ESTABLISHMENT.—

1 (1) IN GENERAL.—The Secretary, in consulta-
2 tion with the Administrator, shall establish the Low-
3 Income Household Water Assistance Program to
4 award grants, in accordance with paragraph (2), to
5 eligible entities to provide funds to owners and oper-
6 ators of public water systems or treatment works to
7 assist low-income households in paying arrearages
8 and other rates charged to such households for
9 drinking water or wastewater services.

10 (2) FORMULA.—In awarding grants under this
11 subsection to eligible entities, the Secretary shall—

12 (A) allot amounts made available for
13 grants under this subsection to an eligible enti-
14 ty that is a State or Indian tribe based on—

15 (i) the percentage of households in the
16 State, or under the jurisdiction of the In-
17 dian tribe, with income equal to or less
18 than 150 percent of the poverty level; or

19 (ii) the percentage of households in
20 the State, or under the jurisdiction of the
21 Indian tribe, that spend more than 30 per-
22 cent of monthly income on housing; and

23 (B) reserve up to 3 percent of amounts
24 made available for grants under this subsection
25 to eligible entities that are Indian tribes.

1 (c) RURAL, UNDERSERVED, AND INDIAN TRIBE AC-
2 CESS GRANTS.—The Secretary shall provide grants to
3 qualified nonprofit organizations to assist owners or oper-
4 ators of public water systems or treatment works, in rural
5 or underserved areas or in the jurisdiction of an Indian
6 tribe, in accessing funds through the Low-Income House-
7 hold Water Assistance Program.

8 (d) APPLICATIONS.—Each eligible entity seeking a
9 grant under subsection (b), and each qualified nonprofit
10 organization seeking a grant under subsection (c), shall
11 submit an application to the Secretary at such time, in
12 such manner, and containing such information as the Sec-
13 retary shall require.

14 (e) LIMITATIONS.—A recipient of a grant under sub-
15 section (b) or (c)—

16 (1) shall not use the funds from the grant to
17 supplant any other funds for any program that as-
18 sists low-income households in maintaining access to
19 affordable drinking water or wastewater services;
20 and

21 (2) may use the funds from the grant to supple-
22 ment or otherwise enhance any such program that
23 satisfies the requirements under this section.

24 (f) TECHNICAL ASSISTANCE FOR ELIGIBILITY RE-
25 QUIREMENTS.—The Secretary shall provide technical as-

1 sistance to eligible entities receiving a grant under sub-
2 section (b) for such eligible entities to establish data shar-
3 ing agreements to streamline categorical eligibility re-
4 quirements for low-income households.

5 (g) TRANSFER TO THE ENVIRONMENTAL PROTEC-
6 TION AGENCY.—

7 (1) IN GENERAL.—On the date on which the
8 final report described in section 50109(d) of the In-
9 frastructure Investment and Jobs Act (42 U.S.C.
10 300j–19a note; Public Law 117–58; 135 Stat. 1148)
11 is submitted to Congress under such section, the
12 Secretary, in coordination with the Administrator,
13 shall transfer the Low-Income Household Water As-
14 sistance Program established under this section to
15 the Environmental Protection Agency for adminis-
16 tration of such program by the Administrator in ac-
17 cordance with this section.

18 (2) ADMINISTRATION.—

19 (A) IN GENERAL.—Beginning on the date
20 described in paragraph (1)—

21 (i) the Administrator shall carry out
22 all functions of the Secretary under this
23 section; and

24 (ii) for purposes of administering the
25 program established under this section,

1 each reference in subsection (b)(2), (c),
2 (d), and (f) to the Secretary shall be
3 deemed a reference to the Administrator.

4 (B) GRANTS PREVIOUSLY AWARDED.—

5 Notwithstanding paragraph (1) and subpara-
6 graph (A), the Secretary shall continue, after
7 the transfer under paragraph (1), administering
8 each grant awarded under this section prior to
9 such transfer until the expiration of the term of
10 such grant.

11 (3) UNOBLIGATED BALANCES.—On the date de-
12 scribed in paragraph (1) and subject to section 1531
13 of title 31, United States Code, the Secretary shall
14 transfer all unobligated balances of appropriations,
15 authorizations, allocations, or other funds available
16 to the Low-Income Household Water Assistance
17 Program established under this section (except for
18 any such balances related to grants awarded prior to
19 the transfer under paragraph (1)) to the Adminis-
20 trator. The amounts of any such unobligated bal-
21 ances so transferred shall be used only for the pur-
22 poses for which the amounts were originally author-
23 ized and appropriated.

1 (h) AUTHORIZATION OF APPROPRIATIONS.—There is
2 authorized to be appropriated to carry out this section
3 \$1,100,000,000.

GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

January 2024

**Presented to the
Great Lakes Water Authority
Audit Committee on April 29, 2024**

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



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.

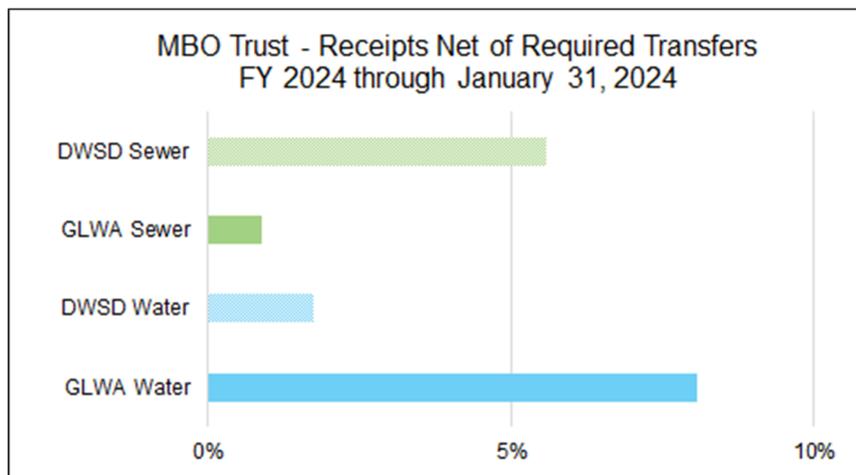
For the current year, water and sewer capital spend, and sewer O&M reflect variances to budget outside the normal range. Capital spend variances reflect evolving changes in timing that the Capital Improvement Planning group continues to monitor and review.

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 January 31, 2024					
Metric	FY 2024 Budget	FY 2024 Amended Budget	FY 2024 Actual	Variance from Financial Plan	Report Page Reference
Wholesale Water Billed Revenue (\$M)	\$205.8	\$201.8	\$201.2	0%	48
Wholesale Water Billed Usage (mcf)	8,228,000	7,771,000	7,781,000	0%	
Wholesale Sewer Billed Revenue (\$M)	\$164.5	\$164.5	\$164.5	0%	50
Wholesale Water Operations & Maintenance (\$M)	\$89.2	\$95.1	\$90.3	-5%	5
Wholesale Sewer Operations & Maintenance (\$M)	\$120.0	\$128.4	\$123.1	-4%	
Investment Income (\$M)	\$9.0	\$23.5	\$32.5	38%	37
Water Prorated Capital Spend w/SRA* (\$M)	\$139.6	\$131.1	\$97.6	-26%	28
Sewer Prorated Capital Spend w/SRA* (\$M)	\$116.1	\$96.2	\$61.6	-36%	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 \$1.2 million and DWSD Sewer reports a surplus of \$9.9 million of net receipts over disbursements through January 2024.

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 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 January 2024.
- The total overall Operations & Maintenance expenses are at 55.7% of budget through January 2024. This positive variance equates to a dollar amount of \$10.2 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 January 2024 is \$52.9 million for the Water fund (24.4% of total revenues) and \$68.6 million for the Sewer fund (23.9 % of total revenues).
- Water Net Position increased by \$ 8.7 million, and Sewage Disposal Net Position increased by \$ 9.8 million for the year to date through January 2024.

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 January, transfers of \$18.6 million and \$25.7 million were completed for the GLWA Water and Sewer funds, respectively.
- Also for January, 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 \$623 million for Water and \$722 million in the Sewer fund.
- Total, combined, cumulative, FY 2024 investment income through January is \$32.5 million.

DWSD Retail Revenues, Receivables & Collections (page 41)

- Water revenue through January 31, 2024 is 103.85% and usage is 103.69% of budget.
- Sewer revenue through January 31, 2024 is 98.42% and usage is 100.73% of budget.
- Combined accounts receivable balances for the water and sewer funds report a decrease of \$23.3 million over the prior year.
- Past dues over 180 days make up of 66.7% the total accounts receivable balance. The current bad debt allowance covers over 97.0% of past dues over 60 days.

GLWA Wholesale Billing, Receivables & Collections (page 47)

- GLWA accounts receivable past due balance net of Highland Park is 13.15% of the total accounts receivable balance, with the majority of that balance related to one water account dispute currently under discussion.
- The Highland Park past due balance is \$55.3 million. It includes \$40.6 million for wastewater treatment services, \$1.9 million for industrial waste control services, and \$12.8 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 \$8.8 million as of January 31, 2024.
- 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@glwater.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 January 2024, the pro-rata benchmark is 58.3% (7 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 59.6% while the *sewer* system is at 58.8%. 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 January 31, 2024, these payments total \$3.8 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 83.9% while the *sewer* system is at 80.7%. 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 below the pro-rata benchmark for FY 2024 the *water* system is at 55.4% while the *sewer* system O&M expenses is at 55.9%.
5. **Debt Service:** For FY 2024, both systems are slightly above the pro-rata benchmark for debt service; the *water* system is at 58.5% while the *sewer* system is at 58.5%. 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 January 31, 2024. 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 1/31/2023	Percent Year-to- Date at 1/31/2023	FY 2024 BOARD ADOPTED BUDGET	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 1/31/2024	Percent Year-to- Date at 1/31/2024
Water System							
Revenues							
Suburban Wholesale Customer Charges	\$ 333,856	\$ 198,927	59.6%	\$ 340,541	\$ 336,541	\$ 197,549	58.7%
Retail Service Charges	22,834	13,341	58.4%	25,537	25,537	14,897	58.3%
Investment Earnings	9,670	3,412	35.3%	4,062	12,062	10,118	83.9%
Other Revenues	995	836	84.0%	175	440	623	141.6%
Total Revenues	\$ 367,356	\$ 216,515	58.9%	\$ 370,315	\$ 374,580	\$ 223,186	59.6%
Revenue Requirements							
Operations & Maintenance Expense	\$ 156,748	\$ 89,493	57.1%	\$ 152,906	\$ 163,101	\$ 90,278	55.4%
General Retirement System Legacy Pension	6,048	3,528	58.3%	-	-	-	0.0%
Debt Service	150,055	89,242	59.5%	159,483	162,634	95,217	58.5%
General Retirement System Accelerated Pension	6,268	3,657	58.3%	3,396	1,506	1,506	100.0%
Extraordinary Repair & Replacement Deposit	200	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	1,771	1,033	58.3%	1,852	1,852	1,080	58.3%
Regional System Lease	22,500	13,125	58.3%	22,500	22,500	13,125	58.3%
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	16,610	69.9%	30,178	21,588	12,593	58.3%
Total Revenue Requirements	\$ 367,356	\$ 216,687	59.0%	\$ 370,315	\$ 374,580	\$ 213,799	57.1%
Net Difference		\$ (173)				\$ 9,388	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ 2,224				\$ 4,681	
Revenue Requirement Variance		(2,396)				4,706	
Overall Variance		\$ (173)				\$ 9,388	

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

	FY 2023 AMENDED BUDGET	FY 2023 ACTIVITY THRU 1/31/2023	Percent Year-to- Date at 1/31/2023	FY 2024 BOARD ADOPTED BUDGET	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 1/31/2024	Percent Year-to- Date at 1/31/2024
Sewer System							
Revenues							
Suburban Wholesale Customer Charges	\$ 274,907	\$ 160,616	58.4%	\$ 282,688	\$ 282,688	\$ 164,195	58.1%
Retail Service Charges	191,042	111,441	58.3%	196,570	196,570	114,666	58.3%
Industrial Waste Control Charges	8,420	4,878	57.9%	8,584	8,584	5,072	59.1%
Pollutant Surcharges	4,951	2,766	55.9%	5,328	5,328	2,195	41.2%
Investment Earnings	13,532	4,997	36.9%	7,057	16,057	12,956	80.7%
Other Revenues	2,355	983	41.7%	400	717	547	76.3%
Total Revenues	\$ 495,207	\$ 285,681	57.7%	\$ 500,627	\$ 509,944	\$ 299,630	58.8%
Revenue Requirements							
Operations & Maintenance Expense	\$ 204,123	\$ 114,931	56.3%	\$ 205,644	\$ 220,128	\$ 123,075	55.9%
General Retirement System Legacy Pension	10,824	6,314	58.3%	-	-	-	0.0%
Debt Service	212,509	124,154	58.4%	228,328	231,782	135,669	58.5%
General Retirement System Accelerated Pension	11,621	6,779	58.3%	6,479	3,097	3,097	100.0%
Extraordinary Repair & Replacement Deposit	-	-	0.0%	-	-	-	0.0%
Water Residential Assistance Program Contribution	2,394	1,397	58.3%	2,503	2,503	1,460	58.3%
Regional System Lease	27,500	16,042	58.3%	27,500	27,500	16,042	58.3%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending	-	-	0.0%	-	-	-	0.0%
Improvement & Extension Fund Transfer Pending	26,237	16,377	62.4%	30,173	24,934	14,545	58.3%
Total Revenue Requirements	\$ 495,207	\$ 285,993	57.8%	\$ 500,627	\$ 509,944	\$ 293,887	57.6%
Net Difference		\$ (312)				\$ 5,743	
<i>Recap of Net Positive Variance</i>							
Revenue Variance		\$ (3,190)				\$ 2,163	
Revenue Requirement Variance		2,878				3,580	
Overall Variance		\$ (312)				\$ 5,743	

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 2024

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of January 31, 2024, is 58.3% (seven 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	FY 2023	Percent Year-to-Date at 1/31/2023	FY 2024	FY 2024	Percent Year-to-Date at 1/31/2024
	AMENDED BUDGET	ACTIVITY THRU 1/31/2023		BOARD ADOPTED BUDGET	AMENDED BUDGET	
Water	\$ 85,337	\$ 50,092	58.7%	\$ 82,733	\$ 87,738	56.2%
Sewer	136,348	78,439	57.5%	132,934	141,656	58.4%
Centralized	104,503	57,111	54.7%	106,901	116,537	52.1%
Administrative	34,682	18,805	54.2%	35,983	37,298	55.4%
Employee Benefits	-	(24)	0.0%	-	-	0.0%
Total O&M Budget	\$ 360,870	\$ 204,424	56.6%	\$ 358,550	\$ 383,229	55.7%

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 55.7% which is below the pro-rata benchmark of 58.3%. This positive variance equates to a dollar amount of \$10.2 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 59.5% through January 2024.

Utilities: The overall category is slightly below the pro-rata benchmark; coming in at 58.1% through January 2024. 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 63.4%. 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 38.7% which is lower than the benchmark of 58.3%. 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 46.2%. This category is under review.
- **Water service** is slightly lower than the benchmark, coming in at 56.5%. 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 52.5% through January 2024. 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 53.0% through January 2024. 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 lower than the pro-rata benchmark; coming in at 55.8% through January 2024. 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 32.5% through January 2024. 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 83.2% through January 2024. 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 Entity-wide	FY 2023	FY 2023	Percent	FY 2023	Percent	FY 2024		FY 2024	Percent	FY 2024
	AMENDED BUDGET	ACTIVITY THRU 1/31/2023	Year-to- Date at 1/31/2023	ACTIVITY THRU 6/30/2023	Year-to- Date at 6/30/2023	FY 2024 AMENDED BUDGET	PRORATED BUDGET (7 MONTHS)	ACTIVITY THRU 1/31/2024	Year-to- Date 1/31/2024	Prorated Amended Budget Less FY 2024 Activity
Salaries & Wages	\$ 71,395	\$ 42,264	59.2%	\$ 70,114	60.3%	\$ 74,935	\$ 43,712	\$ 44,821	59.8%	\$ (1,109)
Workforce Development	1,326	737	55.5%	1,414	52.1%	1,392	812	1,096	78.8%	(285)
Overtime	8,411	4,981	59.2%	8,571	58.1%	7,453	4,348	5,230	70.2%	(882)
Employee Benefits	25,582	14,508	56.7%	24,790	58.5%	28,264	16,487	15,524	54.9%	963
Transition Services	9,432	5,559	58.9%	9,920	56.0%	9,129	5,325	5,462	59.8%	(137)
Employee Benefits Fund	-	(24)	0.0%	-	0.0%	-	-	-	0.0%	-
<i>Personnel Costs</i>	<u>116,145</u>	<u>68,026</u>	<u>58.6%</u>	<u>114,808</u>	<u>59.3%</u>	<u>121,172</u>	<u>70,684</u>	<u>72,134</u>	<u>59.5%</u>	<u>(1,450)</u>
Electric	47,963	27,074	56.4%	48,176	56.2%	46,769	27,282	29,642	63.4%	(2,360)
Gas	12,042	7,869	65.3%	10,821	72.7%	9,865	5,755	3,819	38.7%	1,935
Sewage Service	3,028	1,533	50.6%	3,052	50.2%	2,873	1,676	1,328	46.2%	348
Water Service	11,589	6,418	55.4%	15,228	42.1%	12,109	7,063	6,847	56.5%	216
<i>Utilities</i>	<u>74,622</u>	<u>42,894</u>	<u>57.5%</u>	<u>77,277</u>	<u>55.5%</u>	<u>71,616</u>	<u>41,776</u>	<u>41,637</u>	<u>58.1%</u>	<u>139</u>
Chemicals	29,525	17,280	58.5%	30,542	56.6%	33,109	19,313	17,375	52.5%	1,938
Supplies & Other	36,163	18,294	50.6%	35,766	51.1%	42,662	24,886	22,610	53.0%	2,276
Contractual Services	106,625	59,795	56.1%	108,726	55.0%	111,763	65,195	62,353	55.8%	2,842
Capital Program Allocation	(2,135)	(1,092)	51.1%	(2,190)	49.9%	(4,233)	(2,469)	(1,377)	32.5%	(1,092)
Shared Services	(1,571)	(773)	49.2%	(3,270)	23.6%	(1,656)	(966)	(1,378)	83.2%	412
Unallocated Reserve	1,497	-	0.0%	-	0.0%	8,796	5,131	-	0.0%	5,131
Total Expenses	<u>\$ 360,870</u>	<u>\$ 204,424</u>	<u>56.6%</u>	<u>\$ 361,659</u>	<u>56.5%</u>	<u>\$ 383,229</u>	<u>\$ 223,550</u>	<u>\$ 213,353</u>	<u>55.7%</u>	<u>\$ 10,197</u>

Totals may be off due to rounding



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 January 31, 2024
(\$000)**

	Water	Sewage Disposal	Total Business- type Activities	Comparative June 30, 2023
Assets				
Cash - unrestricted (a)	\$ 167,585	\$ 229,104	\$ 396,688	\$ 482,736
Cash - restricted (a)	229,217	233,284	462,501	470,204
Investments - unrestricted (a)	111,328	110,054	221,382	63,241
Investments - restricted (a)	98,003	167,272	265,275	177,998
Accounts Receivable	90,384	55,873	146,258	171,747
Due from (to) Other Funds (b)	6,937	(6,937)	-	-
Other Assets (c)	665,713	401,898	1,067,611	1,056,956
Cash held FBO DWSD Advance	-	-	-	-
Capital Assets, net of Depreciation	1,173,385	1,926,258	3,099,643	3,229,243
Land	293,617	126,816	420,433	420,433
Construction Work in Process (e)	476,317	320,079	796,396	668,326
Total assets	3,312,486	3,563,701	6,876,187	6,740,885
Deferred Outflows (f)	41,252	83,552	124,805	181,672
Liabilities				
Liabilities - Liabilities-ST	166,751	174,010	340,761	424,229
Due to (from) Other Funds (b)	-	-	-	-
Other Liabilities (h)	2,143	5,722	7,865	7,500
Cash Held FBO DWSD (d)	21,938	37,022	58,960	42,464
Liabilities - Long-Term (i)	3,223,683	3,457,593	6,681,276	6,598,619
Total liabilities	3,414,515	3,674,347	7,088,862	7,072,812
Deferred Inflows (f)	54,345	70,811	125,156	81,327
Total net position (j)	\$ (115,122)	\$ (97,905)	\$ (213,027)	\$ (231,582)

Totals may be off due to rounding

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 2024

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 January 31, 2024 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 January 2024 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 Seven Months ended January 31, 2024
(\$000)

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business- Type Activities	Comparative June 30, 2023
Revenue						
Wholesale customer charges	\$ 201,323	92.9%	\$ 164,195	57.3%	\$ 365,518	\$ 616,511
Local system charges	14,897	6.9%	114,666	40.0%	129,562	213,877
Industrial waste charges		0.0%	5,072	1.8%	5,072	8,393
Pollutant surcharges		0.0%	2,195	0.8%	2,195	4,895
Other revenues	452	0.2%	376	0.1%	828	2,011
Total Revenues	216,672	100.0%	286,504	100.0%	503,175	845,686
Operating expenses						
Operations and Maintenance	87,876	40.6%	124,459	43.4%	212,335	366,823
Depreciation	73,741	34.0%	93,162	32.5%	166,904	289,957
Amortization of intangible assets	2,150	1.0%	326	0.1%	2,475	4,006
Total operating expenses	163,767	75.6%	217,947	76.1%	381,714	660,786
Operating Income	52,905	24.4%	68,557	23.9%	121,462	184,900
Total Nonoperating (revenue) expense	44,167	20.4%	58,740	20.5%	102,907	197,183
Increase/(Decrease) in Net Position	8,738	4.0%	9,817	3.4%	18,555	(12,283)
Net Position (deficit), beginning of year	(123,860)		(107,722)		(231,582)	(219,299)
Net position (deficit), end of year	\$ (115,122)		\$ (97,905)		\$ (213,027)	\$ (231,582)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is \$8.7 million.
- ✓ Wholesale water customer charges of \$201.3 million account for 92.9% of Water System revenues.
- ✓ Operating expenses of \$163.8 million represent 75.6% of total operating revenue. Depreciation is the largest operating expense at \$73.7 million or 45.0% of operating expense.
- ✓ Amortization of intangible assets represents activity for raw water rights.
- ✓ Operating income after operating expenses (including depreciation) equals \$52.9 million or 24.4% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$51.3 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 \$9.8 million.
- ✓ Wholesale customer charges of \$164.2 million account for 57.3% of Sewer System revenues. Wholesale customer charges are billed one-twelfth each month based on an agreed-upon historical average “share” of each customer’s historical flows which are formally revisited on a periodic basis. The result is no revenue shortfall or overestimation.
- ✓ Local system (DWSD) charges of \$114.7 million account for 40.0% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$217.9 million represent 76.1% of total operating revenue. Depreciation is the largest operating expense at \$93.2 million or 42.7% of total operating expense.
- ✓ Amortization of intangible assets represents activity for a warehouse lease.
- ✓ Operating income after operating expenses (including depreciation) equals \$68.6 million or 23.9% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of \$61.1 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 January 2024 Financial Report Binder. Explanatory notes follow this schedule.

**Table 3 – Supplemental Schedule of Operations & Maintenance Expenses
– All Funds Combined
For the Seven Months ended January 31, 2024
(\$000)**

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business- Type Activities	Percent of Total
Operating Expenses						
Personnel						
Salaries & Wages	16,755	19.1%	34,625	27.8%	51,380	24.2%
Overtime	3,187	3.6%	2,042	1.6%	5,230	2.5%
Benefits	11,130	12.7%	4,394	3.5%	15,524	7.3%
Total Personnel	\$ 31,072	35.4%	\$ 41,061	33.0%	\$ 72,134	34.0%
Utilities						
Electric	18,700	21.3%	10,942	8.8%	29,642	14.0%
Gas	548	0.6%	3,271	2.6%	3,819	1.8%
Sewage	211	0.2%	1,117	0.9%	1,328	0.6%
Water	2	0.0%	6,845	5.5%	6,847	3.2%
Total Utilities	\$ 19,462	22.1%	\$ 22,175	17.8%	\$ 41,637	19.6%
Chemicals	6,601	7.5%	10,774	8.7%	17,375	8.2%
Supplies and other	6,382	7.3%	15,913	12.8%	22,294	10.5%
Contractual services	29,035	33.0%	35,780	28.7%	64,815	30.5%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital program allocation	(696)	-0.8%	(681)	-0.5%	(1,377)	-0.6%
Intergovernmental Agreement	(3,049)	-3.5%	(115)	-0.1%	(3,164)	-1.5%
Shared services allocation	(930)	-1.1%	(448)	-0.4%	(1,378)	-0.6%
Operations and Maintenance Expenses	\$ 87,876	100.0%	\$ 124,459	100.0%	\$ 212,335	100.0%

Totals may be off due to rounding

- ✓ Core expenses for water and sewage disposal systems are utilities (19.6% of total O&M expenses) and chemicals (8.2% of total O&M expenses).
- ✓ Personnel costs (34.0% 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 (30.5%) includes:
 - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately \$4.2 million);
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$10.4 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 Seven Months ended January 31, 2024
(\$000)**

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2023
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	\$ (14,065)	\$ (9,186)	\$ (23,251)	\$ (41,059)
Investment earnings	(14,392)	(18,119)	(32,511)	(35,344)
Net (incr) decr in fair value of invstmt	(1,305)	(2,617)	(3,922)	(2,257)
Other nonoperating revenue	(171)	(3,036)	(3,208)	(3,872)
Interest Expense				
Bonded debt	65,324	70,273	135,598	228,066
Lease obligation	9,685	11,837	21,522	37,319
Other obligations	2,453	940	3,394	5,906
Total interest expense	77,462	83,051	160,513	271,291
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	-
Capital Contribution	-	-	-	(2,176)
Amortization, issuance costs, debt	(7,544)	2,147	(5,397)	(3,998)
(Gain) loss on disposal of capital assets	4	(16)	(12)	2,119
Loss on impairment of capital assets	-	-	-	-
Discontinued Capital Projects	-	-	-	20,903
Water Residential Assistance Program	1,775	2,216	3,991	12,343
Legacy pension expense	2,403	4,300	6,703	(20,765)
Total Nonoperating (Revenue)/Expense	\$ 44,167	\$ 58,740	\$ 102,907	\$ 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.

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 2024

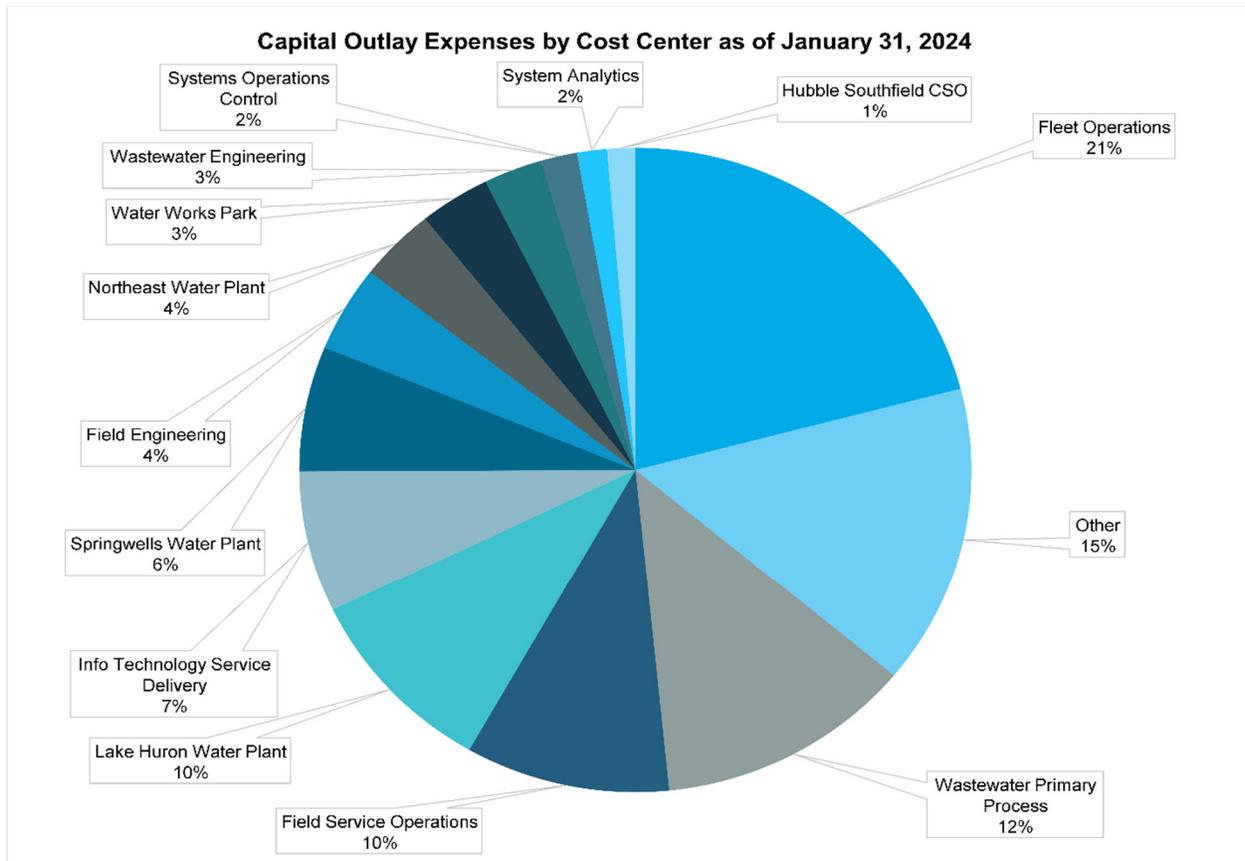
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:
 - Bonded debt;
 - Lease obligation for the regional assets from the City of Detroit; and
 - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to 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 January 31, 2024, total capital outlay spend is \$12.1 million. Following this chart is a sample list of projects and purchases from the total spend of \$12.1 million:



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

Water Operations: Ovation power supply upgrade (\$884k); Clarifier Drive (\$573k); Lake Huron boiler replacement (\$218k); Water Works Park build out (\$210k); Northeast Water Treatment Plant fluid heater (\$189k); Lake Huron doors and frames (\$132k); STACO energy first line universal power supply (\$91k); Springwells elevator repairs

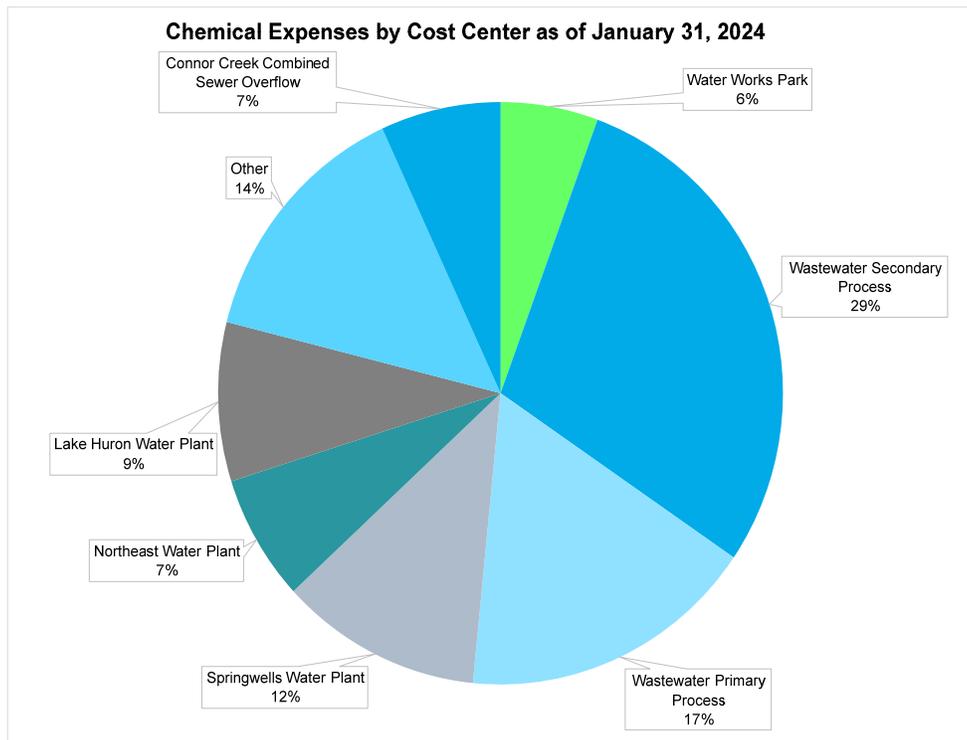
(\$89k); Ozone vessel refurbish (\$84k) and Northeast Water Treatment Plant annual work platform (\$73k).

Wastewater Operations: Magnetic Low Meter Replacement (\$1.1m); Complex A pump replacement (\$265k); Twenty 4” grinders (\$284k); WRRF Incinerator freight elevator (\$215k); CSO’s system control center support (\$137k); Scum hopper pump (\$131k); WRRF Primary area gas detection system (\$105k); Multiple CSO’s submersible motor (\$92k); WRRF EV charging stations (\$80k); Flow meter (\$80k); Chlorination scrubber pump (\$70k); Submersible chopper pump (\$68k); Bluehill Pump Station ovation upgrade (\$66k); Baby Creek furniture and supplies (\$64k); Fischer Pump Station ovation upgrade (\$61k); Hubble furniture and supplies (\$61k); 7 mile CSO influent slide gate replacement (\$59k) and collection system level sensors (\$54k).

Centralized & Administrative Facilities: Trucks and vehicles (\$2.4m); Pump stations ovation upgrade (\$1.1m); Computer hardware and software (\$875k); Sewer meter support (\$139k); Ovation upgrade and cabinet replacement (\$128k); Database support (\$125k); Forklift (\$86k); WRRF furniture and supplies (\$82k); Base trex platform (\$67k); Probe (\$58k) and Water Board Building furniture and supplies (\$51k).

Chart 2 – Chemical Expenses – Water and Sewer System Combined

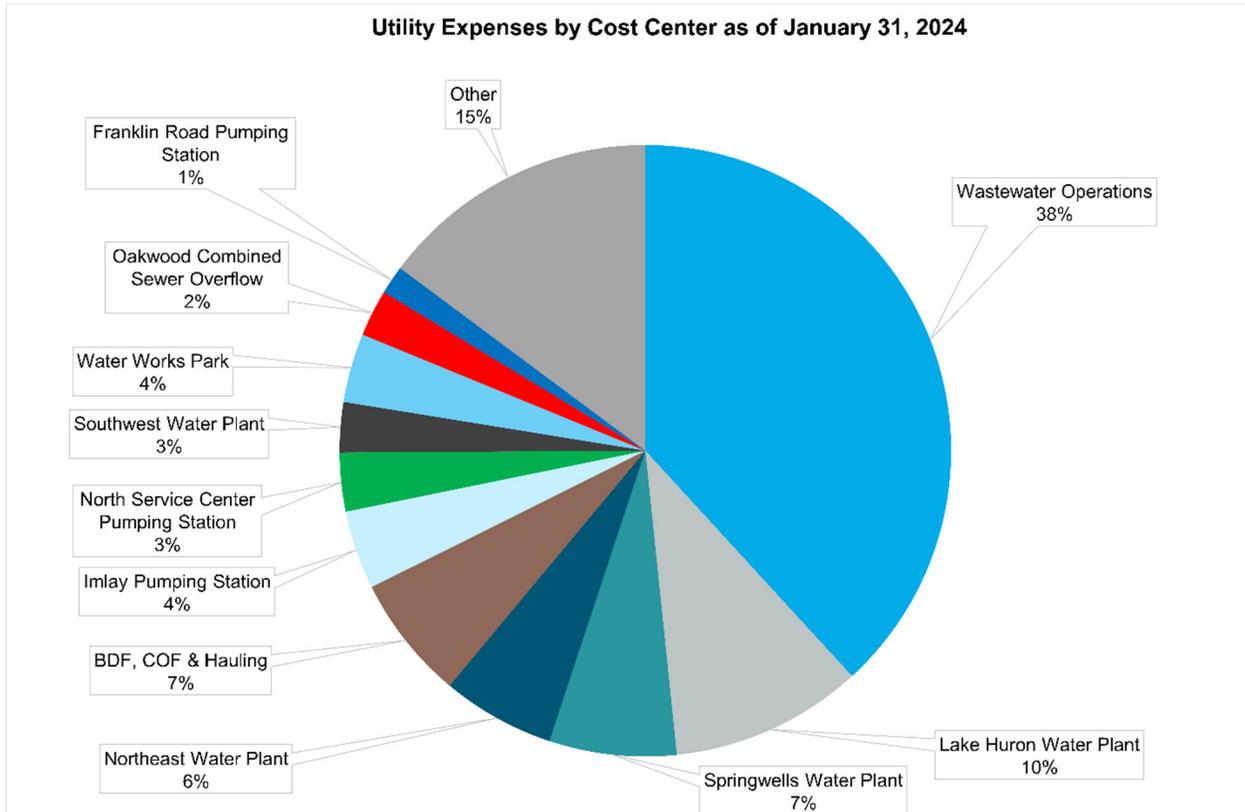
Chemical expenses are \$17.4 million through January 31, 2024. The allocation is shown in the chart below and remains consistent with prior periods.



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 \$41.6 million through January 31, 2024. 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 January 31, 2024 all reconciliations are up-to-date and complete.

There were no new accounts added in the general ledger since December 2023.

Chart 1 – Bank Reconciliation Completion Status

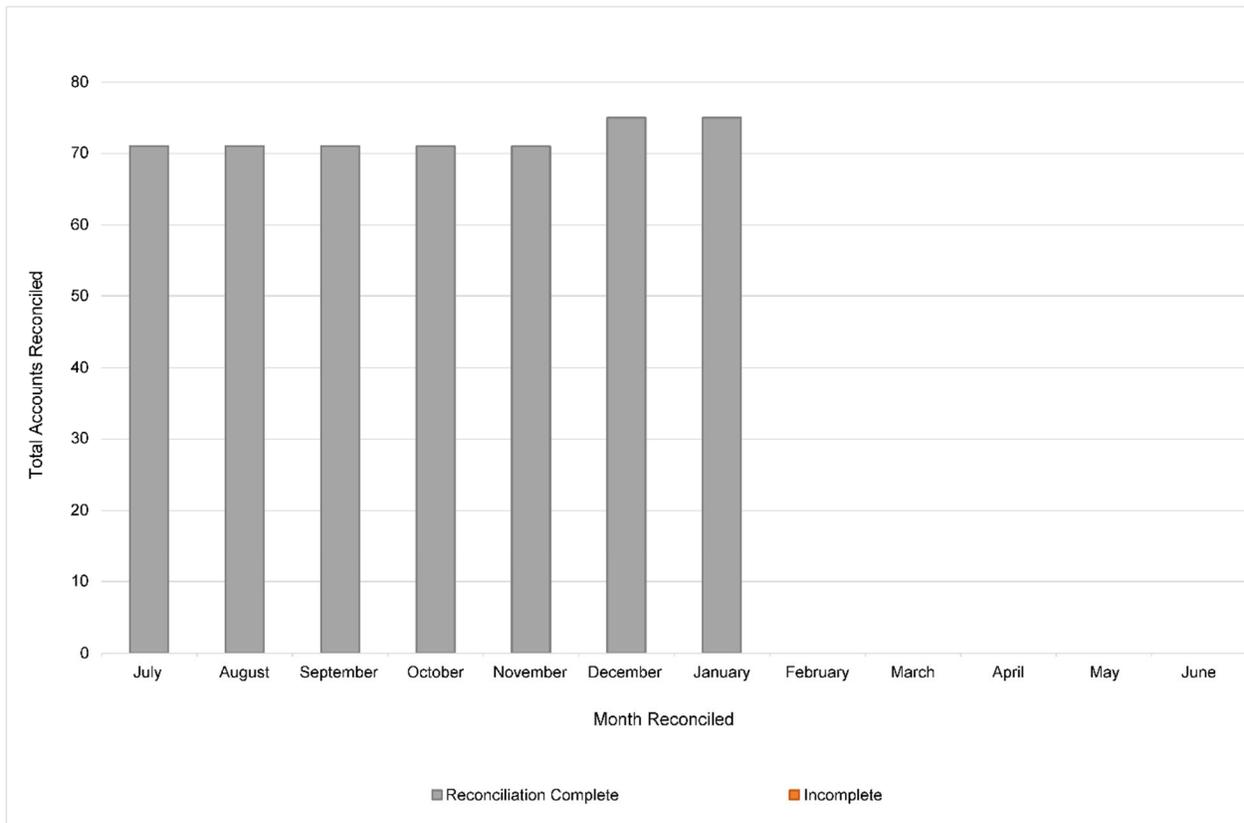


Table 1 – Fiscal Year 2024 GL Cash Account Rollforward

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 January 31, 2024	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 630 and Sewer at 568 days cash on hand as of January 31, 2024. 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>January 31, 2024</u>	<u>Projected June 30, 2024</u>
Water Fund			
Cash and Investments - Unrestricted	\$ 243,707,000	\$ 278,913,000	\$ 228,800,000
Operating Expense			
Operating Expense (a)	\$ 285,220,000	\$ 177,548,000	\$ 304,367,000
Less: Depreciation (a)	(126,486,000)	(80,325,000)	(137,700,000)
Less: Amortization of Intangible Asset (a)	(3,567,000)	(2,081,000)	(3,567,000)
Net Operating Expense	\$ 155,167,000	\$ 95,142,000	\$ 163,101,000
Operating Expense per Day	\$ 425,000	\$ 443,000	\$ 447,000
Days Cash			
Number of Days Cash	573	630	512
Sewage Disposal Fund			
Cash and Investments - Unrestricted	\$ 302,270,000	\$ 339,158,000	\$ 306,100,000
Operating Expense			
Operating Expense (a)	\$ 375,567,000	\$ 224,950,000	\$ 385,628,000
Less: Depreciation (a)	(163,471,000)	(96,542,000)	(165,500,000)
Less: Amortization of Intangible Asset (a)	(440,000)	-	-
Net Operating Expense	\$ 211,657,000	\$ 128,408,000	\$ 220,128,000
Operating Expense per Day	\$ 580,000	\$ 597,000	\$ 603,000
Days Cash			
Number of Days Cash	521	568	508
Combined			
Cash and Investments - Unrestricted	\$ 545,977,000	\$ 618,071,000	\$ 534,900,000
Operating Expense			
Operating Expense (a)	\$ 660,787,000	\$ 402,497,000	\$ 689,996,000
Less: Depreciation (a)	(289,957,000)	(176,867,000)	(303,200,000)
Less: Amortization of Intangible Asset (a)	(4,006,000)	(2,081,000)	(3,567,000)
Net Operating Expense	\$ 366,824,000	\$ 223,550,000	\$ 383,229,000
Operating Expense per Day	\$ 1,005,000	\$ 1,040,000	\$ 1,050,000
Days Cash			
Number of Days Cash	543	594	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 Seven Months Ended January 31, 2024**

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	\$ 9,388	\$ 5,743	\$ 15,131
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	995	1,948	2,943
Prior year pension contribution accounted for in current year (d)	(2,403)	(4,300)	(6,703)
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	43,958	74,581	118,539
Accelerated pension B&C notes obligation portion (g)	125	281	406
Regional System lease (h)	3,440	4,205	7,645
GASB 87 & GASB 96 adjustments (h)	3,029	232	3,260
WRAP (i)	(695)	(756)	(1,451)
Extraordinary Repair & Replacement Fund transfers (j)	-	-	-
Improvement & Extension Fund transfers (j)	12,593	14,545	27,138
Nonbudgeted financial reporting categories adjustments			
Depreciation and amortization (k)	(75,891)	(93,488)	(169,379)
Amortization - debt related (k)	7,544	(2,147)	5,397
Other nonoperating income (k)	-	-	-
Other nonoperating expense (k)	-	2,866	2,866
Gain(loss) on disposal of capital assets (k)	(4)	16	12
Raw water rights obligation (l)	1,714	-	1,714
Investment earnings for construction fund (m)	4,273	5,161	9,434
Interest on DWSD note receivable (n)	-	-	-
Investment earnings unrealized gain/loss (o)	1,305	2,617	3,922
Improvement & extension fund operating expenses (p)	(633)	(1,687)	(2,320)
Net Position Increase/(Decrease) per Financial Statements (b)	\$ 8,738	\$ 9,817	\$ 18,555

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 January 2024, the water system incurred \$98 million of construction costs to date. This spend represents 70% 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

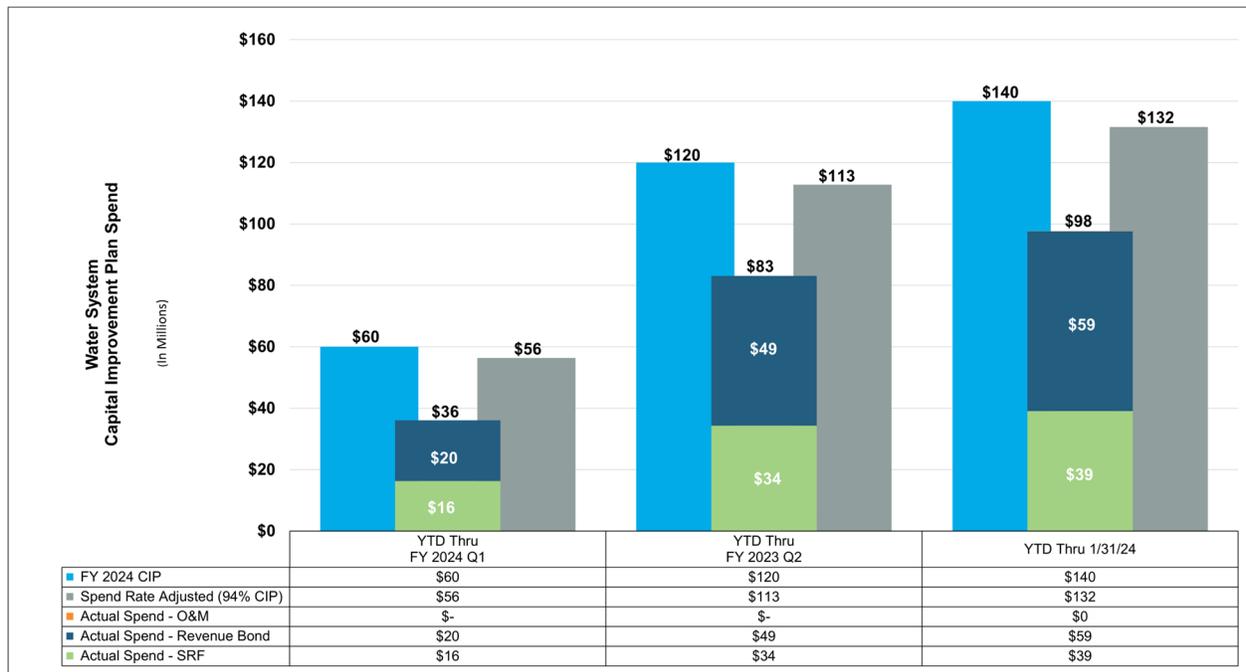


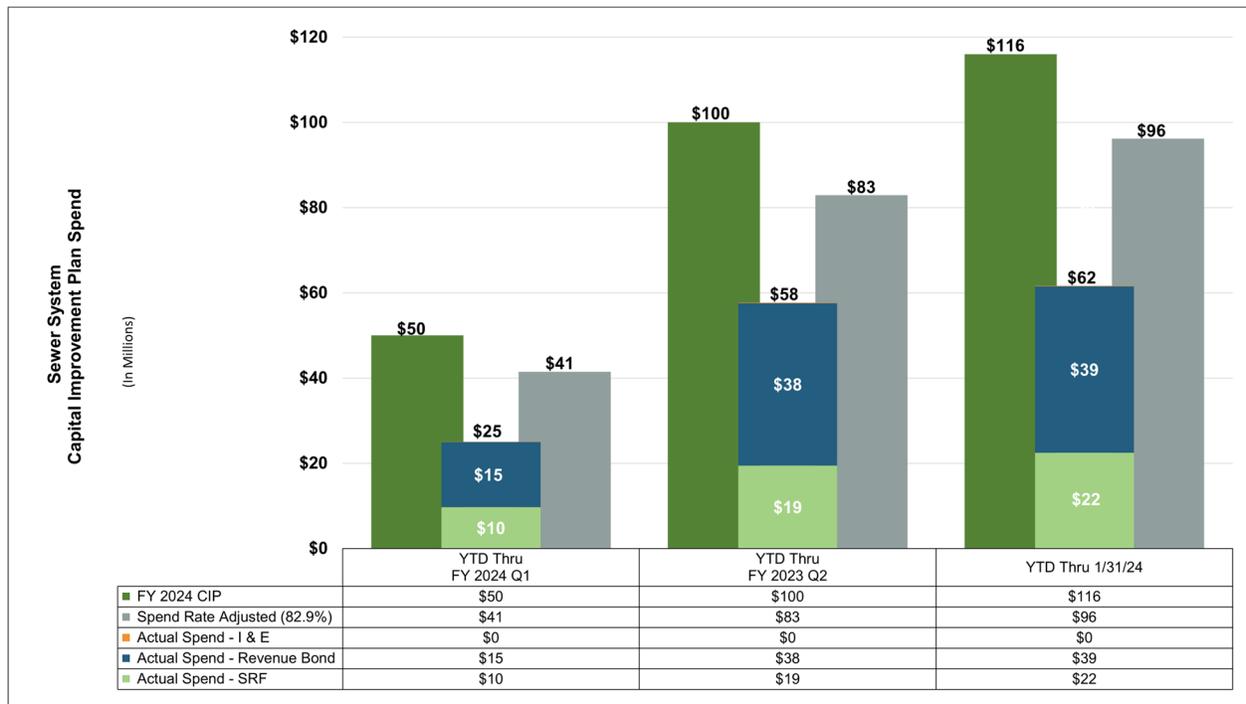
Chart 2 – Sewer System Capital Improvement Plan Spend Incurred to Date

As of January 2024, the Sewer system incurred \$62 million of construction costs to date. This spend represents 53% of the original Board approved FY 2024 CIP plan and 64% 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 64% of that Board approved spend rate adjusted.

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





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 January 2024. MBO transfers for water totaling \$99.3 million have been transferred to GLWA accounts. In January 2024, an adjustment was made to the non-operating pension to reflect a reduction in the required contribution for FY24. The non-operating pension requirement has been fully funded for the fiscal year.

Table 2 – GLWA FY 2024 Sewer MBO Transfers reflects the required transfers for FY 2024 completed through January 2024. MBO transfers for sewer totaling \$134.6 million have been transferred to GLWA accounts. In January 2024, an adjustment was made to the non-operating pension to reflect a reduction in the required contribution for FY24. The non-operating pension requirement has been fully funded for the fiscal year.

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	18,688,752	-	(328,148)	225,895	-	-	18,586,499
February 2024							
March 2024							
April 2024							
May 2024							
June 2024							
Total FY 2024	\$ 95,141,952	\$ -	\$ 2,568,700	\$ 1,580,950	\$ -	\$ -	\$99,291,602

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	25,586,377	-	(180,254)	319,702	-	-	25,725,825
February 2024							
March 2024							
April 2024							
May 2024							
June 2024							
Total FY 2024	\$ 128,408,227	-	\$3,914,500	\$2,237,902	\$ -	\$ -	\$134,560,629

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)	95,141,952	-	2,568,700	1,580,950	-	-	99,291,602
Life to Date	\$1,082,847,764	\$ 48,362,300	\$ 87,337,275	\$ 19,155,254	\$ 2,686,900	\$ 2,806,000	\$1,243,195,493

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)	128,408,227	-	3,914,500	2,237,902	-	-	134,560,629
Life to Date	\$1,547,544,319	\$ 86,620,800	\$ 120,091,909	\$ 27,241,598	\$ 8,246,100	\$ 779,600	\$1,790,524,326

All amounts are unaudited unless otherwise noted.

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 January 2024. MBO transfers for Water totaling \$39.2 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 January 2024. MBO transfers for Sewer totaling \$48.5 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	3,731,400	-	1,875,000	5,606,400
February 2024				
March 2024				
April 2024				
May 2024				
June 2024				
Total FY 2024	\$ 26,119,800	-	\$ 13,125,000	\$ 39,244,800

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	4,642,142	-	2,291,667	6,933,809
February 2024				
March 2024				
April 2024				
May 2024				
June 2024				
Total FY 2024	\$ 32,494,994	-	\$ 16,041,669	\$ 48,536,663

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	26,119,800	-	13,125,000	39,244,800
Offset to Debt Service	-	-	-	-
Net MBO Transfer	26,119,800	-	13,125,000	39,244,800
Life-to-Date				
MBO/Lease Requirement	299,512,704	34,157,100	193,125,000	526,794,804
Offsets	-	-	(31,847,900)	(31,847,900)
Total Water	299,512,704	34,157,100	161,277,100	494,946,904

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 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	32,494,992	-	16,041,669	48,536,661
Offset to Debt Service	-	-	-	-
Total MBO Transfer	32,494,992	-	16,041,669	48,536,661
Life-to-Date				
MBO/Lease Requirement	456,047,404	22,859,800	236,041,669	714,027,326
Offsets	(7,100,000)	-	(51,780,661)	(57,959,114)
Total Sewer	448,947,404	22,859,800	184,261,008	656,068,212

* 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

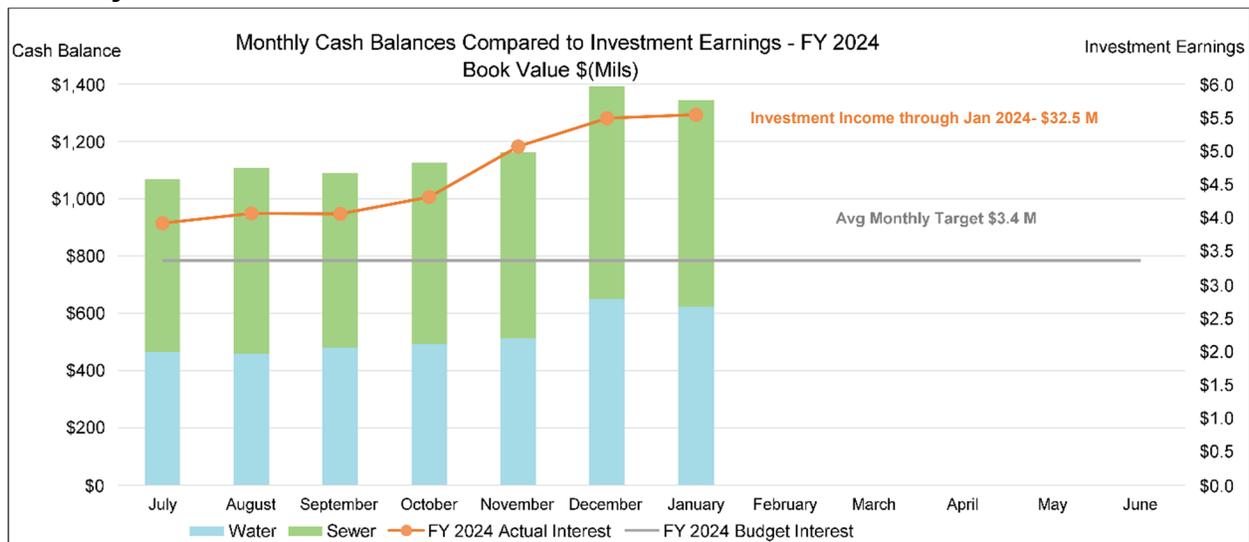
Monthly Cash Balances Compared to Investment Income

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 January 2024, GLWA earned investment income of \$5.5 million and cumulative FY 2024 earnings through January 2024 of \$32.5 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 January 2024



\$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	\$466	\$459	\$481	\$492	\$513	\$651	\$623	-	-	-	-	-
Sewer	\$602	\$649	\$609	\$635	\$650	\$743	\$722	-	-	-	-	-
Total	\$1,068	\$1,107	\$1,090	\$1,127	\$1,162	\$1,393	\$1,346	-	-	-	-	-
Investment Income	\$3.9	\$4.1	\$4.1	\$4.3	\$5.1	\$5.5	\$5.5	-	-	-	-	-

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:

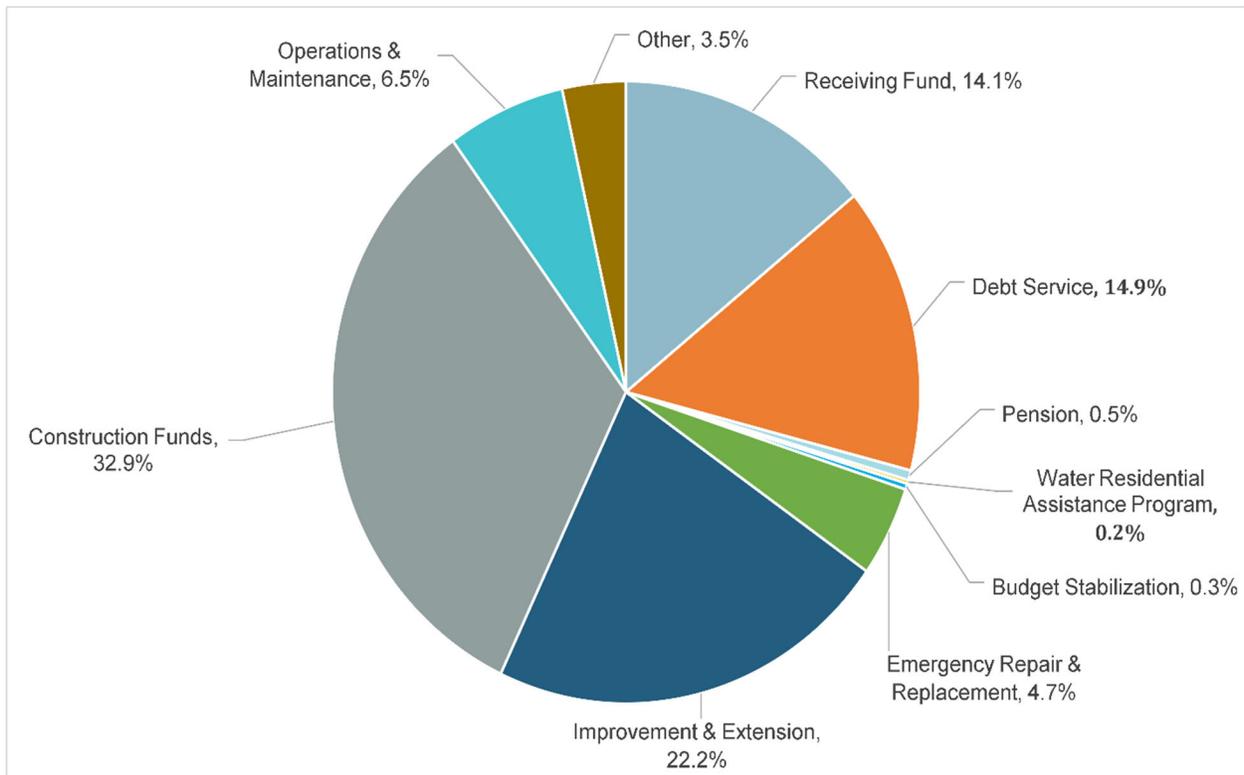
- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors, 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 January 31, 2024 is \$623 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 January 2024

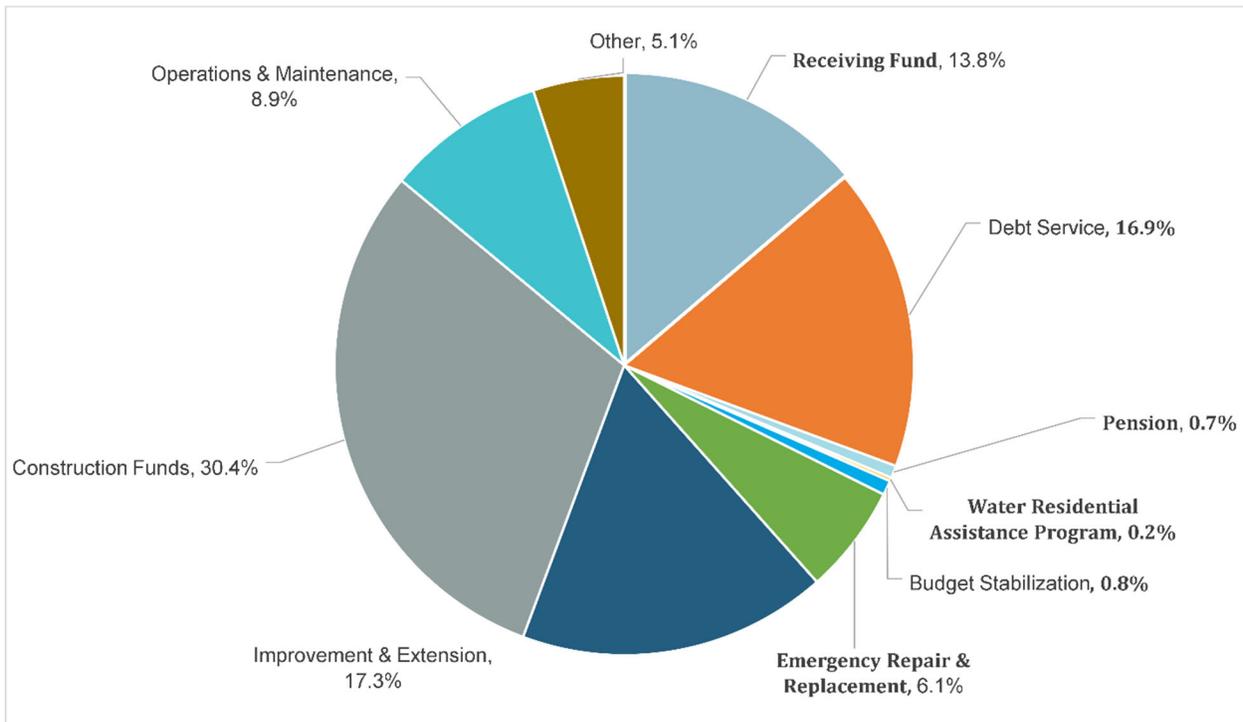


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of January 2024 - Shows the allocation of the balance among the different funds defined in the section above. The total cash balance for Sewer Funds as of January 31, 2024 is \$722 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 January 2024



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 January 31, 2024, the DWSD usage was at 103.69% of the budget and billed revenue was at 103.85% 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	226,734	11,532,351	29,734	1,198,351	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	1,592,650	81,726,806	56,650	3,028,606	2,794,614	135,615,003
Subtotals ytd	1,536,000	78,698,200	1,592,650	81,726,806	56,650	3,028,606		
Achievement of Budget			103.69%	103.85%				

(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
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%
January	8,506,008	8,857,268	(351,261)	-3.97%
Rolling, 12-Month Total	123,792,291	112,543,746		
Rolling, 12-Month Average	10,316,024	9,378,646		

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 January 31, 2024, the DWSD usage was at 100.73% of the budget and billed revenue was at 98.42% 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	182,643	27,322,246	16,643	152,246	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	1,296,341	194,456,210	9,341	(3,125,490)	2,281,218	327,624,524
Subtotals ytd	1,287,000	197,581,700	1,296,341	194,456,210	9,341	(3,125,490)		
Achievement of Budget/Goal			100.73%	98.42%				

(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
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%
January	26,248,512	23,760,629	2,487,883	10.47%
Rolling 12-Month Total	302,617,327	292,852,275		
Rolling, 12-Month Average	25,218,111	24,404,356		

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 January 31, 2024 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 January 31, 2024 with comparative totals from January 31, 2023. 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 January 31, 2024 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	
January 31, 2024 (2)	\$ 35,389,000	\$ 297,500,000	\$ (241,968,000)	\$ 55,533,000	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	\$ 851.64	\$ 14,175,000 7.7%	\$ 10,120,000 5.5%	\$ 34,762,000 18.8%	\$ 125,576,000 68.0%	\$ 184,633,000 100.0%
Commercial	21,376	1,123.42	6,175,000 25.7%	2,171,000 9.0%	6,359,000 26.5%	9,310,000 38.8%	24,014,000 100.0%
Industrial	3,675	3,594.23	5,484,000 41.5%	973,000 7.4%	2,156,000 16.3%	4,597,000 34.8%	13,209,000 100.0%
Tax Exempt	3,791	623.47	515,000 21.8%	216,000 9.1%	520,000 22.0%	1,112,000 47.1%	2,364,000 100.0%
Government	47,740	379.37	3,414,000 18.8%	1,062,000 5.9%	1,578,000 8.7%	12,057,000 66.6%	18,111,000 100.0%
Drainage	45,146	575.07	2,159,000 8.3%	1,242,000 4.8%	4,333,000 16.7%	18,229,000 70.2%	25,962,000 100.0%
Subtotal - Active Accounts	338,525	\$ 792.54	\$ 31,921,000 11.9%	\$ 15,783,000 5.9%	\$ 49,708,000 18.5%	\$ 170,881,000 63.7%	\$ 268,293,000 100.0%
Inactive Accounts	344,950	84.67	91,000 0.3%	159,000 0.5%	1,479,000 5.1%	27,479,000 94.1%	29,207,000 100.0%
Total	683,475	\$ 435.28	\$ 32,012,000 10.8%	\$ 15,942,000 5.4%	\$ 51,187,000 17.2%	\$ 198,360,000 66.7%	\$ 297,500,000 100.0%
<i>% of Total A/R</i>							
Water Fund	254,309	232.76	\$ 8,995,000	\$ 3,713,000	\$ 11,599,000	\$ 34,886,000	\$ 59,192,000
Sewer Fund	317,007	751.74	\$ 23,017,000	\$ 12,229,000	\$ 39,587,000	\$ 163,474,000	\$ 238,308,000
Total January 31, 2024 (a)	683,475	\$ 435.28	\$ 32,012,000	\$ 15,942,000	\$ 51,187,000	\$ 198,360,000	\$ 297,500,000
Water Fund- Allowance							\$ (46,041,000)
Sewer Fund- Allowance							\$ (195,926,000)
Total Bad Debt Allowance							\$ (241,968,000)
Comparative - January 2023 (b)	660,419	\$ 485.76	\$ 34,426,000	\$ 17,518,000	\$ 49,128,000	\$ 219,733,000	\$ 320,806,000
Difference (a) - (b)	23,056		\$ (2,414,000)	\$ (1,576,000)	\$ 2,059,000	\$ (21,374,000)	\$ (23,306,000)

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 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 January 31, 2024, the billed usage was at 94.57% of the original plan and billed revenue at 97.80% 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 above the prior year for the twelve-month period ending January 31, 2024.

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	984,406	27,231,881	20,634	229,281	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	7,780,525	201,239,342	(447,071)	(4,522,158)	13,812,817	342,896,802
Subtotals ytd	8,227,596	205,761,500	7,780,525	201,239,342	(447,071)	(4,522,158)		
Achievement of Original Plan			94.57%	97.80%				
Billing Adjustments (5)			8,009	109,342				
			7,788,534	201,348,684				
			100.23%	99.80%				

- (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
February	26,553,529	24,919,847	(24,919,847)	-100.00%
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%
January	24,448,936	19,182,054	5,266,882	27.46%
Rolling 12-Month Total	335,883,688	322,759,047		
Rolling, 12-Month Average	27,990,307	26,896,587		

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 January 31, 2024 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 above the twelve-month period ending January 31, 2024.

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	23,494,800	N/A	-	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		164,463,600		-		274,657,200
Subtotals ytd		164,463,600		164,463,600		-		
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
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%
January	21,117,470	17,636,972	3,480,498	19.73%
Rolling 12-Month Total	288,134,948	260,519,914		
Rolling, 12-Month Average	24,011,246	21,709,993		

City of Highland Park Billings and Collections

Until the signing of The City of Highland Park was 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. The agreement was This monthly financial report will reflect the impacts of that term sheet and agreement moving forward as implementation steps occur.

As of January 31, 2024, Highland Park had a delinquent balance of \$55.3 million, including \$40.6 million for wastewater treatment services, \$1.9 million for industrial waste control services, and \$12.8 million for water supply services.

Table 5 - City of Highland Park Billings and Collections provides a life-to-date balance summary of the billing and collection history for Highland Park with detail provided for fiscal year 2024 through January 31, 2024. 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
January 31, 2023 Balance		11,686,502	40,789,692	1,846,268	54,322,462
February 2023 Billing	January 2023	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	February 2023	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	March 2023	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	April 2023	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	May 2023	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	June 2023	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	July 2023	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	August 2023	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	September 2023	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	October 2023	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	November 2023	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
January 2024 Billing	December 2023	102,136	464,200	4,006	570,342
January 2024 Payments		-	(450,270)	-	(450,270)
January 31, 2024 Balance		12,842,889	40,558,058	1,893,748	55,294,695

All amounts are unaudited unless otherwise noted.

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 January 31, 2024.

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 \$682 thousand and an additional account reports a past due of \$1 thousand, with both balances paid in February. The remaining past due account is under review.

The IWC past due balance includes one account that was fully paid in February. 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	\$ 55,511,077.42	\$ 34,705,886.53	\$ 1,702,974.41	\$ 1,569,760.51	\$ 17,532,455.97
Sewer	\$ 59,210,264.49	\$ 19,116,406.33	\$ 464,200.00	\$ 464,200.00	\$ 39,165,458.16
IWC	\$ 2,401,237.44	\$ 512,303.22	\$ 7,209.25	\$ -	\$ 1,881,724.97
Pollutant Surcharge	\$ 337,746.20	\$ 337,700.62	\$ (3,569.75)	\$ 1,039.57	\$ 2,575.76
Total	\$ 117,460,325.55	\$ 54,672,296.70	\$ 2,170,813.91	\$ 2,035,000.08	\$ 58,582,214.86
	100.00%	46.55%	1.85%	1.73%	49.87%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 42,668,188.17	\$ 34,497,097.24	\$ 1,593,670.56	\$ 1,453,656.21	\$ 5,123,764.16
Sewer	\$ 18,652,206.33	\$ 18,652,206.33	\$ -	\$ -	\$ -
IWC	\$ 507,489.55	\$ 504,307.96	\$ 3,181.59	\$ -	\$ -
Pollutant Surcharge	\$ 337,746.20	\$ 337,700.62	\$ (3,569.75)	\$ 1,039.57	\$ 2,575.76
Total	\$ 62,165,630.25	\$ 53,991,312.15	\$ 1,593,282.40	\$ 1,454,695.78	\$ 5,126,339.92
	100.00%	86.85%	2.56%	2.34%	8.25%

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

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 33,519,745.22	\$ 32,791,492.28	\$ 382,192.16	\$ 346,060.78	\$ -
Sewer	\$ 18,652,206.33	\$ 18,652,206.33	\$ -	\$ -	\$ -
IWC	\$ 507,489.55	\$ 504,307.96	\$ 3,181.59	\$ -	\$ -
Pollutant Surcharge	\$ 337,746.20	\$ 337,700.62	\$ (3,569.75)	\$ 1,039.57	\$ 2,575.76
Total	\$ 53,017,187.30	\$ 52,285,707.19	\$ 381,804.00	\$ 347,100.35	\$ 2,575.76
	100.00%	98.62%	0.72%	0.65%	0.00%

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 seven months of activity to date.

Water fund receipts exceeded required disbursements by 9% through January 31, 2024 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 1% through January 31, 2024 in line with the four-year historical average ratio of required receipts exceeding disbursements by 6% 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 Jan 31
Water					
1 Receipts	\$ 332,606,196	\$ 336,642,021	\$ 338,117,694	\$ 363,335,474	\$ 226,280,413
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	332,606,196	336,642,021	338,117,694	363,335,474	226,280,413
4 Disbursements	(296,190,425)	(308,713,407)	(316,495,360)	(349,186,375)	(208,049,127)
5 Receipts Net of Required Transfers	36,415,771	27,928,614	21,622,334	14,149,099	18,231,286
6 I&E Transfer	(25,719,751)	(31,991,687)	(26,622,862)	(9,898,100)	(23,221,476)
7 Net Receipts	\$ 10,696,020	\$ (4,063,073)	\$ (5,000,528)	\$ 4,250,999	\$ (4,990,190)
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	112%	109%	107%	104%	109%
Sewer					
9 Receipts	\$ 490,461,356	\$ 472,871,853	\$ 471,979,297	\$ 498,888,416	\$ 289,989,417
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	490,461,356	472,871,853	471,979,297	498,888,416	289,989,417
12 Disbursements	(445,604,952)	(436,600,883)	(450,701,751)	(473,516,238)	(287,376,212)
13 Receipts Net of Required Transfers	44,856,404	36,270,970	21,277,546	25,372,178	2,613,205
14 I&E Transfer	(19,096,200)	(40,504,727)	(37,651,788)	(26,766,200)	(6,234,000)
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)	\$ (3,620,794)
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	110%	108%	105%	105%	101%
Combined					
19 Receipts	\$ 823,067,552	\$ 809,513,874	\$ 810,096,991	\$ 862,223,890	\$ 516,269,830
20 MOU Adjustments	-	-	-	-	-
21 Adjusted Receipts	823,067,552	809,513,874	810,096,991	862,223,890	516,269,830
22 Disbursements	(741,795,377)	(745,314,290)	(767,197,111)	(822,702,613)	(495,425,339)
23 Receipts Net of Required Transfers	81,272,175	64,199,584	42,899,880	39,521,277	20,844,491
24 I&E Transfer	(44,815,951)	(72,496,414)	(64,274,650)	(36,664,300)	(29,455,476)
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	\$ (8,610,985)
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	111%	109%	106%	105%	104%

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee April 29, 2024

Chart 1 – GLWA 12-Month Net Receipts – Water

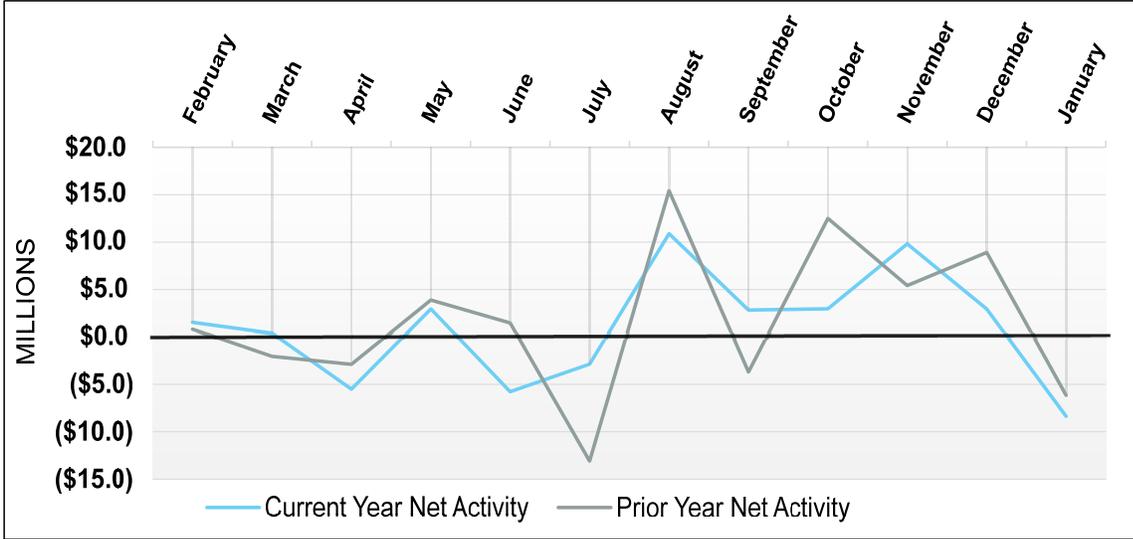
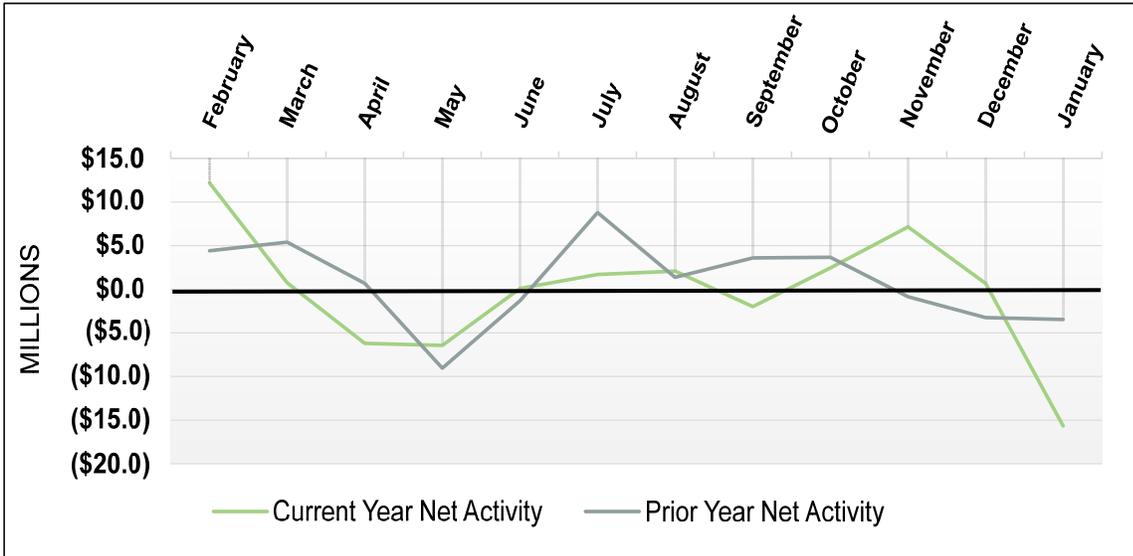


Chart 2 – GLWA 12-Month Net Receipts – Sewer



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 seven months of activity to date.

Water fund receipts exceeded required disbursements by 2% through January 31, 2024 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 6% through January 31, 2024 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 Jan 31
Water					
1 Receipts	\$ 96,885,723	\$ 102,067,423	\$ 101,964,963	\$ 123,766,624	\$ 70,116,135
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	96,885,723	102,067,423	101,964,963	123,766,624	70,116,135
4 Disbursements	(97,823,097)	(100,707,200)	(94,495,601)	(117,666,100)	(68,893,160)
5 Receipts Net of Required Transfers	(937,374)	1,360,223	7,469,362	6,100,524	1,222,975
6 I&E Transfer	-	-	-	-	-
7 Net Receipts	\$ (937,374)	\$ 1,360,223	\$ 7,469,362	\$ 6,100,524	\$ 1,222,975
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	99%	101%	108%	105%	102%
Sewer					
9 Receipts	\$ 264,689,559	\$ 308,210,767	\$ 291,280,896	\$ 298,896,942	\$ 178,403,500
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	264,689,559	308,210,767	291,280,896	298,896,942	178,403,500
12 Disbursements	(275,507,374)	(295,100,771)	(285,256,000)	(283,095,100)	(168,465,228)
13 Receipts Net of Required Transfers	(10,817,815)	13,109,996	6,024,896	15,801,842	9,938,272
14 I&E Transfer	-	-	-	-	-
15 Shortfall Advance from GLWA	-	-	-	-	-
16 Net Receipts	\$ (10,817,815)	\$ 13,109,996	\$ 6,024,896	\$ 15,801,842	\$ 9,938,272
17 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	96%	104%	102%	106%	106%
Combined					
18 Receipts	\$ 361,575,282	\$ 410,278,190	\$ 393,245,859	\$ 422,663,566	\$ 248,519,635
19 MOU Adjustments	-	-	-	-	-
20 Adjusted Receipts	361,575,282	410,278,190	393,245,859	422,663,566	248,519,635
21 Disbursements	(373,330,471)	(395,807,971)	(379,751,601)	(400,761,200)	(237,358,388)
22 Receipts Net of Required Transfers	(11,755,189)	14,470,219	13,494,258	21,902,366	11,161,247
23 I&E Transfer	-	-	-	-	-
24 Shortfall Advance from GLWA	-	-	-	-	-
25 Net Receipts	\$ (11,755,189)	\$ 14,470,219	\$ 13,494,258	\$ 21,902,366	\$ 11,161,247
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

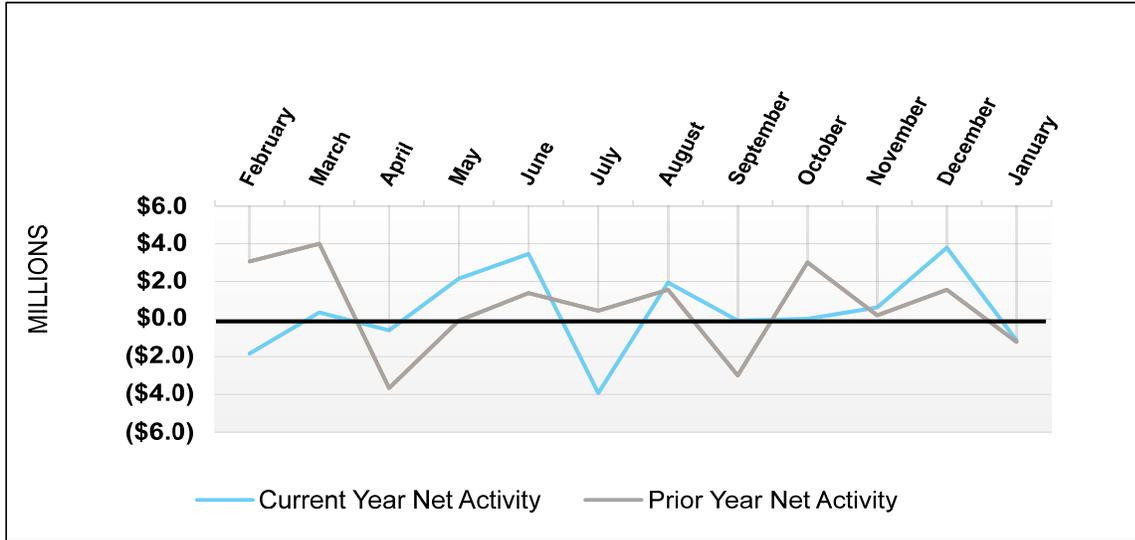
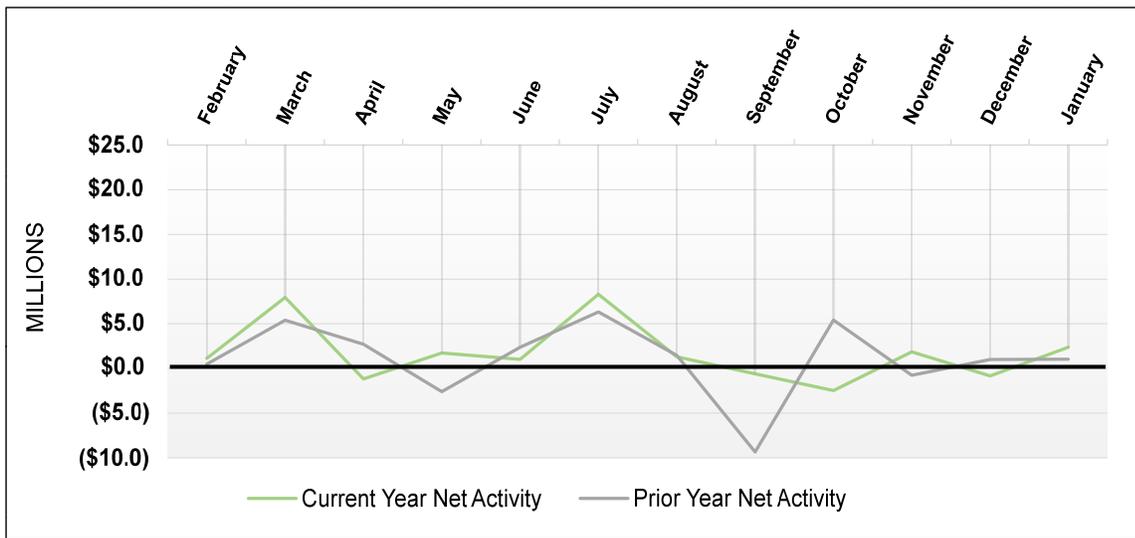


Chart 4 – DWSD 12-Month Net Receipts – Sewer



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 seven months of activity to date.

Water fund net receipts exceeded required disbursements by 7% through January 31, 2024 compared to the four-year historical average ratio of required receipts exceeding disbursements by 7% since July 1, 2019.

Sewer fund receipts exceeded required disbursements by 3% through January 31, 2024 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 Jan 31
Water					
1 Receipts	\$ 429,491,919	\$ 438,709,444	\$ 440,082,657	\$ 487,102,098	\$ 296,396,548
2 MOU Adjustments	-	-	-	-	-
3 Adjusted Receipts	429,491,919	438,709,444	440,082,657	487,102,098	296,396,548
4 Disbursements	(394,013,522)	(409,420,607)	(410,990,961)	(466,852,475)	(276,942,287)
5 Receipts Net of Required Transfers	35,478,397	29,288,837	29,091,696	20,249,623	19,454,261
6 I&E Transfer	(25,719,751)	(31,991,687)	(26,622,862)	(9,898,100)	(23,221,476)
7 Net Receipts	\$ 9,758,646	\$ (2,702,850)	\$ 2,468,834	\$ 10,351,523	\$ (3,767,215)
8 <i>Ratio of Receipts to Required Disbursements (Line 3/Line 4)</i>	109%	107%	107%	104%	107%
Sewer					
9 Receipts	\$ 755,150,915	\$ 781,082,620	\$ 763,260,193	\$ 797,785,358	\$ 468,392,917
10 MOU Adjustments	-	-	-	-	-
11 Adjusted Receipts	755,150,915	781,082,620	763,260,193	797,785,358	468,392,917
12 Disbursements	(721,112,326)	(731,701,654)	(735,957,751)	(756,611,338)	(455,841,440)
13 Receipts Net of Required Transfers	34,038,589	49,380,966	27,302,442	41,174,020	12,551,477
14 I&E Transfer	(19,096,200)	(40,504,727)	(37,651,788)	(26,766,200)	(6,234,000)
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	\$ 6,317,477
18 <i>Ratio of Receipts to Required Disbursements (Line 11/Line 12)</i>	105%	107%	104%	105%	103%
Combined					
19 Receipts	\$ 1,184,642,834	\$ 1,219,792,064	\$ 1,203,342,850	\$ 1,284,887,456	\$ 764,789,465
20 MOU Adjustments	-	-	-	-	-
21 Adjusted Receipts	1,184,642,834	1,219,792,064	1,203,342,850	1,284,887,456	764,789,465
22 Disbursements	(1,115,125,848)	(1,141,122,261)	(1,146,948,712)	(1,223,463,813)	(732,783,727)
23 Receipts Net of Required Transfers	69,516,986	78,669,803	56,394,138	61,423,643	32,005,738
24 I&E Transfer	(44,815,951)	(72,496,414)	(64,274,650)	(36,664,300)	(29,455,476)
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	\$ 2,550,262
28 <i>Ratio of Receipts to Required Disbursements (Line 21/Line 22)</i>	106%	107%	105%	105%	104%

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$223,487.97	\$223,487.97	\$0.00	\$0.00	\$0.00
ALMONT VILLAGE	\$22,002.69	\$22,002.69	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$72,155.51	\$72,155.51	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$122,349.22	\$122,349.22	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$326,362.61	\$326,362.61	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$22,925.06	\$22,925.06	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$36,934.85	\$36,934.85	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$988,090.15	\$988,090.15	\$0.00	\$0.00	\$0.00
CENTER LINE	\$88,337.58	\$88,337.58	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$413,920.93	\$413,920.93	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$667,605.17	\$667,605.17	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$576,238.50	\$576,238.50	\$0.00	\$0.00	\$0.00
DEARBORN	\$9,148,442.95	\$1,705,604.96	\$1,211,478.40	\$1,107,595.43	\$5,123,764.16
DEARBORN HEIGHTS	\$1,356,097.88	\$674,225.72	\$335,811.38	\$346,060.78	\$0.00
EASTPOINTE	\$152,409.86	\$152,409.86	\$0.00	\$0.00	\$0.00
ECORSE	\$102,483.47	\$102,483.47	\$0.00	\$0.00	\$0.00
FARMINGTON	\$173,945.37	\$173,945.37	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$1,526,037.06	\$1,526,037.06	\$0.00	\$0.00	\$0.00
FERNDAL	\$99,081.42	\$99,081.42	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$128,971.86	\$128,971.86	\$0.00	\$0.00	\$0.00
FLINT	\$400,956.26	\$400,956.26	\$0.00	\$0.00	\$0.00
FRASER	\$113,127.13	\$113,127.13	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GARDEN CITY	\$154,882.48	\$154,882.48	\$0.00	\$0.00	\$0.00
GENESEE COUNTY DRAIN COMM	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GIBRALTAR	\$31,458.36	\$31,458.36	\$0.00	\$0.00	\$0.00
GREATER LAPEER CUA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GREENWOOD TWP. (DTE)	\$170,856.91	\$170,856.91	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$105,024.65	\$105,024.65	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$114,372.21	\$114,372.21	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$48,931.05	\$48,931.05	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$109,053.46	\$109,053.46	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$77,337.54	\$77,337.54	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$81,655.18	\$81,655.18	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$151,018.09	\$151,018.09	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$138,077.19	\$136,681.19	\$1,396.00	\$0.00	\$0.00
HIGHLAND PARK	\$12,842,889.25	\$208,789.29	\$109,303.85	\$116,104.30	\$12,408,691.81
HURON TOWNSHIP	\$183,980.43	\$183,980.43	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$107,772.05	\$107,772.05	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP (CHAMPION BUS	\$904.42	\$904.42	\$0.00	\$0.00	\$0.00
INKSTER	\$117,004.45	\$117,004.45	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$26,612.00	\$26,612.00	\$0.00	\$0.00	\$0.00
LAPEER	\$138,862.85	\$138,862.85	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$30,589.29	\$30,589.29	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
LINCOLN PARK	\$214,926.26	\$214,926.26	\$0.00	\$0.00	\$0.00
LIVONIA	\$998,737.24	\$998,737.24	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$2,146,666.64	\$2,146,666.64	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$184,152.97	\$184,152.97	\$0.00	\$0.00	\$0.00
MAYFIELD TOWNSHIP (KAMAX)	\$3,969.38	\$3,969.38	\$0.00	\$0.00	\$0.00
MELVINDALE	\$64,115.48	\$64,115.48	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$40,011.28	\$40,011.28	\$0.00	\$0.00	\$0.00
NOCWA	\$1,900,924.79	\$1,900,924.79	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$130,196.79	\$130,196.79	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$454,939.09	\$454,939.09	\$0.00	\$0.00	\$0.00
NOVI	\$790,546.88	\$790,546.88	\$0.00	\$0.00	\$0.00
OAK PARK	\$131,191.36	\$131,191.36	\$0.00	\$0.00	\$0.00
OAKLAND CO DR COM	\$12,421.17	\$12,421.17	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$190,919.70	\$190,919.70	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$411,894.09	\$411,894.09	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$267,472.56	\$267,472.56	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$43,659.73	\$43,659.73	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$75,519.52	\$75,519.52	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$22,723.34	\$22,723.34	\$0.00	\$0.00	\$0.00
ROMEO	\$35,373.66	\$35,373.66	\$0.00	\$0.00	\$0.00
ROMULUS	\$322,099.72	\$322,099.72	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$242,596.73	\$242,596.73	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$18,245.03	\$18,245.03	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SHELBY TOWNSHIP	\$946,505.34	\$946,505.34	\$0.00	\$0.00	\$0.00
SOCWA	\$4,030,334.84	\$3,985,350.06	\$44,984.78	\$0.00	\$0.00
SOUTH ROCKWOOD	\$10,946.59	\$10,946.59	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$190,652.96	\$190,652.96	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$282,717.57	\$282,717.57	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$1,303,659.93	\$1,303,659.93	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$65,458.41	\$65,458.41	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$20,407.27	\$20,407.27	\$0.00	\$0.00	\$0.00
TAYLOR	\$448,662.60	\$448,662.60	\$0.00	\$0.00	\$0.00
TRENTON	\$164,278.67	\$164,278.67	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,164,320.92	\$1,164,320.92	\$0.00	\$0.00	\$0.00
UTICA	\$51,481.74	\$51,481.74	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$295,922.38	\$295,922.38	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$70,984.84	\$70,984.84	\$0.00	\$0.00	\$0.00
WARREN	\$856,676.73	\$856,676.73	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$192,579.57	\$192,579.57	\$0.00	\$0.00	\$0.00
WAYNE	\$166,714.92	\$166,714.92	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,846,375.28	\$1,846,375.28	\$0.00	\$0.00	\$0.00
WESTLAND	\$1,083,161.57	\$1,083,161.57	\$0.00	\$0.00	\$0.00
WIXOM	\$257,935.77	\$257,935.77	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$127,941.56	\$127,941.56	\$0.00	\$0.00	\$0.00
YCUA	\$1,836,809.19	\$1,836,809.19	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL WATER ACCOUNTS	\$55,511,077.42	\$34,705,886.53	\$1,702,974.41	\$1,569,760.51	\$17,532,455.97

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 01/31/24

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	\$0.00	\$0.00	\$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	\$346,100.00	\$346,100.00	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$40,558,058.16	\$464,200.00	\$464,200.00	\$464,200.00	\$39,165,458.16
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	\$6,114,906.83	\$6,114,906.83	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROUGE VALLEY	\$4,789,300.00	\$4,789,300.00	\$0.00	\$0.00	\$0.00
SOUTHEAST MACOMB SANITATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$4,500.00	\$4,500.00	\$0.00	\$0.00	\$0.00
TOTAL SEWER ACCOUNTS	\$59,210,264.49	\$19,116,406.33	\$464,200.00	\$464,200.00	\$39,165,458.16

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 01/31/24

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)	\$11,651.64	\$11,651.64	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O) ADMIN	\$1,990.30	\$1,990.30	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$2,478.84	\$2,478.84	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$5,805.80	\$5,805.80	\$0.00	\$0.00	\$0.00
BLOOMFIELD HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$87.36	\$87.36	\$0.00	\$0.00	\$0.00
CENTER LINE	\$5,345.34	\$5,345.34	\$0.00	\$0.00	\$0.00
CHARTER TOWNSHIP OF INDEPENI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$13,398.84	\$13,398.84	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$205.66	\$205.66	\$0.00	\$0.00	\$0.00
CITY OF FERNDALE	\$9,118.20	\$9,118.20	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$3,812.90	\$3,812.90	\$0.00	\$0.00	\$0.00
CLARKSTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON (C-O) ADMIN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLAWSON	\$3,148.61	\$3,148.61	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$27,871.48	\$27,871.48	\$0.00	\$0.00	\$0.00
DEARBORN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
DEARBORN HEIGHTS	\$23,146.99	\$19,965.40	\$3,181.59	\$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	\$4,153.24	\$4,153.24	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRASER	\$5,077.80	\$5,077.80	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$6,331.78	\$6,331.78	\$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	\$349.44	\$349.44	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$4,273.36	\$4,273.36	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$1,838.20	\$1,838.20	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$476.84	\$476.84	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$6,865.04	\$6,865.04	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,893,747.89	\$7,995.26	\$4,027.66	\$0.00	\$1,881,724.97
HUNTINGTON WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDEPENDENCE (C-O) ADMIN	\$1,330.22	\$1,330.22	\$0.00	\$0.00	\$0.00
INKSTER	\$11,385.92	\$11,385.92	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$710.63	\$710.63	\$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 01/31/24

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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$4,775.68	\$4,775.68	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$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	\$3,993.08	\$3,993.08	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$140.14	\$140.14	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$13,016.64	\$13,016.64	\$0.00	\$0.00	\$0.00
ROCHESTER HILLS	\$19,548.62	\$19,548.62	\$0.00	\$0.00	\$0.00
ROMULUS	\$800.80	\$800.80	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$15,102.36	\$15,102.36	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ROYAL OAK	\$14,084.98	\$14,084.98	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$984.62	\$984.62	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$15,362.62	\$15,362.62	\$0.00	\$0.00	\$0.00
SOUTHFIELD (E-F)	\$29,480.36	\$29,480.36	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$3,434.34	\$3,434.34	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$12,456.08	\$12,456.08	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$33,085.78	\$33,085.78	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$393.12	\$393.12	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$38,789.66	\$38,789.66	\$0.00	\$0.00	\$0.00
UTICA	\$6,249.88	\$6,249.88	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$4,899.44	\$4,899.44	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VILLAGE OF LAKE ORION	\$822.64	\$822.64	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP DPW	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WATERFORD TOWNSHIP DPW (ADMI	\$3,281.45	\$3,281.45	\$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)	\$12,433.39	\$12,433.39	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP. (C-O) A	\$482.67	\$482.67	\$0.00	\$0.00	\$0.00
WESTLAND	\$23,636.34	\$23,636.34	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
TOTAL IWC ACCOUNTS	\$2,401,237.44	\$512,303.22	\$7,209.25	\$0.00	\$1,881,724.97

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

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	\$1,941.61	\$1,941.61	\$0.00	\$0.00	\$0.00
AACTRON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ACADEMY PACKING CO.	\$184.58	\$184.58	\$0.00	\$0.00	\$0.00
ACME RUSTPROOF	\$149.34	\$74.29	\$41.78	\$33.27	\$0.00
ADORING PET FUNERAL HOME	\$176.77	\$176.77	\$0.00	\$0.00	\$0.00
ADVANCE ENGINEERING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AEVITAS SPECIALITY SERVICES	\$483.73	\$483.73	\$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	\$48.66	\$48.66	\$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.	\$9,710.94	\$9,710.94	\$0.00	\$0.00	\$0.00
APPLIED TECHNOLOGY INDUSTRIE	\$974.14	\$974.14	\$0.00	\$0.00	\$0.00
ATWATER IN THE PARK	\$8.22	\$8.22	\$0.00	\$0.00	\$0.00
AUTOMOTIVE FINISH	\$8.62	\$8.62	\$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	\$46.57	\$46.57	\$0.00	\$0.00	\$0.00
BAFFIN BREWING COMPANY	\$204.35	\$77.17	\$0.00	\$127.18	\$0.00
BARON INDUSTRIES	\$1,178.61	\$1,178.61	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BARTZ BAKERY	\$30.75	\$30.75	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$62.50	\$62.50	\$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	\$11,398.23	\$11,398.23	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$61.25	\$0.00	\$0.00	\$0.00	\$61.25
BOZEK'S MARKET	\$(2,218.93)	\$0.00	\$0.00	\$0.00	\$(2,218.93)
BREW DETROIT	\$5,984.13	\$5,984.13	\$0.00	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROOKS BREWING, LLC.	\$20.55	\$20.55	\$0.00	\$0.00	\$0.00
BROWN IRON BREWHOUSE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CADILLAC STRAITS BREWING CO.	\$30.57	\$30.57	\$0.00	\$0.00	\$0.00
CANTON BREW WORKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAPITOL REPRODUCTIONS	\$(0.99)	\$0.00	\$(0.99)	\$0.00	\$0.00
CF BURGER CREAMERY	\$21,612.79	\$21,612.79	\$0.00	\$0.00	\$0.00
CHARTER TOWNSHIP OF CLINTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CHIEFTAN COATING, LLC.	\$2,712.05	\$2,712.05	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$269.19	\$28.38	\$17.74	\$13.01	\$210.06
CINTAS CORP. - MACOMB TWP.	\$33,495.78	\$33,495.78	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$11,816.06	\$11,816.06	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$4,470.01	\$4,470.01	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
CITY LAUNDRY, INC.	\$12.55	\$12.55	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$116.35	\$116.35	\$0.00	\$0.00	\$0.00
CLEAN EARTH OF MICHIGAN, LLC	\$25.52	\$25.52	\$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.	\$83.30	\$83.30	\$0.00	\$0.00	\$0.00
DANA CONTAINER, INC.	\$497.39	\$497.39	\$0.00	\$0.00	\$0.00
DARLING INGREDIENTS, INC.	\$4,549.22	\$4,549.22	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$355.53	\$355.53	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$48.75	\$18.04	\$0.00	\$30.71	\$0.00
DEARBORN SAUSAGE	\$5,960.36	\$5,960.36	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$8,886.37	\$8,886.37	\$0.00	\$0.00	\$0.00
DETROIT BEER CO.	\$148.27	\$81.21	\$0.00	\$67.06	\$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	\$604.29	\$604.29	\$0.00	\$0.00	\$0.00
DETROIT SAUSAGES CO INC	\$ (46.08)	\$0.00	\$ (46.08)	\$0.00	\$0.00
DETRONIC INDUSTRIES, INC.	\$25.38	\$25.38	\$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 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
DIVERSIFIED CHEM TECH. INC.	\$173.94	\$173.94	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$2,584.76	\$2,584.76	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$1,326.39	\$1,326.39	\$0.00	\$0.00	\$0.00
DOWNEY BREWING COMPANY	\$14.49	\$14.49	\$0.00	\$0.00	\$0.00
DUBOIS CHEMICALS, INC.	\$1,109.29	\$1,109.29	\$0.00	\$0.00	\$0.00
E & E MANUFACTURING CO, PLAN	\$225.37	\$130.86	\$94.51	\$0.00	\$0.00
E & E MANUFACTURING CO, PLAN	\$147.83	\$147.83	\$0.00	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$4,007.40	\$4,007.40	\$0.00	\$0.00	\$0.00
EASTERN MARKET BREWING COMP	\$6.85	\$6.85	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$460.92	\$460.92	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$2,642.73	\$2,642.73	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$3.23	\$3.23	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$(0.01)	\$0.00	\$0.00	\$0.00	\$(0.01)
ETON ST BREWERY- GRIFFIN CL	\$1,369.83	\$1,369.83	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$164.65	\$164.65	\$0.00	\$0.00	\$0.00
EXTRUDEHODE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON BREWING COMPANY	\$7.34	\$7.34	\$0.00	\$0.00	\$0.00
FAYGO BEVERAGES, INC.	\$2,272.31	\$2,272.31	\$0.00	\$0.00	\$0.00
FITZGERALD FINISHING LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FIVES CINETIC CORP.	\$2,238.92	\$2,238.92	\$0.00	\$0.00	\$0.00
FORD MOTOR CO- STERLING PLAN	\$1,227.67	\$1,227.67	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

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	\$510.22	\$510.22	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$5,286.66	\$5,286.66	\$0.00	\$0.00	\$0.00
GENERAL MOTORS, LLC ROMULUS	\$1,008.37	\$1,008.37	\$0.00	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$15.43	\$15.43	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$36.59	\$36.59	\$0.00	\$0.00	\$0.00
GREAT BARABOO BREWING CO.	\$76.72	\$76.72	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$243.19	\$243.19	\$0.00	\$0.00	\$0.00
HACIENDA MEXICAN FOODS	\$1,221.99	\$868.25	\$353.74	\$0.00	\$0.00
HENKEL CORPORATION	\$96.02	\$96.02	\$0.00	\$0.00	\$0.00
HENRY FORD MACOMB HOSPITAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOME STYLE FOOD INC.	\$3,704.28	\$2,567.87	\$1,136.41	\$0.00	\$0.00
HEMIGROWN BREWING COMPANY	\$78.43	\$34.25	\$0.00	\$44.18	\$0.00
HOODS CLEANERS	\$211.33	\$0.00	\$0.00	\$0.00	\$211.33
HUNTINGTON CLEANERS	\$144.07	\$144.07	\$0.00	\$0.00	\$0.00
IDP, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
INDUSTRIAL METAL COATING	\$99.53	\$99.53	\$0.00	\$0.00	\$0.00
INTRASTATE DISTRIBUTORS	\$612.04	\$612.04	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$273.18	\$273.18	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

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.	\$46.58	\$21.92	\$0.00	\$24.66	\$0.00
JELD-WEN, INC.	\$418.44	\$418.44	\$0.00	\$0.00	\$0.00
KAR NUT PRODUCTS	\$1,973.46	\$1,973.46	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$452.94	\$452.94	\$0.00	\$0.00	\$0.00
KUHNHENN BREWING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$652.78	\$652.78	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$36.26	\$36.26	\$0.00	\$0.00	\$0.00
LEAR CORPORATION DBA EAGLE C	\$230.75	\$230.75	\$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	\$34.25	\$34.25	\$0.00	\$0.00	\$0.00
LIQUID ENVIRONMENTAL OF ILLI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LIQUID ENVIRONMENTAL SOLUTIC	\$185.73	\$185.73	\$0.00	\$0.00	\$0.00
MACDERMID, INC.	\$816.94	\$816.94	\$0.00	\$0.00	\$0.00
MCCLURE'S PICKLES	\$388.01	\$388.01	\$0.00	\$0.00	\$0.00
MCGEAN CHEMICALS	\$152.59	\$152.59	\$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	\$462.41	\$462.41	\$0.00	\$0.00	\$0.00
MIBA HYDRAMECHANICA CORP.	\$629.24	\$629.24	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$34,606.88	\$34,606.88	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$2,453.44	\$2,453.44	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

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	\$529.21	\$529.21	\$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	\$89.05	\$89.05	\$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.	\$527.86	\$527.86	\$0.00	\$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	\$ (237.73)	\$0.00	\$0.00	\$ (237.73)	\$0.00
OAKWOOD BAKERY	\$31.12	\$31.12	\$0.00	\$0.00	\$0.00
OLIVER HATCH CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PACKAGING CORPORATION OF AME	\$1,173.63	\$1,173.63	\$0.00	\$0.00	\$0.00
PARKEDALE PHARMACEUTICALS/PE	\$153.47	\$153.47	\$0.00	\$0.00	\$0.00
PARKER'S HILLTOP BREWER & SE	\$26.92	\$26.92	\$0.00	\$0.00	\$0.00
PELLERITO FOODS INC.	\$ (8.39)	\$0.00	\$ (8.39)	\$0.00	\$0.00
PEPSI COLA, INC.	\$6,565.16	\$6,565.16	\$0.00	\$0.00	\$0.00
PERDUE PREMIUM MEAT COMPANY	\$ (10,287.98)	\$0.00	\$ (10,287.98)	\$0.00	\$0.00
PERDUE PREMIUM MEAT COMPANY	\$ (6,508.41)	\$0.00	\$ (6,508.41)	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
PERDUE PREMIUM MEAT COMPANY	\$ (316.92)	\$0.00	\$ (316.92)	\$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.	\$2,411.64	\$2,411.64	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$704.86	\$704.86	\$0.00	\$0.00	\$0.00
PREMIER PLATING- STERLING HE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$269.79	\$269.79	\$0.00	\$0.00	\$0.00
QUAKER HOUGHTON - PLANT #2	\$45.30	\$45.30	\$0.00	\$0.00	\$0.00
QUAKER HOUGHTON - PLANT #2	\$ (324.38)	\$0.00	\$0.00	\$0.00	\$ (324.38)
QUAKER HOUGHTON - PLANT #2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
QUALA SERVICES, LLC	\$29.36	\$29.36	\$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	\$1.31	\$1.31	\$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	\$211.02	\$211.02	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS PROD BREWERY	\$4,178.79	\$0.00	\$0.00	\$723.64	\$3,455.15
ROYAL OAK BREWERY	\$77.34	\$77.34	\$0.00	\$0.00	\$0.00
RTT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SEAFARE FOODS, INC.	\$270.93	\$155.73	\$74.67	\$40.53	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SHERWOOD BREWING COMPANY	\$38.36	\$38.36	\$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	\$63.02	\$63.02	\$0.00	\$0.00	\$0.00
SWEETHEART BAKERY, INC.	\$876.97	\$116.38	\$66.20	\$63.00	\$631.39
THE CROWN GROUP-LIVONIA PLANT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE DEBURRING COMPANY	\$37.11	\$37.11	\$0.00	\$0.00	\$0.00
THERMO FISHER SCIENTIFIC	\$29,282.15	\$17,424.15	\$11,857.70	\$0.30	\$0.00
TOM LAUNDRY CLEANERS	\$1.15	\$1.15	\$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	\$63,797.71	\$63,797.71	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$93.88	\$93.88	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$18,853.04	\$18,853.04	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$1,590.95	\$1,590.95	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$0.43	\$0.43	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$152.61	\$152.61	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
URBANREST BREWING COMPANY	\$219.52	\$109.76	\$0.00	\$109.76	\$0.00
US ECOLOGY MICHIGAN	\$731.57	\$731.57	\$0.00	\$0.00	\$0.00
US ECOLOGY ROMULUS, INC.	\$1,157.20	\$1,157.20	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 01/31/24

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
USHER OIL SERVICES	\$829.05	\$829.05	\$0.00	\$0.00	\$0.00
VALICOR ENVIROMENTAL SERVICE	\$1,271.04	\$1,271.04	\$0.00	\$0.00	\$0.00
VALICOR ENVIRONMENTAL SERVIC	\$534.04	\$534.04	\$0.00	\$0.00	\$0.00
VAUGHAN INDUSTRIES, INC.	\$11.95	\$11.95	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$5,877.46	\$5,877.46	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$2,127.23	\$2,127.23	\$0.00	\$0.00	\$0.00
WIGLEY'S MEAT PROCESS	\$ (43.73)	\$0.00	\$ (43.73)	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$272.71	\$272.71	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$139.88	\$139.88	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$1,465.31	\$1,465.31	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$1,961.12	\$1,961.12	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO., PLANT	\$2,879.56	\$2,879.56	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$144.24	\$0.00	\$0.00	\$0.00	\$144.24
X-R-I TESTING	\$92.12	\$92.12	\$0.00	\$0.00	\$0.00
TOTAL POLLUTANT SURCHARGE ACCOUNTS	\$337,746.20	\$337,700.62	\$ (3,569.75)	\$1,039.57	\$2,575.76

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 (7 Months)	773,282	3,218,400	27,884	4,019,566
FY 2024 Payments (7 Months)	<u>-</u>	<u>(2,957,585)</u>	<u>-</u>	<u>(2,957,585)</u>
Balance as of January 31, 2024	<u>\$ 12,842,889</u>	<u>\$ 40,558,058</u>	<u>\$ 1,893,748</u>	<u>\$ 55,294,695</u>



Financial Services
Audit Committee Communication
 Affordability & Assistance Update
 April 29, 2024

Contacts: June White, Affordability & Assistance Manager
 Haran Stanley, Affordability & Assistance Management Professional

WRAP Update

Meeting with Community Action Agencies across the region and Water Residential Assistance Program (WRAP) Service Delivery Partners to ensure that vital funding opportunities are recognized. The team is also updating procedures to collect and review the WRAP Statement of Expenses (SOEs) and the Lifeline Program Funding Requests (PFRs).

Affordability Update

The Michigan House of Representatives Health and Human Services Committee and the Michigan Senate Health and Human Services Committee held hearings this month related to the SB 690 Supplemental Appropriation for Water Assistance of \$60 million dollars. This proposed appropriation mirrors a similar appropriation passed in the Spring of 2023 for \$60 million dollars, which was awarded as a \$25 million dollar allocation in October 2023 and named the *Water Affordability Grant*. The remaining \$35 million was allocated to the *Local Water Utility Affordability Plan (LWUA)*.

The Affordability & Assistance Team has been working with Service Delivery Partners and others to apply for the [MDHHS Lead Education and Faucet Replacement Program](#). The program is part of the State of Michigan's 'Get Ahead of Lead' strategy and seeks to prevent lead exposure from drinking water for certain high-risk populations. Funding of \$3 million is available with maximum awards of \$700 thousand and the possibility of noncompetitive annual renewals. The application due date is April 26, 2024.

Key Initiatives

1. Discovery Phase – Establish an electronic data extraction process directly from Service Delivery Partner systems to create a comprehensive database
2. Discovery Phase – Develop a grant-seeking proposal package to identify additional sources of funding
3. In-process – On-ramping of new Affordability & Assistance Manager and updating work plan for the next 12 months.
4. In-Process – Convert legacy monthly program funding requests from a myriad of formats to a “WRAP Database” that better supports program management
5. In-Process – Create a WRAP commitment forecasting model for Service Delivery Partners
6. In-Process – Engage in statewide conversations with stakeholders and leaders related to water affordability matters in Michigan
7. Final Stage – Update WRAP program manual and Frequently Asked Questions documents



Financial Services Audit Committee Communication

Date: April 29, 2024

To: Great Lakes Water Authority Audit Committee

From: Nick Simms, Grants Management Professional

Re: Grants, Gifts, and Other Resources Report Through March 31, 2024

Highlights: Key activities to note in this month's report through March 31, 2024, includes the following.

- ✓ **Michigan Industrial Cluster Approach (MICA) Focus Hope Apprenticeship Program** – The Great Lakes Water Authority received a payment from the Focus Hope Apprenticeship nonprofit program (Ref #2021-012) in the amount of \$7,000 for apprenticeship training to help fill positions in high demand including maintenance and water plant services.
- ✓ **Environmental Protection Agency (EPA) Climate Pollution Reduction Grant**– The Great Lakes Water Authority Grants team was recently able to assist the Research and Innovation department complete and submit a Climate Pollution Reduction Grant (Ref #2024-004) application for \$500 million.
- ✓ Items highlighted in yellow in the attached tables reflect changes from the prior report.

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.glwater.org/grants-gifts-and-other-resources-delegation-policy).

Analysis: The tables in each section of this report present GLWA grant activity by each phase. As a grant moves through each phase, it is shown in the corresponding table.

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.

Items of note related to each table include the following.

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 State of Michigan Public Act 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 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 has no current activity to report for March 2024 related. 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 State of Michigan Public Act 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	Grant Amount is Estimated

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	Grant Amount is Estimated
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	Grant Amount is Estimated
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	Grant Amount is Estimated
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, 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	Received \$24,000 in 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 has no current activity to report for March 2024. 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.

Proposed Action: Receive and file this report.



Financial Services Audit Committee Communication

Date: April 29, 2024

To: Great Lakes Water Authority Audit Committee

From: Megan Savage, Vendor Outreach Coordinator

Re: Business Inclusion & Diversity Program Quarterly Update

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

Analysis: This month we present tables to recap B.I.D. Program activity from the date of the program launch on February 1, 2021 through March 31, 2024 for procurements budgeted to exceed \$1 million.

Table 1: B.I.D. Eligible Procurements as of March 31, 2024

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

	Awarded	In Evaluation Phase	Active (Advertised)	Total
Procurements Requiring B.I.D. Submittals	85	9	4	98
Total Number of Diversity Plans Submitted	286	25	n/a	311

Table 2: Scored Criteria for Awarded Procurements

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

	Procurements Awarded Meeting B.I.D. Criteria as a % of Total \$ Awards	Total Contract Amount (in millions)
Michigan Location	93%	\$1,213.5
Member Partner Service Area	81%	\$1,058.8
Disadvantaged Service Area	31%	\$410.3

Table 3: Member Partner Communities

Table 3 provides a breakdown of the number of awarded contracts to vendors located in GLWA's Member Partner Service area.

	Total Contract Count	Total Contract Amount (in millions)	% of Total \$ Awarded
City of Detroit	46	\$410.3	31.29%
City of Auburn Hills	5	\$76.7	5.85%
City of Novi	3	\$94.4	7.20%
City of Livonia	3	\$59.6	4.55%
City of Taylor	3	\$361.3	27.55%
City of Troy	3	\$17.0	1.30%
City of Southfield	2	\$6.3	0.48%
City of Madison Heights	1	\$6.0	0.46%
City of Warren	2	\$4.7	0.36%
City of Wixom	2	\$5.1	0.39%
City of Farmington Hills	2	\$6.5	0.50%
City of Riverview	1	\$1.9	0.14%
Harrison Township	1	\$1.0	0.08%
Clinton Township	1	\$8.1	0.62%
Subtotal	75	\$1,058.8	80.73%
Other Michigan Communities	4	\$154.7	11.79%
Out of State	6	\$98.0	7.48%
Total	85	\$1,311.5	100.00%

Table 4: Economically Disadvantaged Communities

Table 4 provides a breakdown of the number of awarded contracts to vendors who have a business presence in an economically disadvantaged GLWA service territory area. This means that the vendor is located in a municipality designated as having one of the five lowest median household incomes in that respective county as defined by the U.S. Census Bureau every five years.

	Total Contract Count	Total Contract Amount (in millions)
Detroit	46	\$410.3

Table 5: Non-Scored Criteria - Disadvantaged, Minority-owned, Women-owned, and Small Businesses

Table 5 provides a breakdown of the percentage of B.I.D. Program-eligible procurements awarded thus far that met the B.I.D. Program Non-Scored Criteria. This Non-Scored Criteria refers to any diversity certifications that the vendor may hold as a Disadvantaged Business Enterprise (DBE), Minority-Owned Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or Small Business Enterprise (SBE).

	Procurements Awarded as a % of Total \$ Awards	Total Contract Amount (in millions)
Awarded to Disadvantaged, Minority- owned, Women-owned, and Small Businesses	26%	\$346.8

Table 6: Diversity Certification Percentages

Table 6 provides a breakdown of the vendors who met the certification criteria as SBE (Small Business Enterprise), DBE (Disadvantaged Business Enterprise), MBE (Minority-owned Business Enterprise), and/or WBE (Women-owned Business Enterprise). Note that some firms may have multiple certifications.

	SBE	DBE	MBE	WBE
Percentage of Awarded Procurements to SBE, DBE, MBE, and WBE (based on total number of contracts)	9%	70%	39%	6%
Total Contract Amount (in millions)	\$18.5	\$333.6	\$132.7	\$65.2

Table 7: Overall Contracts Awarded

Table 7 provides a breakdown of overall dollars awarded under the B.I.D. Program thus far, distinguishing between firms that met the B.I.D. Program certification criteria (non-scored criteria) and firms that met the three B.I.D. Program geographic criteria (scored criteria).

	Total Contract Count	Total Contract Amount (in millions)	% of Total \$ Awarded
Eligible Procurements	85	\$1,311.5	100%
Firms that met the certification criteria (non-scored criteria)	33	\$346.8	26%
Firms that met the three geographic criteria (scored criteria)	46	\$410.3	31%

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

- A B.I.D. Program Manager was hired on April 1, 2024.
- The B.I.D. Program Team attended the Diverse Connections Oakland County Purchasing Event on March 20, 2024 in Novi, Michigan. The event, which focused on outreach to diversity certified businesses, was attended by over 150 vendors.
- Continued attendance of the B.I.D. Program Liaison at all Pre-Bid and Pre-Proposal solicitation meetings to overview B.I.D. Program requirements and answer any questions from vendors/contractors.

Two tasks have been placed on hold for reasons specified below.

- The request remains open with Bonfire to provide options for tracking and reporting diversity certifications in the vendor database. Currently Bonfire does not have this on the list of planned upgrades.
- Continued evaluation of insurance and bonding requirements for small, minority-owned, and disadvantaged business enterprises. No solution has been identified but we do continue to explore the topic with potential resources.

Proposed Action: Receive and file this report.



The Semiannual Debt Report includes the following:

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

Key Takeaways

- ✓ The purpose of this report is to provide a resource for stakeholders and to support management decisions as capital financing needs evolve.
- ✓ GLWA continues to enhance transparency by including the Debt Summary Report in the Audit Committee Binder semiannually.
- ✓ GLWA has nineteen active State Revolving Fund (SRF) loans, eleven for water and eight for sewer. On behalf of DWSD, GLWA is administering four projects for water and two for sewer.
- ✓ GLWA seeks to issue a revenue refunding bonds for water and sewer by the end of calendar year 2024.
- ✓ Other key items of interest include the following balances as of March 31, 2024.

As of March 31, 2024 (\$ Millions)		
	Water	Sewer
FY 2025 Approved SRF Projects - Table 5	\$0.0	\$395.9
DWSD Obligation Receivable - Table 6	\$539.8	\$352.2
GLWA Outstanding Debt - Table 8	\$2,604.8	\$2,874.4

Background

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

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

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

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

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

Look Ahead - Five Year Capital Financing Plan

The following tables summarize the projected Capital Improvement Program (CIP) funding to be provided by proceeds received from the issuance of new revenue bonds and draws on committed SRF loans. *The financing plan is dynamic and changes with the pace of capital spending and alignment with refunding opportunities.*

GLWA closed on revenue bond transactions in December 2023 to support capital needs in accordance with the approved capital improvement plan. These transactions provided \$250 million in additional funding with \$150 million supporting the water system and \$100 million supporting the sewer system.

Looking ahead, GLWA is working on revenue refunding bond transactions for both the water supply system and sewage disposal system. These transactions are expected to be completed in 2024 but are ultimately dependent upon market conditions. GLWA has received prior authorization to issue water supply system bonds in a principal amount not to exceed \$500 million, and sewage disposal system bonds in a principal amount not to exceed \$500 million. Within these authorized amounts, revenue refunding bonds issued in 2024 are expected to be issued to refinance existing obligations of GLWA and provide debt service savings, and not to provide new capital financing. Ultimately, the size of the transactions will be based on market conditions at the time of sale.

Table 1 below is based on the FY 2025 – FY 2029 budget approved by the board at the February 28, 2024 meeting. Table 2 is based on the DWSD Capital Improvement plan approved by the board at the April 17, 2024 Board of Water Commissioners meeting. The projected financing will change in the upcoming months as a result of additional analysis completed during the 2024 bond refunding transaction.

Table 1 - GLWA Projected Financing FY 2025 – FY 2029 provides a breakdown of projected financing based on the FY 2025 and FY 2026 Biennial Budget adopted by the GLWA Board of Directors and the related Five-Year Financial Plan.

Projected Financing for Regional System					
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Water					
Revenue Bonds	\$ 275,000,000	\$ -	\$ 400,000,000	\$ -	\$ 245,000,000
SRF loan draws	\$ 30,800,000	\$ 14,230,000	\$ -	\$ -	\$ -
Total projected funding Water	\$ 305,800,000	\$ 14,230,000	\$ 400,000,000	\$ -	\$ 245,000,000
Sewer					
Revenue Bonds	\$ -	\$ -	\$ 190,000,000	\$ -	\$ 200,000,000
SRF loan draws	\$ 96,852,000	\$ 120,693,000	\$ 113,146,000	\$ 62,828,000	\$ 24,755,000
Total projected funding Sewer	\$ 96,852,000	\$ 120,693,000	\$ 303,146,000	\$ 62,828,000	\$ 224,755,000

Table 2 - DWSD Projected Financing FY 2025 – FY 2029 provides a breakdown of projected financing based on the current, local system CIP presented to the DWSD Capital Improvement Plan Committee at its April 3, 2024 meeting. It is important to note the amounts represented in revenue bonds reflect the funding needs by year and not a revenue bond transaction for each year. GLWA and DWSD coordinate the timing for additional revenue bonds to ensure efficiency in the debt management process.

Projected Financing for Local System					
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Water					
Revenue Bonds	\$ 29,200,000	\$ 41,740,000	\$ 26,750,000	\$ 17,250,000	\$ 12,250,000
SRF loan draws	\$ 16,000,000	\$ 26,000,000	\$ 26,000,000	\$ 21,000,000	\$ 21,000,000
Total projected funding Water	\$ 45,200,000	\$ 67,740,000	\$ 52,750,000	\$ 38,250,000	\$ 33,250,000
Sewer					
Revenue Bonds	\$ 13,250,000	\$ 26,550,000	\$ 35,250,000	\$ 19,250,000	\$ 2,250,000
SRF loans draws	\$ -	\$ 58,480,000	\$ 37,760,000	\$ 12,960,000	\$ 10,000,000
Total projected funding Sewer	\$ 13,250,000	\$ 85,030,000	\$ 73,010,000	\$ 32,210,000	\$ 12,250,000

Existing Debt

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

In advance of the December 2023 bond transaction, GLWA earned upgrades into the ‘AA’ category from two of three bond rating agencies, as well as an affirmation of its “AA” rating from the third bond rating agency. Moody’s Investors Service moved GLWA’s senior lien debt into a new level of investment grade rating at ‘Aa3’ (up from ‘A1’) for both the water and sewer systems. Fitch Ratings moved GLWA’s senior lien debt for the sewer system to ‘AA-’ (up from ‘A+’) and affirmed its A+ rating for the water system. Standard & Poor Global Ratings affirmed its outstanding senior lien water and sewer system debt at ‘AA-’.

Table 3 – Debt Ratings by System provides a summary of the debt ratings.

Current Debt Ratings			
	S&P Global Ratings	Moody's Investors Service	Fitch Ratings
Water Supply System Revenue Bonds			
Senior lien	AA-	Aa3	A+
Second lien	A+	A1	A
Junior lien	N/A	N/A	N/A
Outlook	Stable	Stable	Stable
Sewage Disposal System Revenue Bonds			
Senior lien	AA-	Aa3	AA-
Second lien	A+	A1	A+
Junior lien	N/A	N/A	N/A
Outlook	Stable	Stable	Postive

Debt Allocation: GLWA has nearly \$2.6 billion in water system debt and nearly \$2.9 billion in sewer system debt for a combined total of over \$5.5 billion. Debt within each system is prioritized according to its security interest, or lien category, with senior lien debt having the highest security interest, followed by second lien and finally junior lien.

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

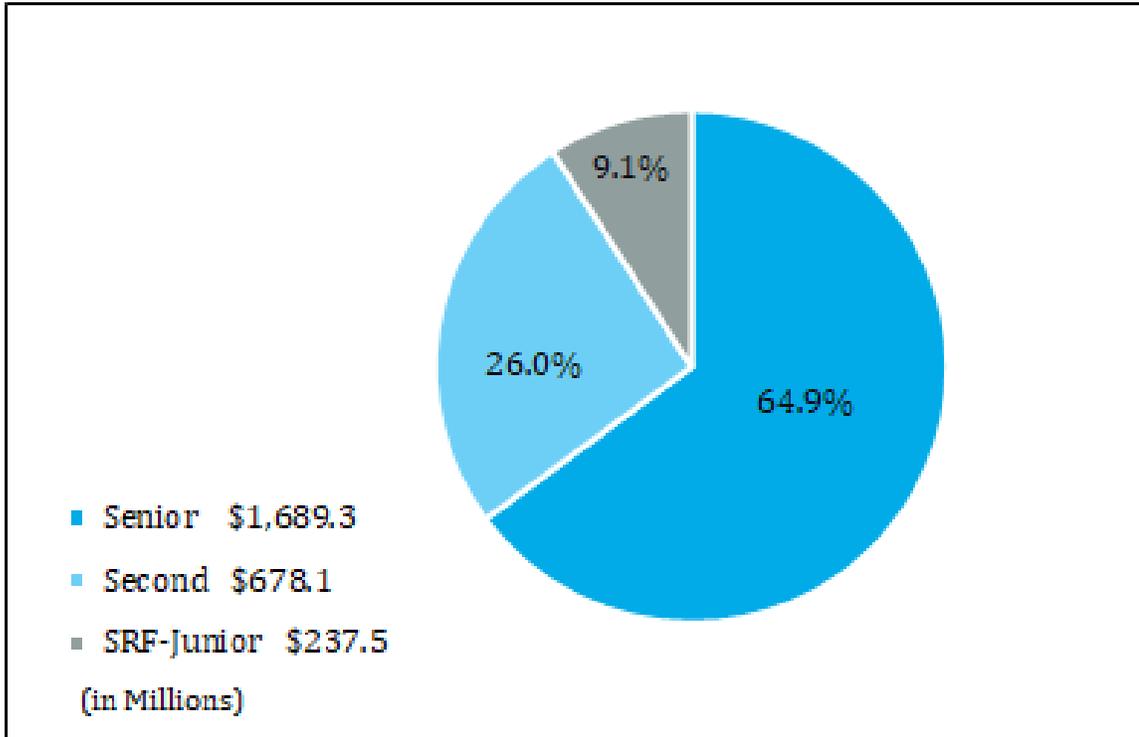


Chart 2 - Debt Type by Lien – Sewer provides a breakdown of the total sewer system debt for both the regional and local systems by lien type.

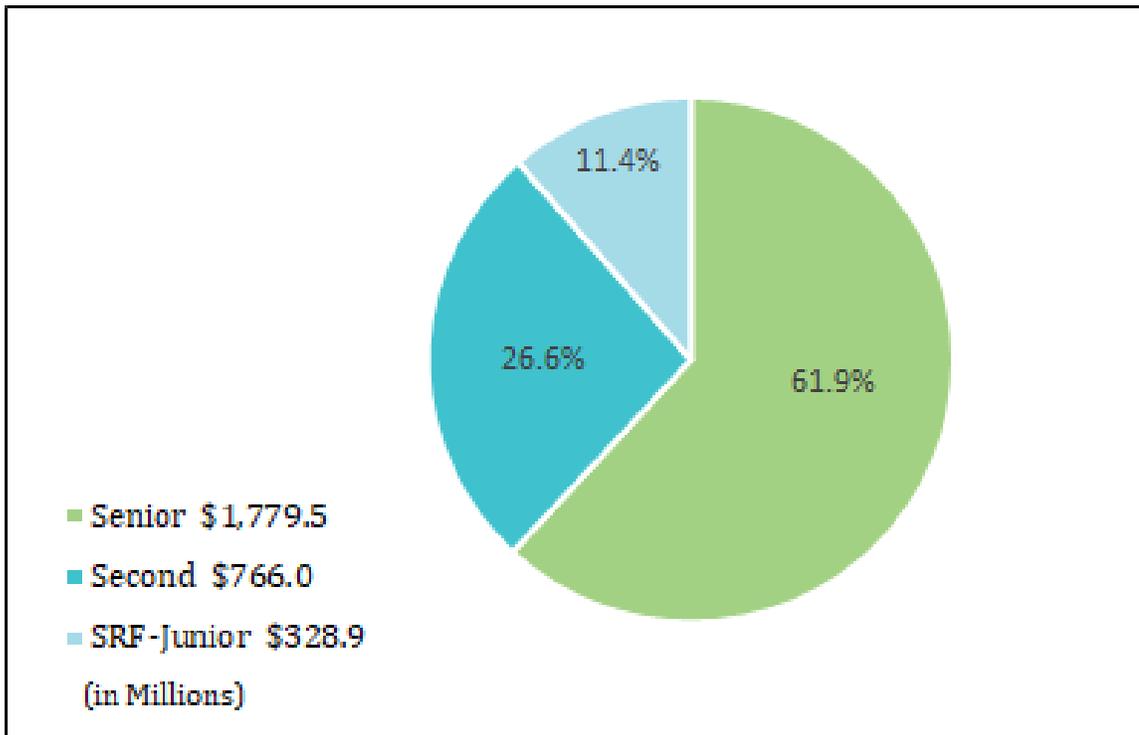




Chart 3 – Annual Debt Service Payments by Lien – Water provides the annual debt service installment requirements for each fiscal year.

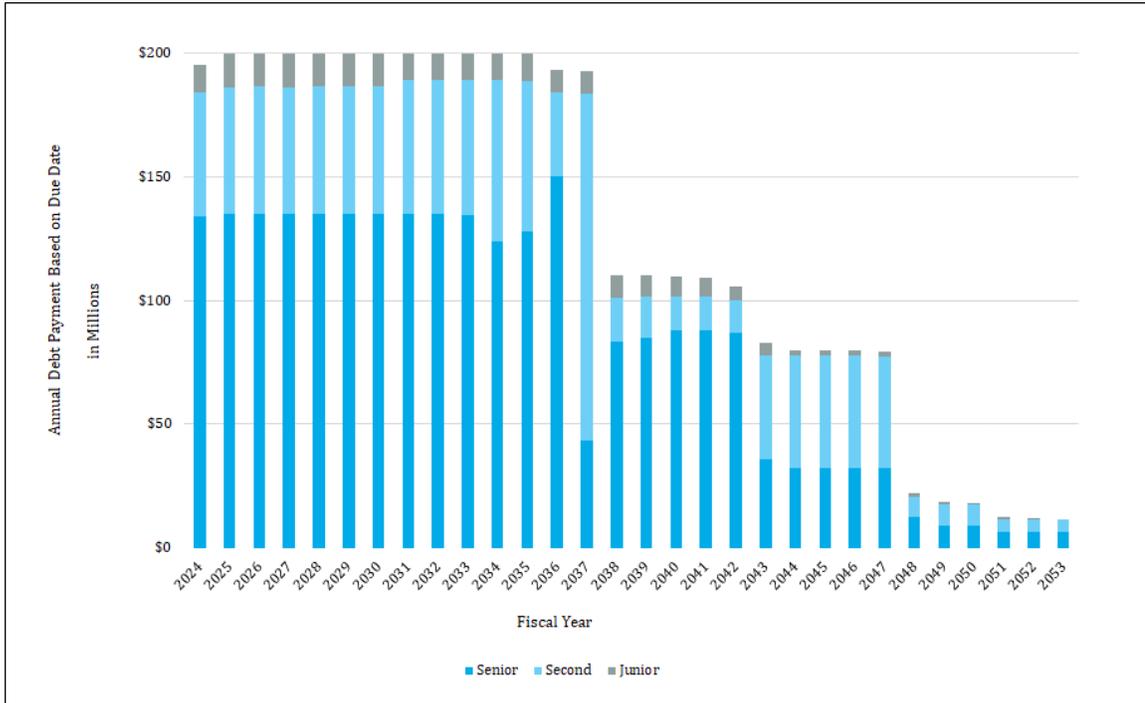
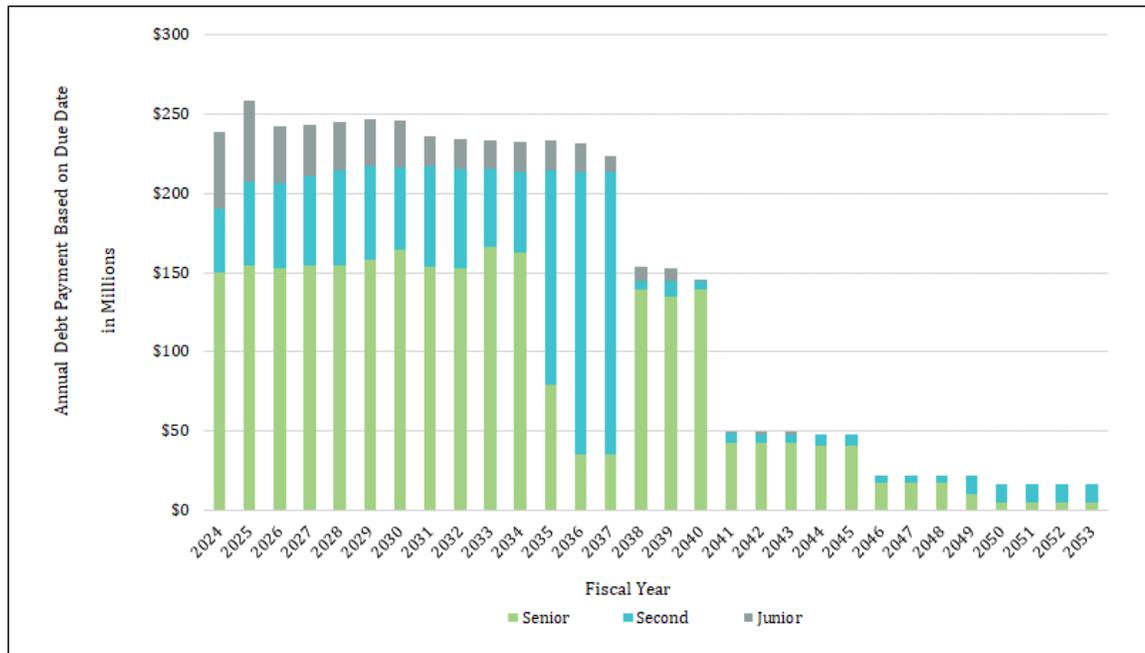


Chart 4 – Annual Debt Service Payments by Lien – Sewer provides the annual debt service installment requirements for each fiscal year.



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



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

These loan programs have interest rates that are well below open market interest rates (current estimate between 3.5% and 4.0%) and are repaid over 20-30 years. For the State's 2024 fiscal year, the DWSRF and CWSRF program rates are 2.5% for 20-year loans and 2.75% for 30-year loans. Overburdened applicant's rates are 2.0% and significantly overburdened applicant's rates are 1.0% for 20- and 30-year loans.

Funds are disbursed as construction payments are made. Interest on each loan is based on the amount of funds drawn and not the full loan amount. GLWA must submit project plans to the Michigan Department of Environment, Great Lakes, and Energy ("EGLE", and formerly known as the Michigan Department of Environmental Quality or MDEQ) for each project by the annual submission date (June 1 for DWSRF and May 1 for CWSRF) to be considered for the State's funding pool for the following fiscal year.

State Revolving Fund Loans: GLWA's strategy is to maximize its use of SRF loans to finance qualified capital projects. GLWA currently has \$241.6 million in outstanding water SRF loans and \$339.7 million in outstanding sewer SRF loans.

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

State Loan #	CIP Reference	Description	Order of Approval	Project Total (\$ Millions)
SRF Water - DWSD Projects				
7460-01	WS-710 & 711	Water Main Replacement	7/15/2020	\$22.6
7483-01	WS-715 & 718	Water Main Replacement	9/9/2020	\$13.4
7484-01	WS-713	Water Main Replacement - Jefferson Chalmers	8/6/2021	\$12.8
7548-01	WS-721	Lead Service Line Water Main Replacement	4/8/2022	\$10.0
SRF Water - GLWA Projects				
7445-01	122003	Northeast Transmission Phase 1	8/9/2019	\$30.0
7445-02	122003	Northeast Transmission Main - Phase 2a	8/7/2020	\$9.0
7445-04	122003	Northeast Transmission Main - Phase 3a	5/28/2021	\$11.9
7461-01	122013	14 Mile Transmission Main Loop - Phase 1	8/7/2020	\$9.0
7461-02	122013	14 Mile Transmission Main Loop - Phase 2	8/6/2021	\$104.7
7532-01	122004	96-inch Water Transmission Main Relocation Project - Phase 1	8/29/2022	\$34.1
7532-02	122004	96-inch Water Transmission Main Relocation Project - Phase 2	6/26/2023	\$64.2
			Total Water	\$321.7
SRF Sewer - DWSD Projects				
5688-01	DWS-916	Sewer Main Rehab/Rplcmt - Project A	9/9/2020	\$4.0
5706-01	DWS-917 & 918	Sewer Main Replacements - Project B	9/9/2021	\$9.2
SRF Sewer - GLWA Projects				
5655-02	222002	Detroit River Interceptor Segment 2	3/27/2020	\$28.4
5655-03	222002	Detroit River Interceptor Segment 3	5/16/2020	\$34.2
5673-01	211008	PS-1 Ferric Chloride System Rehabilitation	2/26/2021	\$12.9
5741-01	260701	In-System Storage Device & Dam & Valve Remote Evaluation & Rehabilitation	8/29/2022	\$19.0
5742-01	260204	Connor Creek Sewer System Rehabilitation	8/8/2022	\$50.2
5836-01	211006	Pump Station #1 Rehabilitation	5/15/2023	\$96.0
			Total Sewer	\$254.0



Chart 5 - Open State Revolving Fund Loans summarizes all current SRF loans held by GLWA (including financings on behalf of DWSD) that are active (reference Table 4 above for project descriptions). It summarizes the original award amount remaining and the amount drawn down as of March 31, 2024 for each loan. On March 31, 2024, the amount of SRF loans authorized and unissued is \$102.6 million for the Water fund and \$192.9 million for the Sewage Disposal Fund.

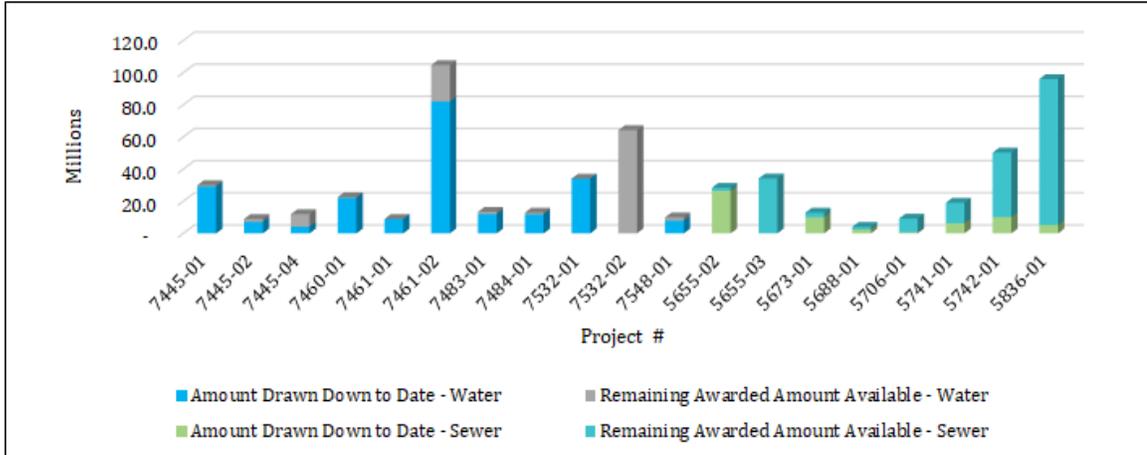


Table 5 - Project Plans Approved by EGLE for FY 2024

Project Owner	CIP Number	Description	Estimated Award Amount	Anticipated Funding Date
Water SRF				
		No Approved Water SRF Projects		

Total Water SRF \$ -

Sewer SRF				
GLWA	232002	Freud Pump Station	\$ 126,800,000	Q 2.5
GLWA	212008	WRRF Aeration Improvements 1 and 2	\$ 175,000,000	Q 2.5
GLWA	222001	Oakwood District Intercommunity Relief Sewer Modification	\$ 75,000,000	Q 4
DWSD		CSO West Chicago South	\$ 19,100,000	Q 4

Total Sewer SRF \$ 395,900,000

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

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

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

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

Chart 6 - DWSD Obligation Receivable by Type summarizes the total DWSD obligation receivable balance for both Water and Sewer as of March 31, 2024 by pre-bifurcation, revenue bond and SRF component.

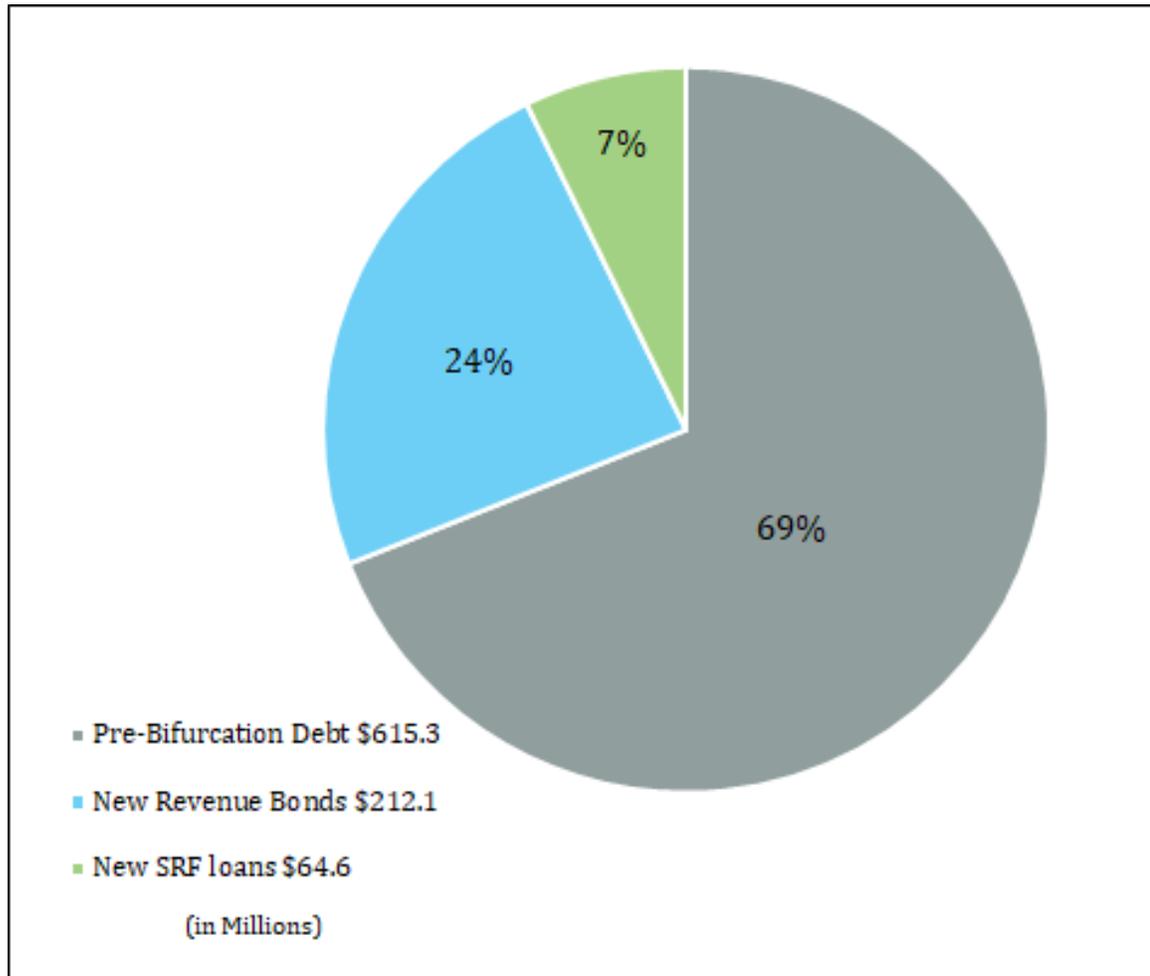


Chart 7 – Obligation Receivable Compared to Total Debt - Water provides context by comparing the Water System Obligation Receivable to the Total Water Debt (excludes unamortized premiums).

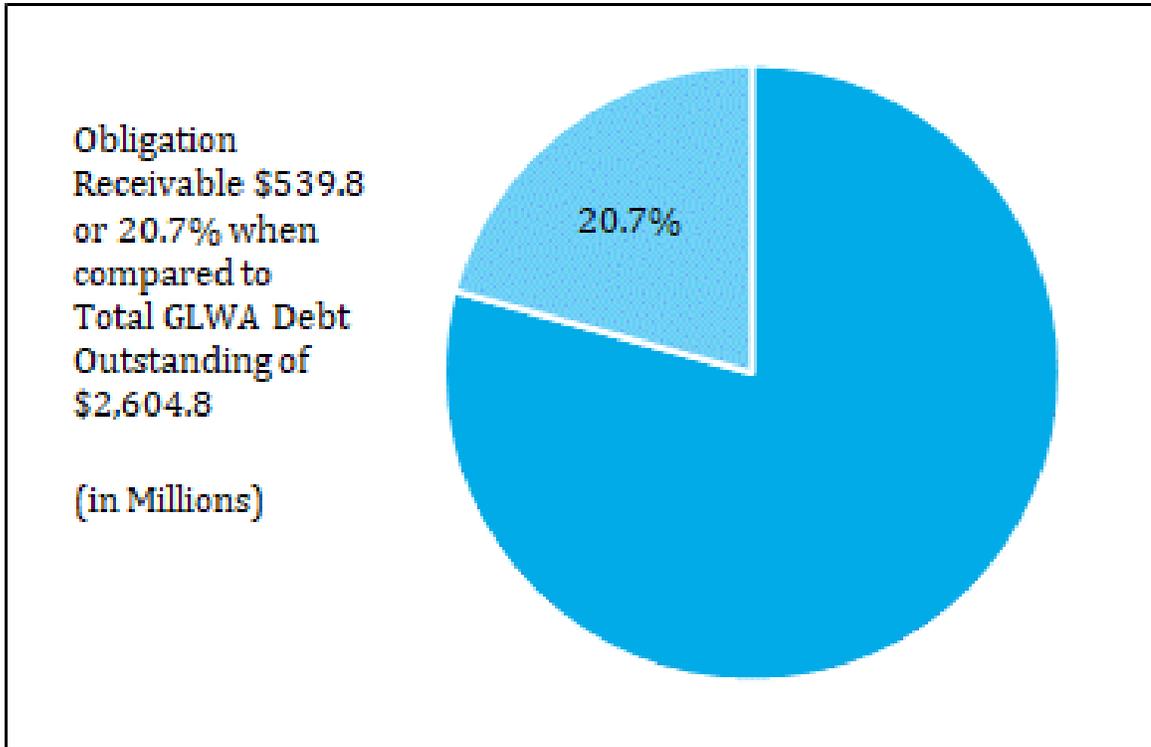


Chart 8 - Obligation Receivable Compared to Total Debt - Sewer provides context by comparing the Sewer System Obligation Receivable to the Total Sewer Debt (excludes unamortized premiums).

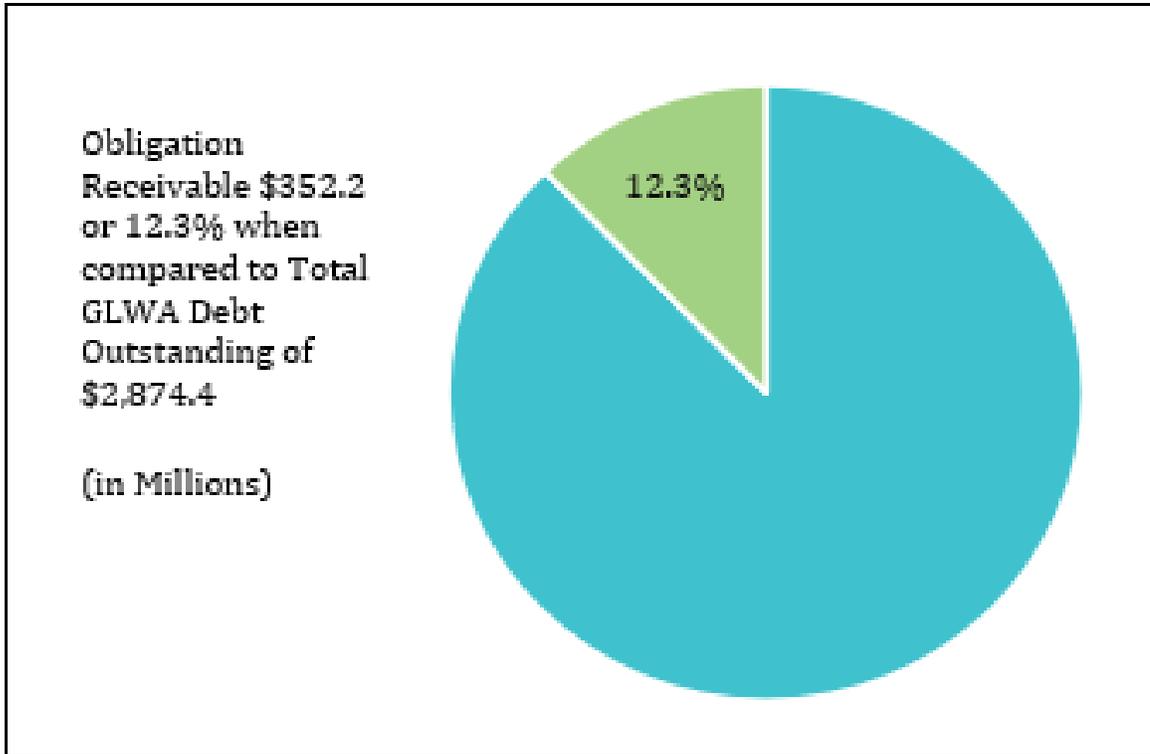


Table 6 - DWSD Obligation Receivable provides obligation receivable detail including fiscal year 2024 beginning balances by debt type and loan issue (for revenue bonds and SRF loans), year-to-date activity and ending balances as of March 31, 2024. Total DWSD debt totals \$917.4 million. This differs slightly from the total in Chart 6 due to the inclusion of unamortized premiums.

(In Thousands)

Debt Type	July 1, 2023 Beg Balance	Increase	Decrease	SRF Debt Forgiveness	March 31, 2024 End Balance
DWSD Water					
Pre-Bifurcation Debt	\$ 352,783	\$ -	\$ (12,485)		\$ 340,298
Revenue Bond - 2016A	17,725	-	-	-	17,725
Revenue Bond - 2016B	33,015	-	-	-	33,015
Revenue Bond - 2020A	42,445	-	-	-	42,445
Revenue Bond - 2020B	43,135	-	-	-	43,135
SRF 7412-01	4,591	-	-	-	4,591
SRF 7413-01	2,969	-	-	-	2,969
SRF 7414-01	5,193	-	(160)	-	5,033
SRF 7447-01	7,448	3,087	(300)	-	10,235
SRF 7460-01	19,515	-	-	-	19,515
SRF 7483-01	8,833	1,628	-	-	10,461
SRF 7484-01	9,678	747	-	-	10,425
SRF 7548-01	-	6,100	-	(6,100)	-
Total DWSD Obligation	547,329	11,562	(12,945)	(6,100)	539,847
Unamortized Premiums	18,100	-	(596)	-	17,504
Subtotal: Water	565,429	11,562	(13,540)	(6,100)	557,351
DWSD Sewer					
Pre-Bifurcation Debt	285,471	-	(10,433)	-	275,038
Revenue Bond - 2018A	75,815	-	-	-	75,815
SRF 5688-01	843	638	(135)	-	1,346
SRF 5706-01	-	267	-	(267)	-
Total DWSD Obligation	362,129	905	(10,568)	(267)	352,199
Unamortized Premiums	8,161	-	(318)	-	7,843
Subtotal: Sewer	370,290	905	(10,886)	(267)	360,042
Total DWSD Debt	\$ 935,719	\$ 12,467	\$ (24,426)	\$ (6,367)	\$ 917,393

Table 7 – Loan Forgiveness provides a summary of loan principal forgiven on DWSD SRF loans closed after January 1, 2016. EGLE grants principal loan forgiveness on qualified planning costs for disadvantaged communities. Through March 31, 2024, \$26.4 million or 23% of approved, DWSD SRF loans have been forgiven as a disadvantaged community.

State Loan #	Approved Amount	Loan Forgiveness
DWSD Water SRF		
SRF 7412-01	10,605,000	1,000,000
SRF 7413-01	5,180,000	1,000,000
SRF 7414-01	8,675,000	2,000,000
SRF 7447-01	16,500,000	4,711,944
SRF 7460-01	22,570,000	2,031,300
SRF 7483-01	13,355,000	1,201,950
SRF 7484-01	12,845,000	1,316,050
SRF 7548-01	10,000,000	10,000,000
Subtotal: Water	99,730,000	23,261,244
DWSD Sewer SRF		
SRF 5688-01	4,040,000	808,000
SRF 5706-01	9,175,000	2,293,750
Subtotal: Sewer	13,215,000	3,101,750
Total DWSD Debt	\$ 112,945,000	\$ 26,362,994

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

Table 8 - Long-Term Debt Summary provides a detail of GLWA’s fiscal year 2024 beginning balances by debt type and loan issues, year-to-date activity, and ending balances as of March 31, 2024. GLWA debt includes financing for both the regional and local share.

(In Thousands)

Debt Type	June 30, 2023			Debt Forgiveness	March 31, 2024 End Balance
	Beg Balance	Increase	Decrease		
Water Fund					
Revenue Bonds	\$ 2,279,260	\$ 215,745	\$ (127,640)	\$ -	\$ 2,367,365
State Revolving Loans	207,357	43,178	(2,810)	(6,100)	241,625
Total Installment Debt	2,486,617	258,923	(130,450)	(6,100)	2,608,990
Unamortized Premiums / Discounts	167,921	-	3,945	-	171,867
Subtotal: Water	2,654,538	258,923	(126,505)	(6,100)	2,780,857
Sewer Fund					
Revenue Bonds	2,561,135	297,060	(312,705)	-	2,545,490
State Revolving Loans	349,919	19,640	(29,595)	(267)	339,697
Total Installment Debt	2,911,054	316,700	(342,300)	(267)	2,885,187
Unamortized Premiums / Discounts	75,627	-	20,873	-	96,500
Subtotal: Sewer	2,986,681	316,700	(321,427)	(267)	2,981,687
Total Combined, Long Term Debt	\$ 5,641,219	\$ 575,623	\$ (447,931)	\$ (6,367)	\$ 5,762,544

Debt Service Coverage

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

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

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

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

Debt Service Coverage Water System							
	MBO					Adopted Budget 2025	Adopted Budget 2026
	Required Minimum	Actual 2021	Actual 2022	Actual 2023	Estimated 2024		
Rate Covenant Basis							
Senior Lien Bonds	1.20	1.99	1.88	1.88	1.86	1.75	1.78
Senior and second lien bonds	1.10	1.40	1.37	1.37	1.36	1.30	1.35
All bonds, including SRF junior lien	1.00	1.38	1.33	1.31	1.25	1.19	1.23
GAAP Basis							
Senior Lien Bonds		1.95	2.00	1.99			
Senior and second lien bonds		1.38	1.45	1.45			
All bonds, including SRF junior lien		1.35	1.41	1.38			

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

Debt Service Coverage Sewage Disposal System							
	MBO Required Minimum	Actual 2021	Actual 2022	Actual 2023	Estimated 2024	Adopted Budget 2025	Adopted Budget 2026
Rate Covenant Basis							
Senior Lien Bonds	1.20	2.92	2.35	2.17	2.05	2.07	2.17
Senior and second lien bonds	1.10	1.97	1.68	1.72	1.54	1.54	1.60
All bonds, including SRF junior lien	1.00	1.51	1.30	1.37	1.24	1.26	1.35
GAAP Basis							
Senior Lien Bonds		2.50	2.64	2.13			
Senior and second lien bonds		1.68	1.89	1.69			
All bonds, including SRF junior lien		1.29	1.46	1.34			

Refinancing

To reduce the annual water and sewer debt service payments, GLWA monitors its outstanding water and sewer debt portfolios to determine if it can refund existing bond issues with new, lower interest rate bonds. At least once per year, GLWA's registered municipal advisor, PFM Financial Advisors, LLC (PFM) prepares an analysis of GLWA's bond refunding opportunities based on the current municipal interest rate environment and the existing debt service on GLWA's callable bonds.

On December 5, 2023, \$67.2 million of water supply system refunding bonds and \$200.2 of sewage disposal system refunding bonds were issued. The net present value savings from the refunding transaction was \$46.0 million made up of savings of \$11.2 million for the water supply fund and \$34.8 million for the sewage disposal fund.

Table 11: 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 \$766 million of debt service savings for the systems.

Savings by Issuance	
Series 2016	\$ 309,100,000
Series 2018	84,900,000
Series 2020	324,100,000
Series 2022	1,960,000
Series 2023	45,949,000
	\$ 766,009,000

The next available refunding opportunity is for bonds with a call date of July 1, 2024, for both the water fund and sewage disposal fund. Approximately \$434.2 million in water bonds and \$436.5 million in sewer bonds will be callable at that time. GLWA continues to work with its registered municipal advisor on these bonds.

GLWA does not have any defeased debt as of March 31, 2024.



Financial Services Audit Committee Communication

Date: April 29, 2024

To: Great Lakes Water Authority Audit Committee

From: Nick Fedewa, CPA, Public Finance Manager

Re: General Retirement System Financial Report and Annual Actuarial Valuation for Year End June 30, 2023 (City of Detroit Component II)

Background: The Great Lakes Water Authority (GLWA) assumed a portion of the legacy pension commitment assigned to the Detroit Water & Sewerage Department (DWSD) pursuant to the terms of the regional water and sewer system leases. For this reason, GLWA monitors activity related to the City of Detroit General Retirement System (GRS). While there are two plans managed by GRS, GLWA is impacted by only the Component II plan. Component II was closed as of June 30, 2014 under the City of Detroit bankruptcy plan of adjustment and is commonly referred to as the 'legacy plan'.

The following reports have been presented to the GRS Board and are attached.

1. Letter from the GRS external audit firm to those charged with governance for the General Retirement System of the City of Detroit for the year ending June 30, 2023
2. Audited Financial Report for the General Retirement System of the City of Detroit (dated December 7, 2023)
3. GASB Statement No. 67 and 68 Accounting and Financial Reporting of Financial Plans of Component II June 30, 2023 (dated November 1, 2023)
4. Annual Actuarial Valuation as of June 30, 2023 (dated December 22, 2023)

While the external auditor letter (#1 above) to those charged with governance did highlight areas for improvement, the overall financial audit for the GRS combined plans received an unqualified opinion for the year ending June 30, 2023. The balance of this discussion will focus on the remaining reports: the results of the Audited Financial Report (#2 above) and GASB Statement No. 67 and 68 Report (#3 above) which are based on prior year actuarial results and serve as the basis for the DWSD and GLWA pension expense and liability to be reported in FY 2024. Finally, we will address the most recent June 30, 2023 Actuarial Valuation Report (#4 above) which provides insight into future pension expense and liability expectations. We are presenting this annual communication utilizing the latest reports to provide a timely update on the Authority's pension status.

Key Updates: There are two updates related to overall pension status.

First, when GLWA staff last presented this report at the June 26, 2023 GLWA Audit Committee meeting, the June 30, 2022 GRS Actuarial report remained in draft form due to a dispute between the Police & Fire Retirement System and the City of Detroit regarding the amortization period associated with the GRS plan. In June 2023, the U.S. Bankruptcy Court granted the motion filed by the City of Detroit requiring the Police & Fire Retirement System to honor the original, 30-year amortization period. The GRS Board was presented with and approved the final June 30, 2022 actuarial report and a funding policy confirming use of the 30-year level dollar amortization upheld by the U.S. Bankruptcy Court. There were no changes between the draft report presented to this body and the final report released. As of March 12, 2024, the Police & Fire Retirement System has filed an appeal against the June 2023 U.S. Bankruptcy Court ruling requesting reinstatement of the 20-year amortization plan adopted by the Police & Fire Retirement System.

Second, fiscal year 2024 is the first year (post-bankruptcy) GLWA & DWSD will be required to make actuarially determined employer contributions (ADEC) in accordance with the terms of a pension agreement. The fiscal year 2024 employer contribution was computed in the June 30, 2022 actuarial valuation. According to the commentary on page 5 of the 2022 valuation report, “the DWSD and Library groups are projected to be more than 100% funded on June 30, 2023”, “the projected UAAL contributions for DWSD decrease to \$0 beginning in FY2024”. However, the actuarial accrued liability for DWSD will be impacted by various factors, such as a lower assumed rate of return, and may result in an unfunded actuarial accrued liability at any point in the future. Previously, GLWA & DWSD contributions to the Component II system were established as under the City of Detroit Bankruptcy Plan of Adjustment (POA) requiring combined, fixed, annual pension payments of \$45.4 million, of which \$2.5 million was specific to administrative expenses.

Analysis: This report addresses five key areas.

1. Financial Position of the GRS as a Whole
2. Financial Position of the DWSD Unit with the GRS
3. Administrative Expenses
4. Planning for the Tail Liability (Unfunded Actuarial Accrued Liability - UAAL)
5. Impact on GLWA Financial Forecast

Financial Position of the GRS as a Whole

As reported in the GASB Statement No. 67 and 68 Accounting and Financial Report, and shown below in Table 1, the June 30, 2023 Component II Net Pension Liability is \$923 million as of June 30, 2023. This is an increase of approximately 1.2% from the prior year liability of \$911.9 million. The combined DWSD/GLWA unit makes up approximately \$52.7 million or 6% of that total and will be discussed further in the next section.

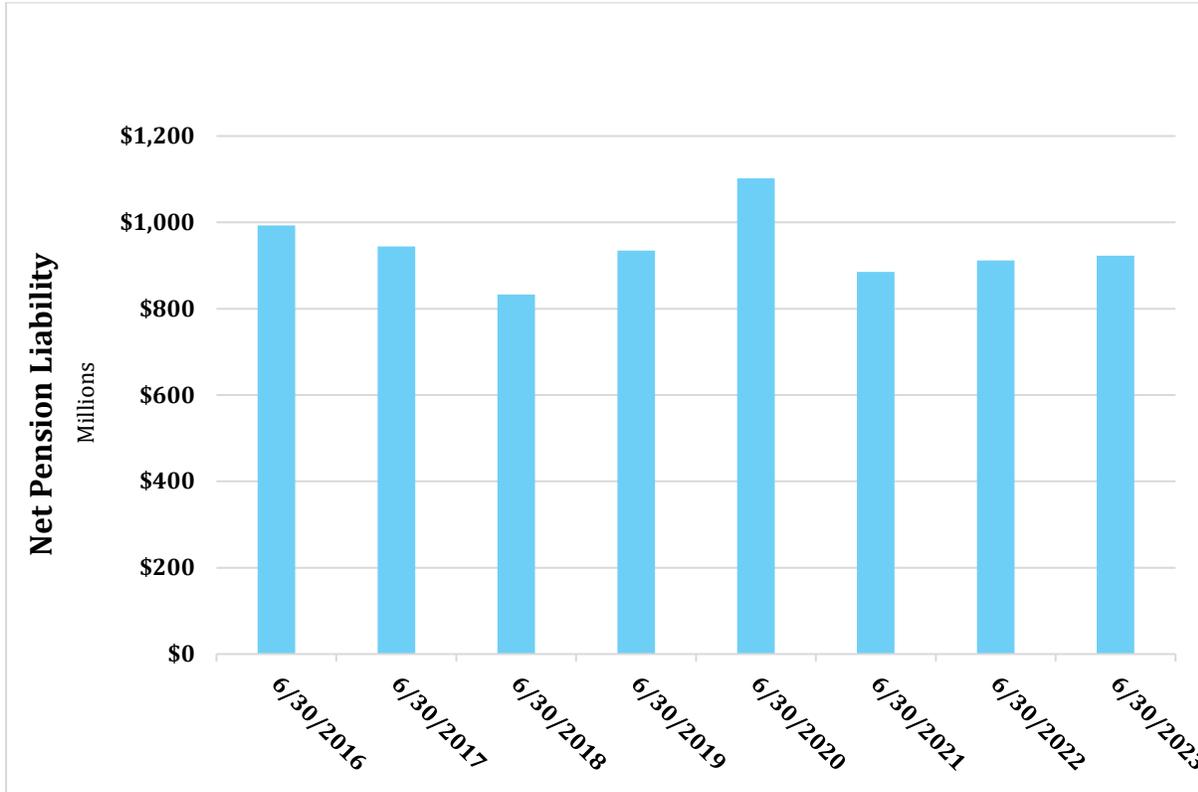
Table 1: GASB Statement No. 67 and 68 Report - Executive Summary

Executive Summary	
as of June 30, 2023	
Actuarial Valuation Date	June 30, 2022
Measurement Date of the Net Pension Liability	June 30, 2023
Employer's Fiscal Year Ending Date (GASB No. 68 Reporting Date)	June 30, 2024
Membership	
Number of	
- Retirees and Beneficiaries	10,918
- Inactive, Nonretired Members	2,633
- Active Members	1,850
- Total	15,401
Covered Payroll	\$ 83,104,746
Net Pension Liability	
Total Pension Liability	\$ 2,341,573,565
Plan Fiduciary Net Position	1,418,609,280
Net Pension Liability	\$ 922,964,285
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	60.58%
Net Pension Liability as a Percentage of Covered Payroll	1,110.60%
Development of the Single Discount Rate	
Single Discount Rate	6.76%
Long-Term Expected Rate of Investment Return	6.76%
Long-Term Municipal Bond Rate*	3.86%
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	2123
Total Pension Expense	\$ 75,335,447

Source: GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pension Plans of Component II, June 30, 2023 (dated November 1, 2023), p 1.

The June 30, 2023 actual net pension liability increase for GRS as a whole is largely attributed to a decline in other income (including Annuity Savings Fund (ASF) as compared to June 30, 2022. Chart 1 below highlights the overall net pension liability trend for the GRS since GLWA was formed in 2016.

Chart 1: Net Pension Liability Trend for GRS in Total



Source: GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pension Plans of Component II. Multiple Years.

Financial Position of the DWSD Unit with the GRS

The GASB Statement No. 67 and 68 Accounting and Financial Report also provides a breakdown by unit as shown below in Table 2. The DWSD unit reflects the combined DWSD and GLWA pension obligation. As of June 30, 2023, the DWSD Net Pension Liability is \$52.7 million. This is a decrease of 41% from \$89.9 million DWSD Net Pension Liability as of June 30, 2022 in contrast to the overall system increase of 1.2%. This decrease in the net pension liability is a result of actual net investment return 4.94% exceeding the previous year (7.27%).

Table 2: GASB Statement No. 67 and 68 Report - DWSD Changes in Net Pension Liability

**Schedule of Changes in Net Pension Liability and Related Ratios Current Period
Fiscal Year Ended June 30, 2023***

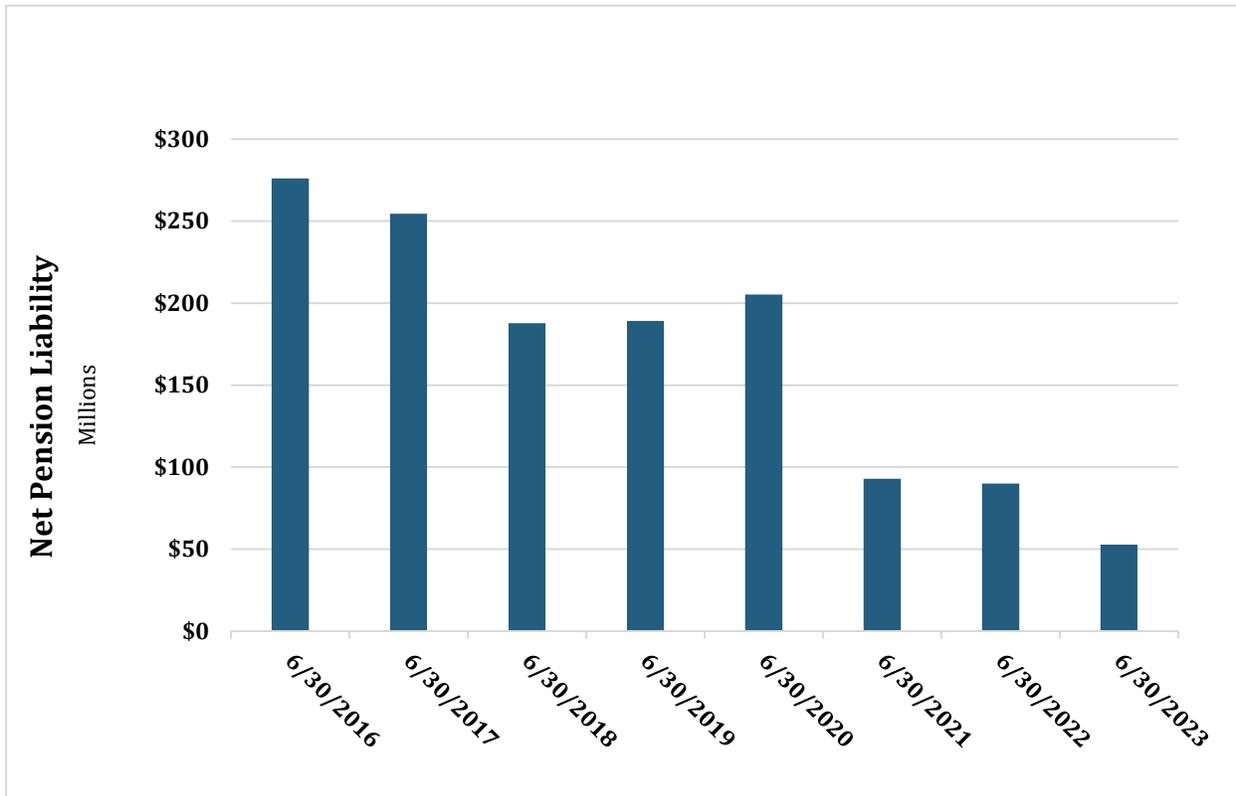
	General	DOT	DWSD	Library	Total
A. Total Pension Liability					
1. Service Cost	\$ -	\$ -	\$ -	\$ -	\$ -
2. Interest on the Total Pension Liability	84,530,943	24,338,578	43,090,051	5,146,090	157,105,662
3. Changes of benefit terms	-	-	-	-	-
4. Difference between expected and actual experience of the Total Pension Liability	(10,746,246)	(5,329,700)	(10,036,313)	(902,507)	(27,014,766)
5. Changes of assumptions	(948,846)	(285,717)	(499,568)	(55,030)	(1,789,161)
6. Benefit payments, including refunds of employee contributions	(126,614,631)	(33,743,903)	(60,802,124)	(7,278,257)	(228,438,915)
7. Net change in Total Pension Liability	\$ (53,778,780)	\$ (15,020,742)	\$ (28,247,954)	\$ (3,089,704)	\$ (100,137,180)
8. Total Pension Liability – Beginning	1,315,617,590	377,443,473	668,772,184	79,877,498	2,441,710,745
9. Total Pension Liability – Ending	\$ 1,261,838,810	\$ 362,422,731	\$ 640,524,230	\$ 76,787,794	\$ 2,341,573,565
B. Plan Fiduciary Net Position					
1. Contributions – employer	\$ 2,765,012	\$ 109,988	\$ 42,900,000	\$ 2,500,000	\$ 48,275,000
2. Contributions – employee	-	-	-	-	-
3. Net investment income	40,946,160	4,791,444	30,977,175	4,257,057	80,971,836
4. Benefit payments, including refunds of employee contributions	(126,614,631)	(33,743,903)	(60,802,124)	(7,278,257)	(228,438,915)
5. Pension Plan Administrative Expense	(2,375,122)	(165,107)	-	(140,678)	(2,680,907)
6. Other	(4,571,593)	(41,705)	(4,155,786)	(594,945)	(9,364,029)
7. Net change in Plan Fiduciary Net Position	\$ (89,850,174)	\$ (29,049,283)	\$ 8,919,265	\$ (1,256,823)	\$ (111,237,015)
8. Plan Fiduciary Net Position – Beginning	776,443,791	94,217,535	578,907,876	80,277,093	1,529,846,295
9. Plan Fiduciary Net Position – Ending	\$ 686,593,617	\$ 65,168,252	\$ 587,827,141	\$ 79,020,270	\$ 1,418,609,280
C. Net Pension Liability	\$ 575,245,193	\$ 297,254,479	\$ 52,697,089	\$ (2,232,476)	\$ 922,964,285
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	54.41%	17.98%	91.77%	102.91%	60.58%
E. Covered-employee payroll	\$ 53,915,327	\$ 12,056,318	\$ 10,506,161	\$ 6,626,940	\$ 83,104,746
F. Net Pension Liability as a percentage of covered-employee payroll	1066.94%	2465.55%	501.58%	-33.69%	1110.60%

*Totals may not add due to rounding.

Source: GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pension Plans of Component II, June 30, 2023 (dated November 1, 2023), p 22.

Chart 2 below highlights the overall net pension liability trend for the DWSD unit since GLWA was formed in 2016.

Chart 2: Net Pension Liability Trend for DWSD Unit



Under a pension reporting agreement established on January 24, 2017, the parties of DWSD and GLWA agreed that 70.3 percent of the liability allocated to the DWSD unit in the table above was attributable to GLWA regional operations and 29.7 percent to DWSD. This is the basis of allocation for future pension contributions with additional allocation within each entity between Water and Sewer funds. This is summarized in Table 3 below and applied to the current June 30, 2023 liability.

Table 3: Liability Allocation Between GLWA and DWSD as of June 30, 2023

Entity	Percent	Liability Allocation
DWSD - Water	17.80%	\$ 9,380,082
DWSD - Sewer	11.90%	6,270,954
GLWA - Water	25.20%	13,279,666
GLWA - Sewer	45.10%	23,766,387
	100.00%	\$ 52,697,089

Administrative Expenses

Through June 30, 2023, as part of the City of Detroit bankruptcy plan of adjustment (POA), GLWA and DWSD contribute \$2.5 million annually towards administrative expenses for the combined plan. GRS allocates 60% of overall administrative expenses to Component II and 40% to Component I. An allocation of overall pension administrative expense is provided in the GRS Annual Financial Report Statement of Changes in Fiduciary Net Position by Division shown in Table 4 below.

As of June 30, 2023, the aggregate excess of administrative expenses paid by GLWA and DWSD are approximately \$13 million shown in Table 5 below. Per the audited General Retirement System of the City of Detroit audit report (p 38):

During the fiscal year beginning on July 1, 2023, the parties to the pension reporting agreement are to mutually determine and resolve whether any aggregate excess or shortfall of administrative expenses as of June 30, 2023 shall have any effect on the obligation of GLWA or DWSD to make payments to the GRS of the City of Detroit under the pension reporting agreement. To date, no decisions have been made related to how this aggregate excess of administrative expenses paid by GLWA and DWSD are to be treated going forward.

Table 4: Statement of Changes in Fiduciary Net Position by Division

	DWSD Subdivisions		General Retirement System - Divisions				Total - General Retirement System (all Divisions)
	GLWA	DWSD-R	DWSD - Division Total (all DWSD Subdivisions)	General Division	DOT	Library	
Beginning Net Position - July 1, 2022	408,872,233	171,835,643	578,807,876	776,443,791	64,217,535	80,277,093	1,529,846,265
Additions:							
Investment income (loss):							
Interest, dividends, and other income	9,132,208	3,868,131	12,999,339	17,775,851	2,398,031	1,831,458	35,063,479
Net increase in fair value of investments	14,823,480	6,282,551	21,086,031	27,191,803	2,807,530	2,728,073	53,781,537
Net unrealized loss on collateralized securities	(14,875)	(6,200)	(20,875)	(28,064)	(2,250)	(2,488)	(51,987)
Investment related expenses	(2,184,059)	(814,281)	(3,078,320)	(3,865,330)	(409,887)	(397,976)	(7,851,483)
Net investment income	21,776,854	9,200,221	30,877,175	40,948,160	4,791,444	4,257,057	80,871,938
Contributions:							
Employer contributions:							
Originating from DWSD:							
Regular pension contribution	30,168,700	12,741,300	42,909,000	-	-	-	42,909,000
Contribution for administrative expenses	1,757,500	742,500	2,500,000	-	-	-	2,500,000
DWSD transfer to General Division for administrative expenses	(1,757,500)	(742,500)	(2,500,000)	2,500,000	-	-	-
Total contributions originating from DWSD	30,168,700	12,741,300	42,909,000	2,500,000	-	-	46,400,000
Employee contributions - military service purchase	-	-	-	-	6,252	-	6,252
Contributions from other divisions	-	-	-	-	-	2,500,000	2,500,000
Total employer contributions	30,168,700	12,741,300	42,909,000	2,500,000	6,252	2,500,000	47,908,252
Foundation for Detroit's Future	-	-	-	285,012	108,888	-	375,000
Total contributions	30,168,700	12,741,300	42,909,000	2,785,012	116,240	2,500,000	48,281,252
ASF recoupment interest	1,080,790	466,807	1,537,397	2,848,883	1,008,388	115,431	5,509,069
Other income	543,248	229,508	772,754	1,085,819	139,985	113,450	2,092,008
Total additions - net	53,559,690	22,827,638	76,187,328	47,628,854	6,054,037	6,885,938	136,854,155
Deductions:							
Member refunds and withdrawals	806,188	382,833	1,289,001	5,798,776	3,040,273	743,347	10,869,387
Retirees' pension and annuity benefits	41,837,725	17,875,388	59,613,123	120,817,855	30,703,630	6,534,910	217,669,518
General and administrative expenses	713,179	301,301	1,014,480	1,390,842	185,107	140,678	2,680,307
ASF Recoupment Write-off	397,878	188,008	585,884	573,726	234,041	5,638	1,379,089
Transfer of general and administrative expenses to General Division	(713,179)	(301,301)	(1,014,480)	1,014,480	-	-	-
Transfer to Component 1 (Transition Cost)	4,147,878	1,752,375	5,900,253	7,913,549	980,289	818,188	15,592,259
Total deductions	47,289,447	19,878,614	67,268,061	137,477,028	35,103,320	8,242,761	248,091,170
Net Increase (Decrease) in Net Position	6,270,243	2,649,022	8,919,265	(89,850,174)	(29,049,283)	(1,258,823)	(111,237,015)
End of Year Net Position Restricted for Pensions - June 30, 2023	413,247,476	174,584,655	587,827,141	686,593,617	65,168,252	79,020,270	1,418,609,280

Source: Audited Financial Report for the General Retirement System of the City of Detroit (dated December 7, 2023), p 51.

Of the \$2.5 million paid by GLWA and DWSD, \$1.0 million is attributable to the current year and is transferred to the General Division. The remainder is recorded as a prepaid toward future administrative expenses after June 30, 2024 summarized in Table 5 below.



Table 5: Schedule of DWSD/GLWA Contributions Toward Administrative Expenses

Combined Plan for the General Retirement System of the City of Detroit		
Schedule of DWSD/GLWA Contributions Toward Administrative Expenses as Compared to Actual DWSD/GLWA Allocable Administrative Expenses		
For the Year Ended June 30, 2023		
	DWSD Division Total	
	GLWA	DWSD-R
Amount Paid in Excess of Administrative Expenses		
Otherwise Allocable - June 30, 2022	\$ 8,067,659	\$ 3,408,388
DWSD/GLWA contribution for administrative expenses in accordance with plan of adjustment and bankruptcy order	1,757,500	742,500
Administrative expenses otherwise allocable to DWSD/GLWA	<u>(713,179)</u>	<u>(301,301)</u>
Cumulative Amount Paid in Excess of Administrative Expenses		
Otherwise Allocable - June 30, 2023	<u>\$ 9,111,980</u>	<u>\$ 3,849,587</u>

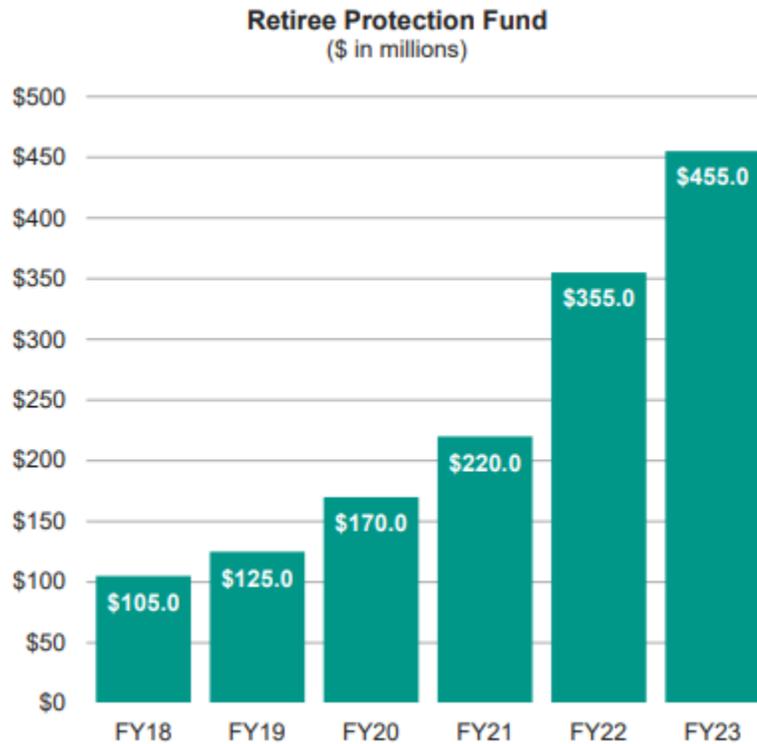
Source: Audited Financial Report for the General Retirement System of the City of Detroit (dated December 7, 2023), p 52.

Planning for the Tail Liability (UAAL)

Under the POA, GLWA and DWSD make combined, Component II annual pension payments of \$45.4 million, of which \$2.5 million is specific to administrative expenses discussed above. Those fixed payments are reduced after June 30, 2023 based upon the terms of a pension agreement that addresses the tail liability. The GRS Component II Annual Pension Report presented to the GLWA Audit Committee by GLWA staff next year will include the June 30, 2024 actuarial report and reflect the first actuarially determined employer contributions (ADEC) payment rather than fixed payments to be made by the combined GLWA and DWSD GRS unit. The actual amount of this remaining, unfunded liability and associated ADEC will vary based upon plan performance and the outstanding liability at that time.

The current June 30, 2023 Actuarial Report estimates the total Component II projected unfunded actuarial accrued liability (UAAL) for the GRS as a whole to be \$779.1 million as of June 30, 2024. The DWSD-GLWA share of the projected UAAL amount is \$16.1 million with an estimated actuarial determined employer contribution of \$1.6 million plus \$0.6 million administrative expense contribution, total \$2.3 million for FY 2025.

The City has been setting funds aside outside of the GRS in a "Retiree Protection Fund" (RPF) via an Internal Revenue Code Section 115 Trust. The balance in the RPF by year is shown in Chart 3 below. The chart was obtained from the FY 2024-2025 proposed budget presented by the Financial Review Commission and presents the current value of that fund as of June 30, 2023. As noted in the City presentation, "To protect retirees, the Mayor and City Council deposited \$455 million in the RPF".

Chart 3: City of Detroit Retiree Protection Fund

Source: [Mayor's Proposed Budget \(detroitmi.gov\)](https://www.detroitmi.gov/mayors-proposed-budget)

Funded ratio is a metric used to measure a plan's ability to cover future obligations based on projected contributions. The Component II funded ratio for the period ending June 30, 2023 is 60.6% (as shown in Table 1 on page 3 of this memo) down from 62.7% the prior year with best practice benchmarks being a 75% minimum and 100% maximum funded ratio. As stated previously, this decrease is largely attributed to the decline in the actual net investment return.

As noted above, the POA established a funding policy for GLWA and DWSD. However, fiscal year 2024 is the first year (post-bankruptcy) the City is required to make ADEC payments annually in accordance with the plan document. The June 30, 2023 valuation computes the employer contribution as a forecast for the 2025 fiscal year. Table 6 below summarizes this ADEC by unit and provides a range for annual contribution requirements beginning in FY 2025.

Table 6: Projected Actuarially Determined Employer Contributions & UAAL/Tail Liability**Actuarially Determined Employer Contributions (ADEC)**

	(\$ Millions)				
	General City	D.O.T.	DWSD	Library	System Total
Actuarial Accrued Liability	\$ 1,258.8	\$ 355.7	\$ 637.0	\$ 75.9	\$ 2,327.5
Funding Value of Assets (FVA)	726.5	69.0	622.0	83.6	1,501.0
UAAL ¹ as of June 30, 2023	\$ 532.3	\$ 286.8	\$ 15.1	\$ (7.7)	\$ 826.5
Expected Contribution (EOY) ²	(67.6)	(37.3)	(0.7)	(0.1)	(105.6)
Assumed Expenses ³	1.3	0.3	0.6	0.1	2.3
Interest at 6.75%	36.0	19.4	1.0	(0.5)	55.9
Projected UAAL as of June 30, 2024	\$ 502.1	\$ 269.2	\$ 16.1	\$ (8.2)	\$ 779.1
Actuarially Determined Employer Contribution (ADEC) for FY 2025⁴					
Remaining Amortization Years	29	29	29	29	29
UAAL Contribution	\$ 51.2	\$ 27.5	\$ 1.6	\$ (0.8)	\$ 79.5
\$0 Minimum UAAL Contribution	51.2	27.5	1.6	-	80.3
Administrative Expense Contribution ³	1.3	0.3	0.6	0.1	2.4
Total Contribution	\$ 52.5	\$ 27.8	\$ 2.3	\$ 0.1	\$ 82.7

Totals may not add due to rounding.

¹ Unfunded Actuarial Accrued Liability in accordance with the Funding Policy including the use of the Funding Value of Assets (FVA) shown in Section G.

² Includes one-time grant proceeds of \$15.8 million for General City and \$7.4 million for D.O.T.

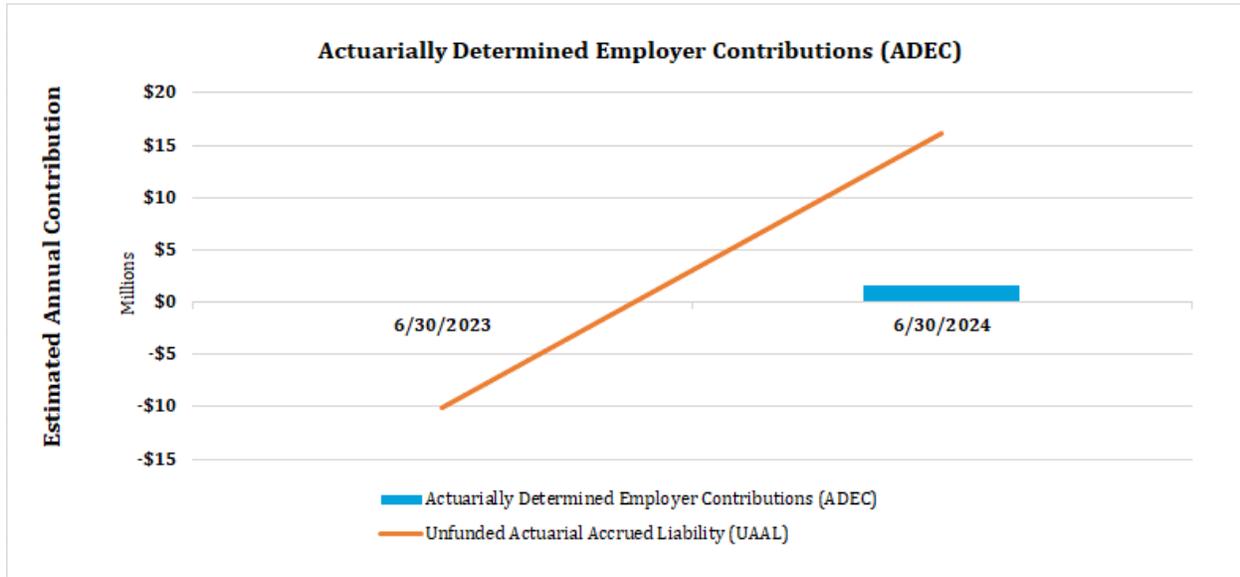
³ Administrative expenses were allocated (see Section D of the report) and assumed to be paid by the individual units.

⁴ Total employer contributions, including amounts paid by the employer but funded from other sources as required by POA, if any. Employer contributions are assumed to be made at the end of the fiscal year.

The Level Principal amortization method is used to systematically eliminate (pay off) the Unfunded Actuarial Accrued Liability (UAAL) over a closed period of 30 years from July 1, 2023 (29 years remaining for the fiscal year ending June 30, 2025 contribution).

Source: Annual Actuarial Valuation of Component II, June 30, 2023 (dated December 22, 2023), p 3.

Chart 4: Estimated Annual Contribution Trends for DWSD Unit based on Actuarially Determined Employer Contributions



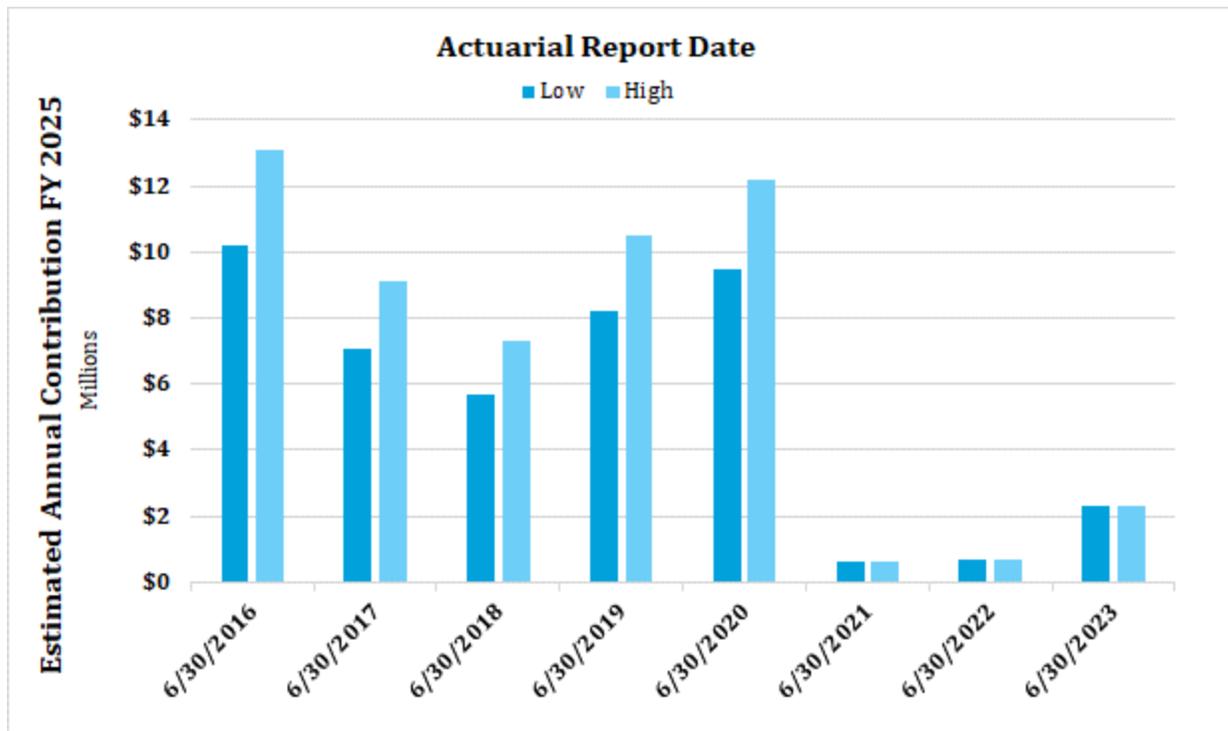
Source: Annual Actuarial Valuation of Component II.

According to the Pension Agreement, “If the Authority Pension Pool is less than 100% funded, then the Authority shall make such level annual contributions to the GRS as necessary to amortize such shortfall over five (5) years (or such greater period not to exceed ten (10) years as agreed upon by GRS and the Authority) at an interest rate equal to the then current GRS investment return assumption. For each Fiscal Year commencing from and after July 1, 2023, on its normal schedule for determining the current Fiscal Year’s contributions to the GRS, the GRS shall provide the Authority with a determination of the UAAL for the Authority Pension Pool using the market value of assets for the Authority Pension Pool and whether the Authority Pension Pool is funded at 100%.” Chart 4 tracks the ADEC contributions based on the UAAL since the first year of this requirement. If the UAAL is less than zero, no annual contribution is required and only administrative expense is paid. This was the case as of June 30, 2023. Chart 4 reflects a zero contribution accordingly.

Impact on GLWA Financial Forecast

Budget Impact: Based on the funding policy currently proposed to the City of Detroit for FY 2025, the annual contribution for GLWA and DWSD is \$0.6 million for administrative expense contribution, and \$1.6 million for ADEC contribution. The prior year actuarial placed that range as \$0.6 million for administration only for FY 2024. The current annual estimated contribution based on the tail liability is summarized in Chart 5 below.

Chart 5: GLWA and DWSD Estimated Annual Contribution for FY 2025



Source: Annual Actuarial Valuation of Component II, June 30, 2023 (dated December 22, 2023), p 3.

GLWA will continue to monitor and report on Component II activity, specifically as it relates to funding policy actions taken by the City of Detroit. GLWA has engaged an independent consultant to review the current valuation and the impacts of any funding policy actions taken by the City and GRS. In addition, GLWA staff continues to attend the monthly GRS Board meetings to monitor and report on the current events and impact on the Plan's investment assets.

Proposed Action: Receive and file this report.

December 7, 2023

To the Board of Trustees, the Investment
Committee, and Management
General Retirement System of the City of Detroit

We have audited the financial statements of the General Retirement System of the City of Detroit (the "System") as of and for the year ended June 30, 2023 and have issued our report thereon dated December 7, 2023. Professional standards require that we provide you with the following information related to our audit, which is divided into the following sections:

Section I - Internal Control Related Matters Identified in an Audit

Section II - Required Communications with Those Charged with Governance

Section III - Other Recommendations and Related Information

Sections I and II include information that we are required to communicate to those individuals charged with governance of the System. Section I communicates deficiencies we observed in the System's internal control that we believe are material weaknesses. Section II communicates significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process.

Section III presents recommendations related to internal control, procedures, and other matters noted during our current year audit. These comments are offered in the interest of helping the System in its efforts toward continuous improvement, not just in the areas of internal control and accounting procedures, but also in operational or administrative efficiency and effectiveness.

We would like to take this opportunity to thank the System's staff for the cooperation and courtesy extended to us during our audit.

This report is intended solely for the use of the board of trustees, the investment committee, and management of the System and is not intended to be and should not be used by anyone other than these specified parties.

We welcome any questions you may have regarding the following communications, and we would be willing to discuss these or any other questions that you might have at your convenience.

Very truly yours,

Plante & Moran, PLLC



Michelle M. Watterworth, CPA



Spencer Tawa, CPA

Section I - Internal Control Related Matters Identified in an Audit

In planning and performing our audit of the financial statements of the System as of and for the year ended June 30, 2023, in accordance with auditing standards generally accepted in the United States of America, we considered the System's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be significant deficiencies or material weaknesses, and, therefore, material weaknesses or significant deficiencies may exist that were not identified. However, as discussed below, we identified certain deficiencies in internal control that we consider to be material weaknesses.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis.

A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis.

We consider the following deficiencies in the System's internal control to be material weaknesses:

Controls Over the System's Census Data and Actuarial Valuation Process (Repeat Finding)

Background: The System has to accumulate and transmit voluminous member data to the actuary. The System accumulates member data based on information from the City of Detroit, Michigan (the "City"), as well as data the System independently obtains. The System relies on data it extracts from the City of Detroit, Michigan's databases primarily for active and deferred members. The System is responsible for data on retirees, as it will obtain additional information when a member commences retirement.

The actuary then uses this information to prepare the actuarial valuation, which impacts the calculation of the actuarially determined contribution (ADC) and the actuarial accrued liability (AAL) for funding purposes and, under GASB Statement No. 67, impacts the total pension liability disclosed in the System's financial statements.

It is key that the information provided to the actuary is complete and accurate in order to ensure that the funding levels, AAL, and disclosures under GASB Statement No. 67, including the total pension liability, also are accurate.

Issues and recommendations: The System has had issues with the accuracy of the member data for many years. We continue to identify a number of errors with the census data. The more significant errors are as follows:

- Inaccuracies with the average final compensation (AFC) being used in the calculation of frozen accrued benefits (Component II only). Based on our procedures, it was noted that the average of our sample's actual AFC was 5 percent higher than reported in the census data, although there was great variability in the discrepancies, which ranged from an AFC that was 3 percent higher than it should have been to 16 percent lower. Reporting inaccurate AFC could lead to a potential misstatement of the plan's total pension liability. Based on follow-up with the System, the discrepancies in the data are not clear. We recommend the System perform a comprehensive review to determine how to pull the most accurate AFC information to provide to the actuary.
- Hybrid pensionable salary - During our testing procedures, we noted differences between actual hybrid pensionable salary for a sample of actives in Component I. The differences ranged from approximately \$1,000 to \$20,000. While the System relies on salary information from the City, we recommend the System perform procedures in verifying the proper salary information is being captured from the City.

**Section I - Internal Control Related Matters Identified in an Audit
(Continued)**

- Death audit - During our testing procedures, we noted a death audit was performed on the deferred members; however, these members were not removed from the census data sent to the actuary. This resulted in 113 members (2 members for Component I and 111 members for Component II) included in the valuation when they should have been removed, thus resulting in the total pension liability calculated being overstated. We recommend the System continue performing these death audits and ensure they are properly utilized to update the census data.

In addition to the errors with pensionable salary/AFC, we also noted errors in the completeness of the data. Given our concerns about the potential impact of these errors on the accuracy of the calculation of the total pension liability (TPL), the System's actuary performed additional testing that targeted testing the accuracy of not only the AFC, but the totality of the census data used in calculating the TPL. That testing, based on the sample utilized by the actuary, provided substantiation that a load was not required to adjust the data. The System is in the process of moving to a new information technology system, and some data has gone through additional validation, which may result in additional census corrections in subsequent years. That said, we continue to encourage the System to put in place controls to further validate the census information each year prior to sending it to the actuary to ensure the data utilized in the valuations is accurate enough not to materially misstate financial data.

Controls Over the System's Information Technology Processes (Repeat Finding)

The System has complex modifiable information technology that integrates with the City of Detroit, Michigan's various payroll databases. The System's IT department is independent of the City and the System's other departments. The security provided by the IT system is important to the validity and the accuracy of the data maintained, including the census information provided to the actuary.

Although the System is currently in the process of modifying the information technology system, we offer the following, which the System should keep in mind as it continues to fully implement the new ERP system:

- Use of automated logs - The System uses customized software for a majority of the System's needs, which includes maintaining the census data and benefits calculation application, which are managed internally by the System's IT personnel and can be modified by the IT department. For all changes to that software, there should be an automated log maintained listing those changes, and no single individual should be able to effect a change without proper authorization. Currently, the System has a process to review, authorize, and track changes, but it is not automated; therefore, it is subject to human error and possible circumvention.
- Master file changes - Additionally, it is recommended that the System implement processes to ensure that master file changes are documented, authorized, and reviewed. The lack of this documentation could result in unauthorized and undocumented changes that go undetected by the System.
- Segregation of duties - Segregation of duty controls provide a separation of users with access to program source code and users with the ability to make or implement changes into the production environment. The ability to make or implement program source code changes should be limited to individuals who cannot access and edit source code. The lack of this control could result in inaccurate or unauthorized changes.

Section II - Required Communications with Those Charged with Governance

Our Responsibility Under U.S. Generally Accepted Auditing Standards

As stated in our engagement letter dated May 31, 2023, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities. Our responsibility is to plan and perform the audit to obtain reasonable, but not absolute, assurance that the financial statements are free of material misstatement.

As part of our audit, we considered the internal control of the System. Such considerations were solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures specifically to identify such matters.

Planned Scope and Timing of the Audit

We performed the audit according to the planned scope and timing previously communicated to you in our meeting about planning matters on August 23, 2023.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we will advise management about the appropriateness of accounting policies and their application. The significant accounting policies used by the System are described in Note 1 to the financial statements. No new accounting policies were adopted, and the application of existing policies was not changed during 2023.

We noted no transactions entered into by the System during the year for which there is a lack of authoritative guidance or consensus.

There are no significant transactions that have been recognized in the financial statements in a different period than when the transaction occurred.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

The following are the significant estimates affecting the financial statements:

Investment Valuations

The financial statements include investments valued at approximately \$16.5 million (less than 1 percent of net position) at June 30, 2023 whose fair values have been estimated by management in the absence of readily determinable market values (Level 3 investments). In addition, the System has approximately \$760.7 million of investments for which management estimated values based on net asset values provided by investee management. These investments all have underlying audited financial statements, but those financial statements are not audited as of the same year end as the System.

The valuation of alternative investments constitutes a very sensitive and significant estimate affecting the financial statements. Management uses various means to value the investments, including utilizing a third-party valuation firm, confirmations from the investment managers, periodic appraisals, guidance from real estate advisors, etc. These estimates are very subjective and highly sensitive to change. We believe management's estimates are in accordance with GAAP.

Section II - Required Communications with Those Charged with Governance (Continued)

Estimates Inherent in the Development of the Total Pension Liability

The financial statement disclosures and required supplementary information schedules contain information about the System's total pension liability. In order to determine the total pension liability, the actuary must apply certain assumptions that are highly sensitive to estimation. The most sensitive estimates used in the valuation were as follows:

- Assumed long-term rate of return - For the purpose of GASB Statement No. 67, as of June 30, 2023, the System is currently using 6.76 percent for the assumed long-term expected rate of return based on information provided by the System's investment advisor combined with calculations performed by the System. Nationally, this long-term rate of return assumption has garnered significant public attention, with many being critical of the average return assumption used by plans across the United States, which, according to a March 2023 National Association of State Retirement Administrators (NASRA) study, was 6.93 percent. We commend the System on continuing to be critical of this significant assumption, watching the trends nationally, and reevaluating the return assumption annually with a critical eye.
- Single discount rate calculation - The calculation of the single discount rate under GASB Statement No. 67, which is calculated using the long-term assumed rate of return as one of many assumptions, is highly sensitive to estimates the actuary makes about future contributions and future benefit payments. Inherent in those assumptions is some subjectivity surrounding the projection of future contributions. The assumption made in the GASB 67 valuation is that the actuarially assumed contributions will be made at rates sufficient to fund the benefits by amortizing the unfunded liability over a closed 30- and 15-year period for Components II and I, respectively, based on the System's adopted funding policy.
- Mortality and other assumptions - The mortality and other assumptions were estimated by the actuary based on the results of an experience study for the period from July 1, 2015 through June 30, 2020. Generally, the actuary used variations of the Pub-2010 tables.

We evaluated the key factors and assumptions used to develop the estimates above and determined that they are reasonable in relation to the financial statements taken as a whole.

The disclosure of these assumptions and resultant sensitivity of the discount rate can be found in Notes 7 and 8 to the financial statements.

The disclosures in the financial statements are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements are the disclosures related to GASB Statement No. 67, including the actuarial valuation results.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in performing and completing our audit.

Disagreements with Management

For the purpose of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Section II - Required Communications with Those Charged with Governance (Continued)

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. The attached schedule summarizes uncorrected misstatements of the financial statements that were requested to be recorded. Management has determined that their effects are immaterial, both individually and in the aggregate, to the financial statements taken as a whole. However, uncorrected misstatements or matters underlying those uncorrected misstatements could potentially cause future period financial statements to be materially misstated.

Significant Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, business conditions affecting the System, and business plans and strategies that may affect the risks of material misstatement, with management each year prior to our retention as the System's auditors. However, these discussions occurred in the normal course of our professional relationship, and our responses were not a condition of our retention.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated December 7, 2023.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a second opinion on certain situations. If a consultation involves application of an accounting principle to the System's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Section III - Other Recommendations and Related Information

During our audit, we noted areas where we believe there are opportunities for the System to further strengthen internal control or to increase operating efficiencies. Our observations on those areas are presented below for your consideration:

Benefit Payment Classification

The System processes monthly benefit payments for each retiree that are summarized and journalized in a monthly entry. These monthly payroll entries are based on the plan to which each retiree is coded (Component II or I). During testing, it was identified that some individuals' pensions are incorrectly classified between Component I and Component II. While the number of individuals incorrectly classified was insignificant, we recommend the System implement a control to ensure proper classification of members in the IT system. This will become more important as the longevity of Component I grows.

Information Technology Processes

- Currently, there is no formal process to fill out a production release form. Usually, a member of the IT department will inform the head of mainframe development to review a production change. The head of mainframe development is the only individual with the ability to release a production change. We recommend the System have a formal policy for individuals to submit a production release form to document change requests and maintain proper support of approval of any changes.
- It was noted there are administrative user profiles that remained in the System for users no longer employed at the System. These profiles have remained active, as staff need to access old files. In addition, we noted duplicate administrative user profiles for current employees. We recommend the System perform a user profile review and only allow one user profile for each current employee and that user profiles for former employees be immediately deleted upon ceasing employment.

Benefit Payment Calculations

Pension factors are used in calculating an individual's pension payment based on age and option selected. Currently, the pension factor used in the calculation of benefit payments is using an old mortality table (1984 table) and a 7.5 percent rate of return. Pension factors should be updated with a newer mortality table (Pub-2010 Mortality Table is currently being used in the actuarial valuations) and rate of return of 6.75 percent (current rate of return used for funding purposes, as stipulated by the Plan of Adjustment). Our understanding is the System will update these amounts once the benefit calculation software is implemented.

Annuity Savings Fund Recoupment Receivable

For members who elected to make employee contributions into the defined contributions-style program, referred to as the annuity savings fund (ASF), between July 1, 2003 and June 30, 2013, the POA called for recoupment of amounts that the System calculated in accordance with the POA provisions where excess interest credited to individual ASF accounts. The recoupment amount was calculated in 2015, and members who had a recoupment amount were offered a lump-sum or monthly payment option. A receivable was recorded on the System's financial records for those who did not pay back the recoupment via the lump-sum option. The monthly payments are being deducted from the members' pension pay monthly until paid in full, or the balance is forgiven upon the members' deaths (or their beneficiaries' if applicable). The receivable is currently recorded in the System's financial statements at \$93 million. For some members, given the provisions of the POA, this recoupment has an extremely long collection period and may, in some cases, be longer than the life expectancy of the member, thereby resulting in eventual write-offs of these balances. To date, annual write-offs have been less than \$2 million, but that amount could increase.

The System has historically not recorded an allowance against this receivable given the limited history to support an estimate for uncollectible balances. However, we encourage the System to consider establishing an estimation methodology, which would result in a more accurate net receivable.

Section III - Other Recommendations and Related Information (Continued)

Informational Items

Income Stabilization Fund

As you are aware, based on the Plan of Adjustment, the investment committee may recommend to the board of trustees that a portion or all of the assets that exceed the income stabilization benefits to be paid in the future be used to fund regular pension payments (up to \$35 million). This is allowed beginning in 2022 and requires agreement from at least 75 percent of the independent members of the investment committee on the recommendation. As of June 30, 2023, the Income Stabilization Fund's net position was \$13,118,022. The investment committee may want to utilize this option; if so, it will need to utilize an actuary to assist in making this determination.

Upcoming Accounting Standards Requiring Preparation

We actively monitor new Governmental Accounting Standards Board standards and due process documents and provide periodic updates to help you understand how the latest financial reporting developments will impact the System. In addition to the summaries below and to stay up to date, Plante & Moran, PLLC issues a biannual GASB accounting standard update. The most recent fall 2023 update and a link to previous fall and spring updates are available [here](#).

GASB Statement No. 101 - Compensated Absences

GASB statement No. 101 is effective for the System for the year ending June 30, 2025. The standard requires all compensated absences to be reported under a new unified model that provides recognition and measurement guidance for all compensated absences that meet certain criteria. This is a major shift from the prior standards that provided different recognition and measurement guidance for vacation leave versus sick leave. Under the new standard, all compensated absences (with some exceptions like parental leave and military leave) that meet three criteria are to be recognized (accrued). The three criteria are (1) the absence accumulates, (2) the absence is attributed to services already performed, and (3) the absence is more likely than not to be either paid or settled through other means.

A few of the more significant changes from prior guidance include the elimination of specific recognition criteria for sick leave (GASB 16's termination payment method and vesting method) in lieu of standard recognition criteria for all types of compensated absences that meet the criteria. In addition, the prior standards used the "probable criteria" as a measurement stick for recognition; GASB 101 lowers that threshold to more likely than not. More likely than not means a likelihood of more than 50 percent. Because GASB 101 does not prescribe the manner in which these leave liabilities are estimated once the criteria is met, organizations will have significant latitude in how these estimates are determined. Because of this, there may be additional reporting and additional disaggregation of historical employee leave usage information that may be required in order to come up with an accurate estimate of these liabilities. We strongly suggest organizations start thinking about these changes now, brainstorm estimation methodologies and begin gathering the necessary information in order to successfully adopt this new standard.

Significant GASB Proposals Worth Watching

The GASB is working on several projects that result in a comprehensive look at financial reporting for state and local governments. The following are likely to result in significant changes to governmental financial statements in the future.

The Financial Reporting Model exposure draft was issued in June 2020, and the final statement is expected to be released in mid-2024. This standard proposes changes to many aspects of the governmental financial statements, including the management's discussion and analysis (MD&A), proprietary fund financial statements, and budgetary comparisons. While the System does not report proprietary fund statements or budgetary comparisons, there are several smaller changes being proposed in this proposal that may impact the System's financial reporting.

**Section III - Other Recommendations and Related Information
(Continued)**

The Revenue and Expense Recognition project aims to develop a comprehensive accounting and financial reporting model for transactions that result in revenue and expenses. The GASB has issued a preliminary views document that proposes a new categorization framework that replaces the exchange/nonexchange transaction notion with a multiple-step categorization process for classifying a transaction. In addition to this new framework, the proposal also addresses recognition and measurement of revenue and expense transactions. The exposure draft for this project is expected sometime in 2025.

Plante & Moran, PLLC has spent significant time digesting these new proposed standards. We strongly encourage the System to monitor developments with these standards, as the potential impacts are quite broad.

Attachment

Client: **General Retirement System of the City of Detroit**
 Opinion Unit: **Fiduciary Funds (all)**
 Y/E: **6/30/2023**

SUMMARY OF UNRECORDED POSSIBLE ADJUSTMENTS

The effect of misstatements and classification errors identified would be to increase (decrease) the reported amounts in the financial statement categories identified below:

Ref. #	Description of Misstatement	Current Assets	Long-term Assets	Deferred Outflows of Resources	Current Liabilities	Long-term Liabilities	Deferred Inflows of Resources	Equity	Revenue	Expenses	Net Income Statement Impact
FACTUAL MISSTATEMENTS:											
A1	None	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JUDGMENTAL ADJUSTMENTS:											
B1	None										
ITEMS UNABLE TO AUDIT:											
C1	None										
	Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

PASSED DISCLOSURES AND FINANCIAL STATEMENT PRESENTATION ISSUES:

- D1 The total pension liability, as calculated by the actuary, is based on census information that is either incomplete or inaccurate. The total pension liability would be different had accurate and complete information been provided to the actuary. Based on errors identified, projected overstatement of the total pension liability of approximately \$7.7 million.
- D2 In the Schedule of Changes in the City's Net Pension Liability and Related Ratios (Legacy Plan), covered payroll was unavailable. This information is required, but has been noted as not available.
- D3 We were unable to substantiate both the money weighted rate of return of 4.94% and time-weighted rate of return of 7.5% which are disclosed in the financial statements.

General Retirement System of the City of Detroit

**Financial Report
with Supplementary Information
June 30, 2023**

General Retirement System of the City of Detroit

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Independent Auditor's Report

To the Board of Trustees
 General Retirement System of the City of Detroit

Opinion

We have audited the financial statements of the General Retirement System of the City of Detroit (the "System") as of and for the year ended June 30, 2023 and the related notes to the financial statements, which collectively comprise the System's basic financial statements, as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the fiduciary net position of the General Retirement System of the City of Detroit as of June 30, 2023 and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are required to be independent of the System and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for 12 months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

To the Board of Trustees
General Retirement System of the City of Detroit

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and other required supplementary information, as identified in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the General Retirement System of the City of Detroit's basic financial statements. The other supplementary information, as identified in the table of contents, is presented for the purpose of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole.

To the Board of Trustees
General Retirement System of the City of Detroit

Report on Summarized Comparative Information

We have previously audited the General Retirement System of the City of Detroit's June 30, 2022 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated December 5, 2022. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2022 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Plante & Moran, PLLC

December 7, 2023

General Retirement System of the City of Detroit

Management's Discussion and Analysis

As management of the General Retirement System of the City of Detroit (DGRS or the "System"), we offer readers this narrative overview and analysis of the financial activities for the year ended June 30, 2023.

Using This Annual Report

This annual report consists of three parts: (1) management's discussion and analysis (this section), (2) the basic financial statements, and (3) the required supplementary information. The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The financial statements are followed by sections of required supplementary information that further explain and support the information in the financial statements.

Financial Highlights

Despite the inflationary challenges and the Fed's short-term interest rates hikes, the U.S. economy continues to forge ahead strongly. The Fed's movement to increase interest rates was implemented to target inflation by slowing economic growth. This effort has been largely successful. While areas of the economy such as employment numbers and consumer spending remain positive, the housing market has been slow. Home prices are at all-time highs, the housing inventory is low, and the 30-year fixed mortgage rate is near 8 percent.

Nevertheless, the U.S. financial markets are doing well. Stocks have recovered from their COVID-19 lows. Moreover, the first half of calendar year 2023 has seen gains that have surpassed some prior years' full year gains.

This year the System posted investment returns of 7.5 percent.

Here at the System, we continue to take steps to improve services for our members. We are implementing new technology and streamlining processes for improved efficiency. Our new ERP system will be fully online within the next few months. There are self-service features of the ERP system that are currently being utilized, and more features will be brought online upon full implementation.

Meeting our members' needs while protecting and growing the System's assets is paramount.

Condensed Financial Information

The tables below compare key financial information in a condensed format between the current year and the prior year:

	2023	2022
Assets	\$ 1,790,953,379	\$ 1,864,607,863
Liabilities	57,334,754	74,082,376
Fiduciary Net Position		
Restricted:		
Pension	1,707,502,532	1,765,307,963
Postemployment benefits other than pension	26,116,093	25,217,524
Total fiduciary net position	\$ 1,733,618,625	\$ 1,790,525,487

General Retirement System of the City of Detroit

Management's Discussion and Analysis (Continued)

	2023	2022
Additions		
Net investment income (loss):		
Interest, dividends, and other income	\$ 40,702,871	\$ 41,900,716
Net increase (decrease) in fair value of investments	64,840,515	(153,266,843)
Investment-related expenses	(9,291,674)	(10,176,199)
Net investment income (loss)	96,251,712	(121,542,326)
Securities lending income	412,111	96,499
Contributions:		
Employer	63,153,813	63,695,698
Employee	18,842,551	16,205,029
Foundation	375,000	375,000
Total contributions	82,371,364	80,275,727
ASF recoupment interest	5,509,059	5,775,503
Transfer from Component II to Component I	15,592,259	-
Other income	2,142,960	294,045
Total additions - Net	202,279,465	(35,100,552)
Deductions		
Benefit payments	221,414,865	225,802,140
Member refunds and withdrawals	16,066,741	19,729,042
Transfer to Component I from Component II	15,592,259	-
General and administrative expenses	4,733,373	4,474,226
ASF recoupment write-off	1,379,089	1,221,731
Total deductions	259,186,327	251,227,139
Net Decrease in Net Position Held in Trust	\$ (56,906,862)	\$ (286,327,691)

Fund Overview, Membership, and Governance

The pension plans of the General Retirement System of the City of Detroit consist of defined benefit pension plans and defined contribution plans for the nonuniformed employees of the City of Detroit, Michigan, composed of Component I and Component II, which are memorialized in a document titled the Combined Plan for the General Retirement System of the City of Detroit, Michigan, made effective July 1, 2014, as amended and restated December 8, 2014 (the "Combined Plan"). The System also manages open and closed death benefit funds (collectively, the "Death Benefit Plans"). The Death Benefit Plans are held in a separate trust; the board of the Death Benefit Plans is substantially the same as the board of the pension plans. This discussion and its accompanying financial statements are concerned primarily with Component I, a new pension plan created by the City effective July 1, 2014 for active nonuniformed employees of the City to earn pension benefits on and after that date (also referred to as the "Hybrid Plan"), and Component II, the legacy pension plan where benefits were earned through June 30, 2014 (the "Legacy Plan").

As discussed in greater detail below, at the conclusion of the 2014 fiscal year, the City froze Component II. The freeze of Component II, which was the pension plan that existed as of June 30, 2014, means that no further benefit accruals occurred after that date, and no new employees are allowed to participate as members.

General Retirement System of the City of Detroit

Management's Discussion and Analysis (Continued)

DGRS exists to pay benefits to its members. Members of the System include active nonuniformed city employees, retirees, and their beneficiaries. Active members still employed with the City on and after July 1, 2014 earn service credit that entitles them to receive benefits in the future in Component I but not in Component II, which, as noted above, has been frozen. Both the employer and municipal plan sponsor for the System, the City, and actively employed members have historically contributed to the System (the employee contributions were voluntary prior to July 1, 2014). Retirees, their beneficiaries, and disabled members are those currently receiving benefits, though the City elected in fiscal year 2015 to transition new disability claims from the benefit program administered by the System to one administered by a third-party insurance carrier.

Component I of DGRS is a newly created plan (effective July 1, 2014), with more active members earning service credit than members eligible to receive or receiving benefits. As of June 30, 2022, there were 4,841 active members, with 692 retirees and 957 terminated plan members entitled to but not yet receiving benefits.

Component II of DGRS is a relatively mature plan in that there are more members receiving current benefits than active members. As of June 30, 2022, in Component II there were 1,850 active members, with 10,918 members receiving benefits and 2,633 terminated plan members entitled to but not yet receiving benefits. On June 30, 2014, the emergency manager of the City of Detroit, Michigan issued Order No. 30, which froze Component II. After that date, no new employees were allowed to participate in Component II, and benefit accruals for members with respect to service rendered prior to July 1, 2014 were frozen based on the member's years of service, average final compensation, and the pension multiplier formula as of the freeze date. Employees working after July 1, 2014 are now earning service credit in the Hybrid Plan, or Component I.

By way of background, a brief review of the City's migration from the Legacy Plan to the Hybrid Plan is appropriate. On June 30, 2014, the emergency manager of the City of Detroit, Michigan issued Order No. 30, which froze Component II. After that date, no new employees were allowed to participate in Component II, and benefit accruals for members with respect to service rendered prior to July 1, 2014 were frozen based on the member's years of service, average final compensation, and the pension multiplier formula as of the freeze date. Employees working after July 1, 2014 are now earning service credit in the Hybrid Plan, or Component I. On July 1, 2014, the City first published the Combined Plan with the city clerk. By August 1, 2014, the City completed the payroll information systems project transitions required to allow the now mandatory employee contributions to be contributed to Component I.

On October 19, 2014, the emergency manager issued Order No. 43, which amended and restated the Combined Plan. On December 8, 2014, before leaving office, the emergency manager issued Order No. 44, which again amended and restated the Combined Plan. According to Order No. 44, the latest amendments and restatements to the Combined Plan conformed the combined plan terms to the requirements of the City's bankruptcy plan and made clarifying modifications. The Combined Plan is available at DGRS' website, www.rscd.org.

In December 2014, DGRS governance was modified as part of the City's bankruptcy plan. DGRS is governed by a board of trustees (the "Board"). Although DGRS' investment management is now the ultimate responsibility of a seven-member investment committee (the "Investment Committee"), the Board maintains its role as the governing board vested with responsibility for the general administration, management, and operation of the System, with which the Investment Committee assists, pursuant to Michigan law.

The Board is composed of 10 members. Five members are elected by the active membership to serve six-year terms. A sixth member is elected by the retiree membership to serve a two-year term. A seventh member is appointed by the mayor of the City of Detroit, Michigan from the citizens of the City to serve a six-year term. The three remaining members serve ex officio, these members being the mayor of the City (or designee), the city treasurer, and one representative from the Detroit City Council. Expirations of terms of elected trustees are staggered, while the remaining trustees serve in accordance with their office or as a designee of an office.

The Investment Committee has five independent members appointed to initial terms with staggered expirations, which terms will all eventually become six years. Two additional members, one active and one retired, serve on the Investment Committee based on appointment by the Board. The Investment Committee will be in place through at least December 2034.

General Retirement System of the City of Detroit

Management's Discussion and Analysis (Continued)

Contributions to the System

Historically, both the City and active employees have made regular contributions to the System, with employee contributions being optional in Component II, essentially before July 1, 2014, though there was a period of transition due to the City's aging information technology infrastructure, which meant that voluntary employee contributions to Component II continued through July 2014, and mandatory employee contributions to Component I from active payroll were implemented as of August 1, 2014.

Basic pension and disability benefits in Component II had been funded through employer contributions plus investment earnings on those contributions, but employee contributions are mandatory in Component I. The required employer contributions had been determined by the System's actuaries using the entry age normal cost method, which is still the case. Assumptions used by the actuaries are subject to experience testing every five years, which is also still the case. Effective December 10, 2014, as part of the resolution of the Chapter 9 case, the investment return assumption and discount rate used by the System's actuary for the purpose of determining the System's assets and liabilities for funding purposes was fixed at 6.75 percent through the period ended June 30, 2023. This applies to both Component I and Component II.

Subsequent to the City's bankruptcy, for the Legacy Plan, the obligations for contributions to support Component II of the System through 2023 are determined as fixed amounts by the provisions in the Eighth Amended Plan for the Adjustment of Debts of the City of Detroit (the "Plan of Adjustment"). Pursuant to the Plan of Adjustment, the System is expected to receive contributions totaling \$718.6 million through fiscal year 2023. The Plan of Adjustment calls for the System to receive \$98.8 million from the State of Michigan; \$428.5 million from the Detroit Water and Sewer Department (DWSD); \$31.7 million from UTGO settlement proceeds; the present value equivalent or actual contribution of \$50 million from the Detroit Institute of Arts (DIA) and its foundation donors during a 10-year period ending in 2024; the present value equivalent or actual contribution of \$18.3 million per year from 2025 through 2034 from certain foundations; and \$114.6 million from the other city-related employer contribution sources, such as the General Fund, Detroit Library Commission, and COBO Authority, over a 10-year period covering fiscal year 2014 through fiscal year 2023. After 2023, the City and various other employer constituents, such as the library, DWSD, and COBO Authority, will retain responsibility for the full funding obligations of Component II of the System, consistent with Michigan law.

The Plan of Adjustment allows for certain of the Legacy Plan's funding obligations to DGRS through 2034 to be met by prepayment of the present value equivalent using a discount rate of 6.75 percent. In the fiscal year ended June 30, 2016, a portion of the DIA obligation to make annual \$5 million contributions over 10 years ending in 2034 was prepaid. This present value prepayment resulted in DGRS receiving \$32,511,827 on June 30, 2016 from the DIA, which represents the present value, using a 6.75 percent discount rate, of \$4,625,000 per year for the 9 years remaining on that annual \$5,000,000 commitment ending in 2024. Pursuant to the Plan of Adjustment, DGRS still expects to receive the equivalent or actual remaining \$375,000 per year from the DIA for that 10-year period ending in 2024 and also received, on June 30, 2016, the amount of \$375,000 in satisfaction of the fiscal year 2016 obligation from the DIA that was not prepaid.

In addition, the City was to remit payments on the UTGO Stub Bonds to the Combined Plan through 2028. In fiscal year 2017, the City of Detroit, Michigan refunded all of its outstanding UTGO Stub Bonds. Upon refunding, the payments to the Combined Plan were accelerated, with a majority of the outstanding balance paid to the Combined Plan in fiscal year 2017; as a result, the Combined Plan received approximately \$7.7 million in the ISP and \$18.3 million in Component II related to this transaction.

With respect to Component I, the Hybrid Plan, nonuniformed employees who are members of DGRS are now required to make mandatory contributions of 4 percent of pay toward their defined benefit pensions earned with the City, and the City contributes an additional 5 percent of pay. The City no longer counts overtime in the calculation of its employer contribution.

The City is also setting aside an additional 0.75 percent of payroll to meet the premium payments required for the disability insurance established with a third-party carrier. DGRS is not administering those disability benefits managed by the third-party carrier.

On June 30, 2023, the City met its obligation for Component I employer contributions by contributing \$15,126,876 to DGRS.

General Retirement System of the City of Detroit

Management's Discussion and Analysis (Continued)

Impact of City of Detroit, Michigan Collective Bargaining and Bankruptcy Pension Adjustments

Pursuant to Emergency Manager Order No. 30, the existing Component II defined contribution plan and defined benefit plan were frozen, preventing any future accruals or new members in Component II effective June 30, 2014.

The following changes became effective July 1, 2014, with the advent of Component I:

- The Hybrid Plan's defined benefit plan commenced with mandatory contributions of 4 percent of base pay. The City contributes 5 percent of employee base pay, not including overtime.
- A new Hybrid Plan defined contribution plan commenced for the annuity savings fund. Employees may make voluntary annuity savings fund contributions of up to 7 percent of total after-tax pay. Interest will be credited at the actual net investment rate of return of DGRS, but in no event will it be lower than 0 percent or higher than 5.25 percent.
- The Hybrid Plan provides that future duty disability and nonduty disability retirement allowances for members who become disabled after July 1, 2014 move to a commercial insurance program through the City.

Benefit Payments

The System exists to pay the benefits that its members have earned pursuant to benefits promised by the City, subject to the Chapter 9 case benefit adjustments going forward in the Legacy Plan and the new promises in the Hybrid Plan. Benefits are paid monthly. In fiscal year 2023, DGRS paid out \$235,900,000 in benefits, consisting of \$219,800,000 in benefits to retirees and beneficiaries plus \$16,100,000 in refunds of annuity savings fund balances and mandatory contributions. The benefits and refunds represent approximately 13.6 percent of the net position of the System as of June 30, 2023. Employer, foundation, and employee contributions were \$82,100,000, or 4.7 percent of the net position of the System. The excess of benefits over contributions of \$153.8 million is funded through investment income. The public capital markets represent the primary source of opportunities to earn investment income.

Asset Allocation

The Board and the Investment Committee of DGRS believe that the principal determinant of total fund investment performance over long periods of time is asset allocation. DGRS' asset allocation is built upon the foundation that the obligations of the System to pay the benefits promised to its members are very long-term obligations. Accordingly, the Board and the Investment Committee must make investment decisions that they believe will be the most beneficial to the System over many years, not just one or two years.

DGRS has established asset allocation policies that are expected to deliver investment income over a very long period of time to satisfy the obligations to pay the benefits promised to the members of the System. The following is a summary of the DGRS asset allocation policy as of June 30, 2023:

Asset Class	Target Allocation
Global equity	46.00 %
Global fixed income	33.00
Real estate/Real assets	13.00
Diversifying strategies	8.00

DGRS' asset allocation policies comply with Michigan law.

Investment Results

DGRS calculates investment results on a time-weighted Global Investment Performance Standard (GIPS) basis unless explicitly stated otherwise. All returns for periods of one year or greater have been annualized.

General Retirement System of the City of Detroit

Management's Discussion and Analysis (Continued)

Total Fund Composite

DGRS' total fund composite return for the year was 7.5 percent, net of fees and expenses using a time-weighted methodology. The fund returned 8.7 percent, 5.8 percent, and 7.0 percent for its 3-, 5-, and 10-year annualized returns, respectively, net of fees and expenses.

The Federal Reserve began raising short-term interest rates in the second half of 2021 as inflation rose above 9 percent briefly that summer and has continued to do so through mid-year 2023. This is being done to slow economic growth, which inevitably will slow inflation.

The Fed's efforts appear to be working, as inflation has come down from its peak of just over 9 percent in July 2021 and is now just above 3 percent as of July 2023. While still above the Fed's target of 2 percent, the lower inflation has been achieved without too much damage to economic growth. This has provided financial markets with encouraging signs the Fed can achieve its target without causing a major recession, resulting in the proverbial "soft landing" for the economy.

The change in Fed interest rate policy from QE (quantitative easing) to QT (quantitative tightening) has raised the return assumptions for bonds quite significantly, which ultimately should make it easier for the System's expected returns.

As part of the resolution of the City of Detroit, Michigan's Chapter 9 bankruptcy case, the discount rate assumption used to meet current and future benefit obligations was set at 6.75 percent through the period ended June 30, 2023. This discount rate assumption provided in the Chapter 9 case does not purport to establish an investment return assumption or discount rate for purposes of, or in accordance with, generally accepted accounting principles. Although the fund's return for this year fell below this assumption, the fund's longer-term return expectation, which this assumption is intended to characterize, still exceeds this assumption.

Total plan returns, net of fees and expenses, for the recent prior fiscal years ended June 30 are shown below:

2022	(7.34)%
2021	28.30
2020	(0.96)
2019	3.40
2018	6.50
2017	14.10
2016	1.40
2015	2.60
2014	14.50
2013	11.70

Money-weighted Rate of Return

GASB Statement No. 67 requires the disclosure of the annual money-weighted rate of return. A money-weighted rate of return (as opposed to the time-weighted rate of return discussed in the previous section) considers both the size and timing of cash flows over the course of the year to determine an internal rate of return (sometimes referred to as IRR). This return is calculated net of expenses and uses cash flows determined on a monthly basis. The DGRS money-weighted rate of return for the year using month-end cash flows was 7.38 percent.

Requests for Further Information

This financial report is intended to provide a general overview of the System's finances and investment results in relation to actuarial projections. It shows the System's accountability for the money it receives from employer and employee contributions. If you have questions about this report or need additional information, we welcome you to contact the System's office or visit its website at www.rscd.org.

General Retirement System of the City of Detroit

Statement of Fiduciary Net Position

June 30, 2023

	Component II Plan (Legacy)		Component I Plan (Hybrid)		Total
	Defined Benefit Fund	Income Stabilization Fund	Defined Benefit Fund	Death Benefit Plans	
Assets					
Cash and cash equivalents (Note 3)	\$ (5,517,641)	\$ 406,246	\$ 19,321,255	\$ 1,508,909	\$ 15,718,769
Investments: (Notes 3 and 4)					
Global equities	709,322,202	5,549,378	80,036,655	17,180,851	812,089,086
Global fixed income	178,541,282	3,120,094	93,057,904	2,114,126	276,833,406
Real estate	221,221,473	2,022,112	37,894,807	1,680,326	262,818,718
Private equity	99,646,190	921,228	17,538,769	95,546	118,201,733
Diversifying strategies	113,693,093	1,051,093	20,011,170	3,663,436	138,418,792
Receivables:					
Investment income	2,173,117	16,966	241,430	-	2,431,513
Contributions (Note 1)	-	-	4,022,646	-	4,022,646
Other receivables	184,371	1,098	54,801	-	240,270
ASF recoupment receivable (Note 1)	93,180,996	-	-	-	93,180,996
Notes receivable from participants	2,154,243	-	1,018,653	-	3,172,896
Receivables from investment sales	1,700,611	12,464	149,974	-	1,863,049
Prepaid expenses	14,307	-	10,793	-	25,100
Restricted investments (Note 11)	4,918,883	38,483	555,024	-	5,512,390
Cash and investments held as collateral for securities lending: (Note 3)					
Asset-backed securities	1,648,013	15,236	290,067	-	1,953,316
Certificate of deposit	885,256	8,184	155,814	-	1,049,254
Repurchase agreements	601,858	5,564	105,933	-	713,355
U.S. corporate floating rate	37,949,411	350,842	6,679,492	-	44,979,745
Commercial paper	536,511	4,960	94,432	-	635,903
Capital assets - Net (Note 1)	4,042,692	-	3,049,750	-	7,092,442
Total assets	<u>1,466,896,868</u>	<u>13,523,948</u>	<u>284,289,369</u>	<u>26,243,194</u>	<u>1,790,953,379</u>
Liabilities					
Accrued expenses	3,804,939	13,258	277,055	127,101	4,222,353
Payables for investment purchases	2,055,848	15,829	204,436	-	2,276,113
Due to the City of Detroit, Michigan	527,783	-	-	-	527,783
Amounts due to broker under securities lending agreements (Note 3)	40,761,376	376,839	7,174,427	-	48,312,642
Lease liability	1,137,642	-	858,221	-	1,995,863
Total liabilities	<u>48,287,588</u>	<u>405,926</u>	<u>8,514,139</u>	<u>127,101</u>	<u>57,334,754</u>
Net Position - Restricted for					
Pension	1,418,609,280	13,118,022	275,775,230	-	1,707,502,532
Postemployment benefits other than pension	-	-	-	26,116,093	26,116,093
Total net position	<u>\$ 1,418,609,280</u>	<u>\$ 13,118,022</u>	<u>\$ 275,775,230</u>	<u>\$ 26,116,093</u>	<u>\$ 1,733,618,625</u>

General Retirement System of the City of Detroit

Statement of Changes in Fiduciary Net Position

**Year Ended June 30, 2023
(with comparative totals for the year ended June 30, 2022)**

	Component II Plan (Legacy)		Component I Plan (Hybrid)		Total	2022
	Defined Benefit Fund	Income Stabilization Fund	Defined Benefit Fund	Death Benefit Plans		
Additions						
Investment income (loss):						
Interest, dividends, and other income	\$ 34,714,312	\$ 302,199	\$ 5,422,485	\$ 263,875	\$ 40,702,871	\$ 41,900,716
Net increase (decrease) in fair value of investments	53,781,537	464,120	8,497,293	2,097,565	64,840,515	(153,266,843)
Investment-related expenses	(7,851,493)	(69,736)	(1,283,068)	(87,377)	(9,291,674)	(10,176,199)
Net investment income (loss)	80,644,356	696,583	12,636,710	2,274,063	96,251,712	(121,542,326)
Securities lending income (loss):						
Interest and dividends	379,167	4,062	90,144	-	473,373	214,456
Net loss on collateralized securities	(51,687)	(478)	(9,097)	-	(61,262)	(117,957)
Total securities lending income	327,480	3,584	81,047	-	412,111	96,499
Contributions:						
Employer	47,900,000	-	15,126,876	126,937	63,153,813	63,695,698
Employee	6,252	-	18,737,570	98,729	18,842,551	16,205,029
Foundation	375,000	-	-	-	375,000	375,000
Total contributions	48,281,252	-	33,864,446	225,666	82,371,364	80,275,727
ASF recoupment interest (Note 1)	5,509,059	-	-	-	5,509,059	5,775,503
Transfer from Component II to Component I	-	-	15,592,259	-	15,592,259	-
Other income	2,092,008	556	50,396	-	2,142,960	294,045
Total additions - Net	136,854,155	700,723	62,224,858	2,499,729	202,279,465	(35,100,552)
Deductions						
Benefit payments	217,569,518	458,025	1,816,188	1,571,134	221,414,865	225,802,140
Member refunds and withdrawals	10,869,397	-	5,197,344	-	16,066,741	19,729,042
Transfer to Component I from Component II	15,592,259	-	-	-	15,592,259	-
General and administrative expenses	2,680,907	-	2,022,440	30,026	4,733,373	4,474,226
ASF recoupment write-off	1,379,089	-	-	-	1,379,089	1,221,731
Total deductions	248,091,170	458,025	9,035,972	1,601,160	259,186,327	251,227,139
Net (Decrease) Increase in Fiduciary Net Position	(111,237,015)	242,698	53,188,886	898,569	(56,906,862)	(286,327,691)
Net Position Restricted for Pension/OPEB - Beginning of year	1,529,846,295	12,875,324	222,586,344	25,217,524	1,790,525,487	2,076,853,178
Net Position Restricted for Pension/OPEB - End of year	\$ 1,418,609,280	\$ 13,118,022	\$ 275,775,230	\$ 26,116,093	\$ 1,733,618,625	\$ 1,790,525,487

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies

Reporting Entity

The pension plans of the General Retirement System of the City of Detroit (the "System" or DGRS) and the Death Benefit Plans are managed by the Retirement System of the City of Detroit. The City of Detroit, Michigan (the "City") sponsors these plans, which consist of four single-employer retirement plans - two pension plans (the "Combined Plan") and two other postemployment benefit plans (the "Death Benefit Plans"), as described below.

Pension Plans

Component II

This is the legacy plan (the "Legacy Plan") that is the original defined benefit plan, which includes a defined benefit component and a defined contribution component. Component II generally applies to benefits accrued by members prior to July 1, 2014. On June 30, 2014, as a result of negotiations between the City and the public employee unions, the existing plan benefit formulas were frozen, and no employees were allowed to earn benefits under the existing plan. The emergency manager issued Order No. 30 (General Retirement System of the City of Detroit) on June 30, 2014, which put these changes into effect. Except as specifically provided in the Combined Plan, benefits provided under Component II are frozen effective June 30, 2014.

Component II also includes the Income Stabilization Fund. The fund, which is part of Component II only and established as a special plan of adjustment provision, was established for the sole purpose of paying the Income Stabilization Benefits and Income Stabilization Benefits Plus to eligible pensioners. Beginning in 2022, the investment committee of DGRS (the "Investment Committee") may recommend to the board that a portion or all of the assets that exceed income stabilization benefits (including Income Stabilization Benefits Plus) to be paid in the future be used to fund regular pension payments. As of June 30, 2023, no decisions have been made to transfer any income stabilization funds.

Nonemployer Contributing Entity within Component II

On September 9, 2014, a memorandum of understanding (the "MOU") was entered into by the emergency manager and mayor of the City of Detroit, Michigan; the county executive of each of the charter counties of Wayne and Macomb, Michigan; the County of Oakland, Michigan; and the governor of the State of Michigan. The purpose of the MOU was to establish a framework for the creation of a regional authority (known as Great Lakes Water Authority or GLWA) pursuant to Act 233 of 1955 to operate, control, and improve the regional assets of the water supply system and the sewage disposal system owned by the City.

Pursuant to the MOU, the City of Detroit, Michigan and GLWA entered into two lease agreements: the Regional Water Supply System Lease dated June 12, 2015 and the Regional Sewage Supply System Lease dated June 12, 2015. Under the provisions of the lease agreements, GLWA leases the regional assets of the City for a period of at least 40 years.

Pursuant to the lease agreements, on December 1, 2015, a triparty agreement between the City of Detroit, Michigan; the General Retirement System of the City of Detroit; and GLWA was signed (referred to as the pension reporting agreement). Per the POA and Section 4.3 of the lease agreements, GLWA is required to pay a portion of the pension obligation that will be allocable to the Detroit Water and Sewer Department (DWSD). The purpose of the pension reporting agreement is to set forth determining the funding status for the DWSD pension pool and for DGRS to agree to provide GLWA with certain actuarial and other reports to enable GLWA to properly manage and pay its portion of the pension obligation that is allocable to DWSD.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies (Continued)

Effective January 1, 2016, GLWA was launched. Accordingly, the prior DWSD division was split into two - one representing the ongoing DWSD department, now referenced as DWSD-Retail (DWSD-R), and another to represent Great Lakes Water Authority. In accordance with the pension reporting agreement, the net position and liabilities of DWSD were allocated to DWSD-R and GLWA in accordance with written directions received from DWSD-R and GLWA. Per written directions, GLWA is to be allocated 70.3 percent of the net position and liabilities of DWSD. Because GLWA has no employees or retirees in the Combined Plan, GLWA is considered a nonemployer contributing entity in accordance with GASB Statement No. 67.

The financial statements of the Combined Plan reflect the net position and pension liabilities of the plan as a whole, which includes the portion allocable to GLWA. GLWA's portion of the total Component II net pension liability of \$922,964,285 at June 30, 2023 was \$37,046,054, with the remainder allocable to the City of Detroit, Michigan and related entities.

Component I

As of July 1, 2014, all current and future employees participate in the new hybrid pension plan (the "Hybrid Plan"), or Component I. Active city employees who participated in the Legacy Plan will receive the benefits they have earned under the plan through June 30, 2014 plus an additional benefit under the new hybrid plan formula, assuming all vesting requirements are met.

Other Postemployment Benefit Plans

Death Benefit Plans

Death benefits are provided to certain employees and retirees of the City of Detroit, Michigan through an employee benefit trust. The following are the benefit plans paid through the trust, both of which are defined benefit plans under GAAP:

- Closed Death Benefit Plan (Closed Plan) - This plan covers those retirees who retired on or before December 10, 2014.
- Death Benefit Plan (Open Plan) - This plan is open to all employees providing services after December 10, 2014.

System Reporting

The Combined Plan and the Death Benefit Plans are separate and independent trusts qualified under applicable provisions of the Internal Revenue Code; they are independent entities (separate and distinct from the employer/plan sponsor) as required by (1) state law and (2) Internal Revenue Code provisions setting forth qualified plan status. The trustees of the Combined Plan and the Death Benefit Plans have a fiduciary obligation and legal liability for any violations of fiduciary duties as independent trustees. The Combined Plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. The Death Benefit Plans provide death benefits for plan members.

The assets of the System include no securities of or loans to the City, although the System did pledge collateral related to a loan of the City (see Note 11).

The basic financial statements include certain prior year summarized comparative information in total but not at the level of detail required for a presentation in accordance with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the System's financial statements for the year ended June 30, 2022, from which the summarized information was derived.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies (Continued)

Plan Sponsor Financial Condition - Impact on the System

In the past, the City of Detroit, Michigan (the "plan sponsor") has experienced significant financial difficulty and liquidity concerns. As of June 2013, the City had defaulted on approximately \$36 million of pension contributions due to the Combined Plan. During fiscal year 2014, the City did not pay any employer contributions into the Combined Plan, despite the fact that there were actuarially required contributions.

In February 2013, the governor appointed a financial review team, which determined that a local government financial emergency existed in the City. This culminated in bankruptcy proceedings, which the City initiated in July 2013. Part of the federal court's ruling in December 2013 indicated that the bankruptcy status usurped whatever protections may be offered to governmental pensions under the Michigan Constitution. On December 10, 2014, the City exited from bankruptcy through confirmation of the Eighth Amended Plan for the Adjustment of Debts of the City of Detroit (the "Plan of Adjustment" or the "POA"). The POA specifies certain provisions pertinent to the legacy and hybrid plans, including contributions and benefits.

Since 2015, the contributions received by the Combined Plan were made in accordance with the provisions of the POA. See Note 12 for significant changes that were implemented by the Combined Plan under the POA.

The POA also resulted in the City closing the existing supplemental death benefit plan to new members effective December 10, 2014. Benefits to be paid to individuals retiring prior to that date are limited to the assets allocated to that closed plan. There are no further contribution requirements for the City for plan members who were retired as of that date.

Summary of Significant Accounting Policies

The following is a summary of the significant accounting policies used by the General Retirement System of the City of Detroit.

Accounting and Reporting Principles

The System follows accounting principles generally accepted in the United States of America (GAAP), as applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Governmental Accounting Standards Board.

Basis of Accounting

The System uses the economic resources measurement focus and the full accrual basis of accounting. Revenue is recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Specific Balances and Transactions

Cash and Cash Equivalents

The System considers cash on hand, demand deposits, and short-term investments with an original maturity of three months or less when purchased to be cash equivalents.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies (Continued)

Investments

Investments are reported at fair value or estimated fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sale price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments. The fair value of real estate investments is based on periodic appraisals, as well as the judgment of independent real estate advisors and management. Investments that do not have an established market value are reported at estimated fair value determined by the System's management.

Approximately \$777,200,000, or 45 percent, of the System's net position as of June 30, 2023 does not have a readily determinable market value. Of this balance, approximately \$16,500,000 has been estimated by management. The remaining \$760,700,000 is valued based on valuations performed by the investee company management, which is subject to annual audits (generally as of December 31).

Investments for which market quotations are readily available are generally priced by the custodian using nationally recognized pricing services and practices. For investments that do not have readily observable market prices, including but not limited to private equity, public and private real estate, alternatives, and direct loans, management's estimate of their fair value is based on information provided by investment managers, general partners, real estate advisors, and other means. These sources are held to a standard of reasonable care in verifying that the valuations presented reasonably reflect the underlying fair value of the investments. A variety of factors is considered in the valuation process, including the nature of the investment, local market conditions, trading values on public exchanges for comparable investments, and current and projected operating performance. However, due to the inherent uncertainty and the degree of judgment involved in determining fair value for such investments, the values reflected in the financial statements may differ significantly from values that would have been used had a readily determinable market value for the investments existed, and the difference could be material.

Contributions Receivable

At June 30, 2023, there was \$4,022,646 in employer contributions receivable. This amount relates to fiscal year 2023 Component I contributions and was paid in July 2023.

ASF Recoupment Receivable - Component II (Legacy)

For members who elected to make employee contributions into the defined contributions-style program, referred to as the annuity savings fund (ASF), between July 1, 2003 and June 30, 2013, the POA called for recoupment of amounts that the City calculated were excess interest credited to individual ASF accounts. In 2011, the City Council adopted an ordinance that limited ASF interest credits to the plan's actual net investment return, with a cap of 7.9 percent and a floor of 0 percent. The POA calculation of excess interest applies the interest formula in the 2011 ordinance to the July 1, 2003 - June 30, 2013 recoupment period, recouping all interest paid in excess of the lower of 7.9 percent or the plan's actual return for that year, with a cap on the recoupment amount of 20 percent of the highest ASF balance in this period. The recoupment amount is also capped at 15.5 percent of the retiree's monthly pension check. The City offered a limited lump sum or a monthly payment option. Repayment of these excess interest amounts is not optional. As of June 30, 2023, the System has approximately \$93,200,000 to be collected. The receivable will be collected, with 6.75 percent interest, as a reduction to monthly pension benefits for those with recoupment balances outstanding.

Receivable/Payable from Investment Sales/Purchases

The System liquidated investments prior to year end and reported a receivable from investment sales at June 30, 2023 in the amount of \$1,863,049. The proceeds from the sales were received subsequent to year end. In addition, the System purchased investments prior to year end and reported a payable from investment purchases at June 30, 2023 in the amount of \$2,276,113. This amount was paid subsequent to year end.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies (Continued)

Notes Receivable from Participants

In Component II (Legacy) and Component I (Hybrid), any active general employee who is or has been a participant in the 1973 defined contribution plan (annuity savings fund) may be eligible for the employee loan program. The minimum amount of the loan was established at \$1,000. The maximum loan is the lesser of 50 percent of the member's account balance in the annuity savings fund or \$10,000. Members can borrow as either a general purpose loan payable in 1 to 5 years or a residential loan payable in 1 to 15 years. A member can have only two outstanding loans. The balance of these loans for the year ended June 30, 2023 was \$2,154,243 and \$1,018,653 for Legacy and Hybrid, respectively. The balance is measured at the unpaid principal balance plus any accrued but unpaid interest. Participant notes receivable are written off when deemed uncollectible.

Capital Assets

Capital assets for the System include software, office equipment, and furniture. The System's leased assets are also categorized as part of capital assets (see below). Depreciation and amortization expense is calculated by allocating the net cost of the assets over their estimated useful lives.

Leases

The System is a lessee for its office building. The System recognizes a lease liability and an intangible right-to-use lease asset in the statement of fiduciary net position.

At the commencement of a lease, the City initially measures the lease liability at the present value of payments expected to be made during the lease term. Subsequently, the lease liability is reduced by the principal portion of lease payments made. The lease asset is initially measured as the initial amount of the lease liability, adjusted for lease payments made at or before the lease commencement date, plus certain initial direct costs. Subsequently, the lease asset is amortized on a straight-line basis over its useful life.

Key estimates and judgments related to leases include how the System determines (1) the discount rate it uses to discount the expected lease payments to present value, (2) lease term, and (3) lease payments. The System uses the interest rate charged by the lessor as the discount rate. When the interest rate charged by the lessor is not provided, the System generally uses its estimated incremental borrowing rate as the discount rate for leases. The lease term includes the noncancelable period of the lease. Lease payments included in the measurement of the lease liability are composed of fixed payments and purchase option price that the System is reasonably certain to exercise.

The System monitors changes in circumstances that would require a remeasurement of its lease and will remeasure the lease asset and liability if certain changes occur that are expected to significantly affect the amount of the lease liability.

Lease assets (reported with other capital assets) and lease liabilities are reported on the statement of fiduciary net position.

Restricted Assets

As part of an agreement with the City, the System has pledged collateral in case of the City's default on a certain loan agreement between the City and the United States Department of Housing and Urban Development (HUD) (see Note 11). At June 30, 2023, this amount has been shown as restricted assets on the statement of fiduciary net position.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 1 - Significant Accounting Policies (Continued)

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from those estimates.

Note 2 - Pension Plan Description

Component II (Legacy Plan) and Component I (Hybrid Plan)

Plan Administration

The Combined Plan's governance was modified in December 2014 as part of the City's bankruptcy plan. The Combined Plan's board of trustees and the Investment Committee administer the General Retirement System of the City of Detroit Pension Plan - a single-employer defined benefit and defined contribution plan that provides retirement benefits, as well as survivor and disability benefits, for plan members and beneficiaries. Plan members include active employees, retirees, and beneficiaries from various departments within the City of Detroit, Michigan. Benefit terms have been established by contractual agreements between the City and the employees' collective bargaining unit, as modified by the POA. Future amendments are subject to the same process. However, pursuant to the POA, pension benefit terms presently expressed in the Combined Plan are not subject to amendment before June 30, 2023, unless an amendment is required to maintain the tax-qualified status of the plans. The obligation to contribute to and maintain the Combined Plan was established by the city charter and negotiations with the employees' collective bargaining units.

The board is composed of 10 members. Five members of the board are elected by the active membership to serve six-year terms. One retiree member is elected by the retiree membership to serve a two-year term. One member is appointed by the mayor of the City of Detroit, Michigan from the citizens of the City to serve a six-year term. Three members serve ex officio, these members being the mayor of the City (or designee), the city treasurer, and one representative from the Detroit City Council. Expirations of terms of elected trustees are staggered.

The Investment Committee has five independent members appointed to initial terms with staggered expirations, which terms will all eventually become six years. Two additional members, one active and one retired, serve on the Investment Committee based on appointment by the board. The Investment Committee will be in place through at least December 2034.

Benefits Provided

The Combined Plan provides retirement and disability benefits. Benefit terms had been established by negotiations between the City Council and the employees' collective bargaining unit and subject to amendment by the City Council. Further changes to benefits were provided for under the POA.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 2 - Pension Plan Description (Continued)

Employees Covered by Benefit Terms

The following members were covered by the benefit terms:

	<u>Component II (Legacy Plan)</u>	<u>Component I (Hybrid Plan)</u>
Date of member count	June 30, 2022	June 30, 2022
Inactive plan members or beneficiaries currently receiving benefits	10,918	692
Inactive plan members entitled to but not yet receiving benefits	2,633	957
Active plan members	<u>1,850</u>	<u>4,841</u>
Total employees covered by the plan	<u><u>15,401</u></u>	<u><u>6,490</u></u>

As of June 30, 2014, Component II has been frozen. As of that date, no new participants were allowed to enter the plan, and no new benefit accruals were allowed for existing participants.

After July 1, 2014, active members will retain existing service credit in the Legacy Plan but will only earn additional service credit in the new Hybrid Plan.

Contributions

Article 9, Section 24 of the State of Michigan Constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year. Accordingly, in the past, the Combined Plan had retained an independent actuary to determine the annual contribution. The actuarially determined rate was the estimated amount necessary to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. However, until 2024, contributions are based on specific provisions in accordance with the Plan of Adjustment.

Employer and Nonemployer Contributing Entity Contributions

Component II

For Component II, during fiscal year 2023, employer contributions are not actuarially determined but rather are determined by the provisions of the POA detailed under Exhibit II.B.3.r.ii.A of the POA. Included within contributions for fiscal year 2023 in Component II are contributions from the Foundation for Detroit's Future (the "Foundation") in the amount of \$375,000 and \$47.9 million of contributions from the city-related entities and GLWA.

Component I

For Component I, during fiscal year 2023, employer contributions are not actuarially determined but rather are determined by the provisions of the Combined Plan detailed under Section 9.3 of Component I. Per Section 9.3, commencing on July 1, 2014 and ending on June 30, 2023, the City is required to contribute 5 percent of compensation of active members. A portion of the employer's annual contribution for each plan year, as determined by the City, shall be credited to the rate stabilization fund reserve, with the remainder allocated to the pension accumulation fund reserve. No contribution amounts have been allocated to the rate stabilization fund. During fiscal year 2023, the City and related entities contributed \$15,126,876 into the Hybrid Plan. Beginning in 2024, the employer contributions will be actuarially determined based on the amount necessary to fund the plan on an actuarial basis.

Because there were no actuarially determined contributions for Component I, there is no required schedule of city contributions included within these financial statements.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 2 - Pension Plan Description (Continued)

Employee Contributions

Component II

Contribution requirements of plan members historically were established and amended by the board of trustees in accordance with the city charter, union contracts, and plan provisions. For the year ended June 30, 2023, there were no employee contributions into Component II, except for military service purchase payments, as the plan was frozen as of June 30, 2014.

Component I

Contribution requirements of plan members are established in Sections 9.3 and 10.1 of Component I of the Combined Plan. For the year ended June 30, 2023, the required active member contribution rate for employees was 4.0 percent of annual pay. Additionally, employees can make voluntary contributions of 3 percent, 5 percent, or 7 percent of annual pay. During fiscal year 2023, the plan received mandatory and voluntary employee contributions of \$18,737,570.

Fiscal Responsibility Provision

To safeguard the long-term actuarial and financial integrity of the Combined Plan, in the event the funding level of Component I projected over a five-year period falls below 100 percent, certain remedial actions are required, as set forth in Section 9.5 of Component I of the Combined Plan, including elimination of COLA, transfers from the rate stabilization fund reserve to the pension accumulation fund reserve, and increases in mandatory employee contributions from 4 percent to 5 percent.

In the event the funding level of Component I is projected to fall below 80 percent, additional remedial actions are required, including further increasing the mandatory employee contributions to 6 percent and the potential for reducing the retirement allowance.

As of June 30, 2023, the enactment of the remedial actions has not been required based on actuarial projections of the funding levels.

Note 3 - Deposits and Investments

The System is authorized by Michigan Public Act 314 of 1965, as amended, to invest, within the pension and Death Benefit Plans, in certain reverse repurchase agreements, stocks, diversified investment companies, annuity investment contracts, real estate leased to public entities, mortgages, real estate, debt or equity of certain small businesses, certain state and local government obligations, and certain other specified investment vehicles.

The investment policy adopted by the board is in accordance with Public Act 196 of 1997 and has authorized investments according to Michigan Public Act 314 of 1965, as amended. The System's deposits and investment policies are in accordance with statutory authority.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 3 - Deposits and Investments (Continued)

The System invests in various investment securities. Investment securities are exposed to various risks, such as interest rate, market, credit risks, and overall market volatility. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported on the statement of changes in fiduciary net position.

The System's cash and investments are subject to several types of risk, which are examined in more detail below:

Custodial Credit Risk of Bank Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the System's deposits may not be returned to it. The System does not have a deposit policy for custodial credit risk. Approximately \$4.1 million of the System's checking account balances was uninsured and uncollateralized at June 30, 2023. The System believes that, due to the dollar amounts of cash deposits and the limits of FDIC insurance, it is impractical to insure all deposits.

Interest Rate Risk

Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. The System's investment policy does not restrict investment maturities.

At year end, the System had the following investments and maturities:

Investment (in Thousands)	Fair Value	Less Than 1 Year	1-5 Years	6-10 Years	More Than 10 Years
Corporate bonds	\$ 126,928	\$ 4,004	\$ 103,467	\$ 12,917	\$ 6,540
U.S. government mortgage-backed securities	27,514	483	8,107	398	18,526
Mutual fund	35,058	-	32,944	2,114	-
Government securities	621	-	217	384	20
U.S. government securities	37,152	5,140	17,954	7,734	6,324
Asset backed	739	-	739	-	-
Total	<u>\$ 228,012</u>	<u>\$ 9,627</u>	<u>\$ 163,428</u>	<u>\$ 23,547</u>	<u>\$ 31,410</u>

Not all fixed-income securities are subject to interest rate risk.

Credit Risk

State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. The System has no investment policy that would further limit its investment choices.

At June 30, 2023, the credit quality ratings of debt securities (other than those guaranteed by the U.S. government), as rated by Standard & Poor's, are as follows:

Investment (in Thousands)	AAA	AA	A	BBB	BB	B or lower	NR
Corporate bonds	\$ 1,428	\$ 624	\$ 10,443	\$ 12,066	\$ 17,928	\$ 13,097	\$ 71,342
U.S. government mortgage-backed securities	-	18,221	-	-	-	-	9,293
Mutual funds	-	-	-	-	-	-	35,058
Government securities	246	260	-	-	-	-	116
Asset backed	739	-	-	-	-	-	-
Total	<u>\$ 2,413</u>	<u>\$ 19,105</u>	<u>\$ 10,443</u>	<u>\$ 12,066</u>	<u>\$ 17,928</u>	<u>\$ 13,097</u>	<u>\$ 115,809</u>

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 3 - Deposits and Investments (Continued)

Foreign Currency Risk

Foreign currency risk is the risk that an investment denominated in the currency of a foreign country could reduce its U.S. dollar value as a result of changes in foreign currency exchange rates. The System does not restrict the amount of investments in foreign currency.

The following securities are subject to foreign currency risk:

Currency (in Thousands)	Equity	Cash	Net Investment (Payable) Receivable
Brazil real	\$ 1,219	\$ -	\$ -
Canadian dollar	3,626	2	65
Eurocurrency unit	16,667	-	227
Hong Kong dollar	883	-	2
Japanese yen	6,435	-	119
Mexican peso	1,124	-	-
New Taiwan dollar	3,174	-	138
Norwegian krone	2,200	-	64
Pound sterling	3,536	-	-
Singapore dollar	987	-	-
South Korean won	1,009	-	4
Swiss franc	1,937	-	74
Total	<u>\$ 42,797</u>	<u>\$ 2</u>	<u>\$ 693</u>

Securities Lending

As permitted by state statutes and under the provisions of a securities lending authorization agreement, the System, through the Combined Plan, lends securities to broker-dealers and banks for collateral that will be returned for the same securities in the future. The System's custodial bank manages the securities lending program and receives cash, government securities, or irrevocable bank letters of credit as collateral. The custodial bank does not have the ability to pledge or sell collateral securities unless the borrower defaults. Borrowers are required to deliver collateral for each loan equal to no less than 102 percent of the market value of the loaned securities.

As of June 30, 2023, the collateral provided was 101.92 percent of the market value of the loaned securities, which is less than the required 102 percent.

The System did not impose any restrictions during the fiscal year on the amount of loans made on its behalf by the custodial bank. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from a default of the borrowers or custodial bank.

The System and the borrower maintain the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested, together with the cash collateral of other lenders, in an investment pool. The average duration of such investment pool as of June 30, 2023 was 10 days. Because the loans are terminable on demand, their duration did not generally match the duration of the investments made with cash collateral. On June 30, 2023, the System had no credit risk exposure to borrowers. The collateral held (at cost) and the fair market value of the underlying securities on loans for the System as of June 30, 2023 were \$48,312,642 and \$47,402,770, respectively.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 3 - Deposits and Investments (Continued)

The following represents the balances relating to the securities lending transactions as of June 30, 2023; investments are reported at fair value:

Securities Lent	Underlying Securities
U.S. corporate fixed income	\$ 9,634,260
U.S. equities	34,802,194
Non-U.S. equities	911,080
U.S. governments	2,055,236
Total	<u>\$ 47,402,770</u>

The fair market value of the collateral pool related to securities lending at June 30, 2023 was \$49,331,573. The investments were in asset-backed securities, floating-rate notes, certificate of deposit, commercial paper, and repurchase agreements. Approximately 96 percent of these securities had a duration of less than 1 year, 0.5 percent had a duration between 1 and 3 years, and 3.5 percent had a duration over 15 years.

The credit ratings of the securities lending collateral pool held at June 30, 2023, as rated by S&P, are as follows:

Ratings	Amount
AAA	\$ 230,302
AA	11,074,157
A	32,655,606
A-1	1,685,157
CC	1,150,548
D	627,106
NR	1,908,697
Total	<u>\$ 49,331,573</u>

Note 4 - Fair Value Measurements

In accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, the notes to the financial statements now include enhanced disclosures about fair value measurement, the level of fair value hierarchy, and valuation techniques.

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets, Level 2 inputs are significant other observable inputs, and Level 3 inputs are significant unobservable inputs. Investments that are measured at fair value using net asset value per share (NAV) (or its equivalent) as a practical expedient are not classified in the fair value hierarchy below.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 4 - Fair Value Measurements (Continued)

The System has the following recurring fair value measurements as of June 30, 2023:

	Assets Measured at Fair Value on a Recurring Basis at June 30, 2023			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance at June 30, 2023
Fixed income:				
Government securities (U.S. and other)	\$ 14,710,003	\$ 621,267	\$ -	\$ 15,331,270
Corporate bonds	-	125,115,063	-	125,115,063
U.S. government mortgage- backed	-	27,513,573	-	27,513,573
Asset-backed securities	-	2,747,277	-	2,747,277
Corporate floating rate notes	-	44,979,745	-	44,979,745
Certificate of deposit (negotiable)	-	1,049,254	-	1,049,254
Commercial paper	-	635,903	-	635,903
Mutual funds	38,721,013	-	-	38,721,013
Privately negotiated debt	-	1,813,153	-	1,813,153
U.S. Treasury	-	22,441,512	-	22,441,512
Total fixed income	53,431,016	226,916,747	-	280,347,763
Equity:				
Common stock	598,995,635	-	-	598,995,635
Preferred stock	1,986,431	3,942,662	-	5,929,093
Total equity	600,982,066	3,942,662	-	604,924,728
Partnership investments	-	-	2,330,000	2,330,000
Real estate private equity funds	-	-	10,577,740	10,577,740
Real estate-related investments	-	-	3,600,000	3,600,000
Total	\$ 654,413,082	\$ 230,859,409	\$ 16,507,740	901,780,231
Investments measured at NAV:				
International equity funds				234,736,450
Fixed-income funds				42,627,301
Hedge funds				135,109,538
Real estate funds				232,637,090
Private equity funds				115,601,733
Total investments measured at NAV				760,712,112
Total investments measured at fair value				\$ 1,662,492,343

A total of \$713,355 of repurchase agreements recorded at amortized cost is not included in the fair value table above.

Equity securities, U.S. government securities, and mutual funds classified in Level 1 are valued using prices quoted in active markets for those securities.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 4 - Fair Value Measurements (Continued)

The fair value of preferred stock and fixed-income securities at June 30, 2023 was determined primarily based on Level 2 inputs. The System estimates the fair value of these investments using other inputs, such as interest rates and yield curves, that are observable at commonly quoted intervals for identical or similar assets.

The fair value of the remaining investments at June 30, 2023 was determined primarily based on Level 3 inputs. The System estimates the fair value of these investments using the System's own pricing estimate methodology, pricing models, discounted cash flow methodologies, or similar techniques taking into account the characteristics of the asset.

The valuation method for investments measured at net asset value per share (or its equivalent) is presented in the table below.

Investments in Entities that Calculate Net Asset Value per Share

The System holds shares or interests in investment companies where the fair value of the investments is measured on a recurring basis using net asset value per share (or its equivalent) of the investment companies as a practical expedient.

As of June 30, 2023, the fair value, unfunded commitments, and redemption rules of those investments are as follows:

	Fair Value	Unfunded Commitments	Redemption Frequency, if Eligible	Redemption Notice Period
International equity funds	\$ 234,736,450	\$ -	Monthly	Up to 30 days
Fixed-income funds	42,627,301	-	Daily	10 business days
Hedge funds	135,109,538	-	Quarterly	100 days
Real estate funds	232,637,090	-	Quarterly	90 days
Private equity funds	115,601,733	46,019,720	N/A	N/A
	<u>\$ 760,712,112</u>	<u>\$ 46,019,720</u>		
Total investments measured at NAV				

Multiple funds are held in each category. For reporting purposes, the redemption frequency and redemption notice period provided are the most restrictive of any of the funds in the category.

The international equity funds class includes investments in funds that invest in predominantly equity securities of non-U.S. companies. The funds invest in developed and emerging market countries and utilize investments across the capitalization spectrum from large to small companies. The fair values of the investments in this class have been estimated using net asset value per share of the investments.

The fixed-income funds class includes investments in funds that invest in predominantly fixed-income instruments in the U.S. and developed and emerging market countries. The funds invest across a diverse group of security types, including government, corporate, and mortgage-backed debt, and across the credit quality spectrum of investment grade and high yield. The fair values of the investments in this class have been estimated using net asset value per share of the investments.

The hedge funds class includes investments in funds that achieve capital appreciation through multimanager and/or multistrategy investments. Within this group of funds, there is exposure to investment strategies, including, but not limited to, credit, event-driven, equity, and relative value. The funds have the ability to invest across all markets and across all asset classes to implement their various strategies. The fair values of the investments in this class have been estimated using net asset value per share of the investments.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 4 - Fair Value Measurements (Continued)

The real estate funds class includes investments in funds whose objective is to operate a core portfolio of real estate investments predominantly located in the U.S. The funds acquire ownership in underlying investments either through direct real estate ownership or ownership in real estate companies or the equity of real estate investment trusts. The funds predominantly target purchases in office, industrial, retail, or multifamily real estate classes. The fair values of the investments in this class have been estimated using net asset value per share of the investments (or its equivalent).

The private equity funds class is an alternative investment class and consists of investments in companies that are not listed on a public exchange. The General Retirement System of the City of Detroit maintains a diversified portfolio of private equity investments by both style (buyout, turnaround, venture capital, etc.) and vintage year exposure. With its private equity allocation, the General Retirement System of the City of Detroit seeks to take advantage of the illiquidity premium associated with these private equity investments. The fair values of the investments in this class have been estimated using net asset value per share of the investments (or its equivalent).

Note 5 - Pension Plan Investments - Policy and Rate of Return

Component II (Legacy Plan) and Component I (Hybrid Plan)

Investment Policy

The assets of Components II and I are commingled and invested together, as allowed by the POA. The Combined Plan's policy in regard to the allocation of invested assets is established and may be amended by governance by a majority vote of its members. It is the policy of the governance to pursue an investment strategy that manages risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. The Combined Plan's investment policy discourages the use of cash equivalents, except for liquidity purposes, and aims to refrain from dramatically shifting asset class allocations over short time spans. The following was the governance's adopted asset allocation policy as of June 30, 2023:

Asset Class	Target Allocation
Global equity	46.00 %
Global fixed income	33.00
Real estate/Real assets	13.00
Diversifying strategies	8.00
Total	100.00 %

Rate of Return

For the year ended June 30, 2023, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 4.94 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 6 - Pension Plan Reserves

Component II (Legacy Plan)

In accordance with the Combined Plan for the General Retirement System of the City of Detroit and state law, the following reserves are required to be set aside within the Component II (Legacy) pension plan:

The annuity reserve fund is an accumulation of transfers that is made from the annuity savings fund when an employee retires or becomes disabled or if a surviving spouse elects an annuity rather than a lump-sum payout of accumulated employee contribution, net of the annuities paid. Balance is currently negative and as a result, has been combined with the pension reserve fund for disclosure.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 6 - Pension Plan Reserves (Continued)

The pension reserve fund represents funded pension benefits available for retired members and is funded by actuarially determined transfers from the pension accumulation fund. The transfers from the pension accumulation fund to the pension reserve fund for fiscal year 2023 retirements have not yet been determined.

The employee reserve (annuity savings fund or ASF) is credited as employee contributions are received throughout the year; the ASF maintains a record of the amount contributed by each employee and credits interest annually at a rate approved by the board. During fiscal year 2023, the board approved the interest rate at 5.25 percent. Eligible active members may elect to withdraw their accumulated (annuity) contributions plus investment earnings. Upon retirement, members can elect to annuitize or receive a lump sum of their accumulated contribution and interest earnings. When an employee retires or becomes disabled or if a surviving spouse elects an annuity rather than a lump-sum payout of accumulated employee contributions, the balance is transferred to the annuity reserve fund. See Note 12 for disclosure of significant changes to the ASF going forward.

The pension accumulation fund is the fund that will accumulate reserves for the pensions and other benefits payable from the contributions made by the City, including various departments thereof, and certain third parties pursuant to the POA and from which pensions and other benefits will be paid on account of members with prior service credit and transfers, as provided in Section E-18. Contributions to the pension accumulation fund from the effective date of the POA through fiscal year 2023 shall be made only in the amounts and from the sources identified in the POA. Due to the required transfers to fund the pension reserve fund, the fund as of June 30, 2023 is negative and has been combined with the pension reserve fund for disclosure.

The expense fund is the fund that will be credited with all money provided by the City to pay the administrative expenses of the Combined Plan and from which all the expenses necessary in connection with the administration and operation of the Combined Plan will be paid. At year end, this reserve balance is zero, as all employer contributions were credited to the pension accumulation fund.

The income fund shall be the fund to which all interest, dividends, and other income derived from the investments of Component II of the Combined Plan will be credited. Transfers from the income fund will be made to credit earnings and losses to various reserves of the Combined Plan in accordance with the provisions of Component II of the combined plan document. Amounts credited to the income fund in excess of amounts needed to credit earnings and losses of the Combined Plan, as provided in Component II, for any plan year shall be transferred to the pension accumulation fund and used to pay retirement allowances and other benefits on account of members. During fiscal year 2023, the income fund reserve was not utilized, and all investment income was credited to the pension accumulation fund.

The balances of the reserve accounts for Component II (excluding the Income Stabilization Fund) as of June 30, 2023 are included in the table below. The reserve balances as of June 30, 2023 shown below do not include the current year transfer amount related to fiscal year 2023 retirements for amounts that are transferred from the pension accumulation fund to the pension reserve fund.

The balances of the reserve accounts at June 30, 2023 are as follows:

	Required Reserve	Amount Funded
Annuity savings fund	\$ 82,885,035	\$ 82,885,035
Pension reserve fund	1,856,204,265	1,335,724,245
Annuity reserve fund	-	-
Pension accumulation fund	-	-

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 6 - Pension Plan Reserves (Continued)

Component I (Hybrid Plan)

In accordance with the Combined Plan for the General Retirement System of the City of Detroit and state law, the following reserves are required to be set aside within the Component I (Hybrid) pension plan:

The accumulated mandatory employee contribution fund shall be the fund in which shall be accumulated the contributions of members to provide their retirement allowances. Upon the retirement, termination, or death of a member with a vested retirement allowance, the member's accumulated mandatory employee contributions shall be deemed to be part of the pension reserve that shall be used to pay the member's retirement allowance.

The accumulated voluntary employee contribution fund shall be the fund in which shall be accumulated the voluntary after-tax contributions of members together with earnings thereon (the board approved 5.25 percent rate of return for fiscal year ended June 30, 2023).

The pension accumulation fund shall be the fund in which shall be accumulated reserves for the retirement allowances and other benefits payable from that portion of the employer's annual contribution that is not credited to the rate stabilization fund and amounts transferred to Component I and from which shall be paid retirement allowances and other benefits on account of members. During fiscal year 2023, all employer contributions were directed by the City into the pension accumulation fund, and no amounts were credited to the rate stabilization fund.

The rate stabilization fund shall be the fund that shall be credited with the employer's annual contributions in excess of the amount of the employer's contribution that is credited to the pension accumulation fund and amounts transferred to Component I, as provided in Section E-16(C) of Component II. See Note 11 for details on the transfer provisions related to transfers between Component II and Component I. During fiscal year 2023, no amounts were credited to the rate stabilization fund. Therefore, this reserve balance is zero.

The medical benefit fund shall be the fund that will be credited with contributions made for the purpose of funding medical benefits. During the year, no such contributions were made, and, therefore, this reserve balance is zero.

The expense fund shall be the fund to which will be credited any money provided by the employers to pay the administrative expenses of the Combined Plan and from which certain expenses incurred in connection with the administration and operation of the Combined Plan will be paid. At year end, this reserve balance is zero, as all employer contributions were credited to the pension accumulation fund.

The income fund shall be the fund to which all interest, dividends, and other income derived from the investments of Component I of the Combined Plan will be credited. Transfers from the income fund will be made to credit earnings and losses to various reserves of the Combined Plan in accordance with the provisions of Component I of the combined plan document. Amounts credited to the income fund in excess of amounts needed to credit earnings and losses of the Combined Plan, as provided in Component I, for any plan year shall be transferred to the pension accumulation fund. During fiscal year 2023, investment income was transferred to other reserve funds, and, therefore, this reserve balance at June 30, 2023 remains unfunded.

The balances of the reserve accounts for Component I as of June 30, 2023 are included in the table below. As of June 30, 2023, not all transfers from the accumulated mandatory employee contribution fund to the pension accumulation fund for retirements have occurred.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 6 - Pension Plan Reserves (Continued)

The balances of the above reserves for Component I that were funded as of June 30, 2023 are as follows:

	Required Reserve	Amount Funded
Accumulated mandatory employee contribution fund	\$ 70,323,194	\$ 70,323,194
Accumulated voluntary employee contribution fund	39,938,095	39,938,095
Pension accumulation fund	-	165,513,945

Note 7 - Net Pension Liability for Component II (Legacy Plan)

The net pension liability has been measured as of June 30, 2023 and is composed of the following:

Total pension liability	\$ 2,341,573,565
Plan fiduciary net position	<u>1,418,609,280</u>
City's pension liability	<u>\$ 922,964,285</u>
Plan fiduciary net position as a percentage of the total pension liability	60.58 %

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2022, which used update procedures to roll forward the estimated liability to June 30, 2023. The valuation used the following actuarial assumptions applied to all periods included in the measurement:

Inflation	N/A	
Salary increases	N/A	No inflation assumption or salary increases due to plan freeze as of June 30, 2014
Investment rate of return	6.76%	Net of pension plan investment expense, including inflation

Note that the long-term assumed rate of return used for the purpose of the GASB Statement No. 67 valuations was determined in accordance with generally accepted accounting principles. This rate will change annually based on capital market expectations in consideration of the System's most recently approved asset mix. This should not be confused with the provisions in the Plan of Adjustment, which established a 6.75 percent assumed rate of return that does not change annually as it is set by the POA for the purpose of the various provisions within the plan; the Plan of Adjustment did not attempt to dictate the long-term rate of return to be used for accounting purposes.

The mortality table assumption was based on the PubG-2010(B) Below-Median General Retiree Table. The tables are projected to be fully generational, based on the two-dimensional, sex-distinct mortality scale MP-2021.

The actuarial assumptions, other than the investment rate of return, used in the June 30, 2022 valuation to calculate the total pension liability as of June 30, 2023 were based on the results of an actuarial experience study for the period from July 1, 2015 through June 30, 2020.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 7 - Net Pension Liability for Component II (Legacy Plan) (Continued)

Attribution Period

As addressed more fully in Note 12, as of June 30, 2014, the plan was frozen such that no new benefit accruals were allowed, and no new members could join. Starting on July 1, 2014, the participants in the Legacy Plan (Component II) will now be earning benefits under a newly created defined benefit plan (Component I). GASB Statement No. 67 requires that the service costs of all pensions be attributed through all assumed exit ages through retirement. Neither GASB Statement No. 67 nor any other GASB standard has set forth guidance specifically related to frozen plans with successor plans in place. Absent any guidance to the contrary, due to the status as a frozen plan combined with the fact that individuals are now earning service in a new defined benefit pension plan, the retirement date for the purpose of attribution was assumed to be June 30, 2014 for all members. Therefore, the total pension liability at June 30, 2023 is equal to the present value of projected benefit payments.

Discount Rate

The discount rate used to measure the total pension liability as of June 30, 2023 was 6.76 percent; however, the single discount rate used at the beginning of the year was 6.75 percent. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that city contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee rate.

Projected Cash Flows

Based on the above assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees at both the beginning of the year and the end of the year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate. Contributions to the Combined Plan are projected to be at the actuarially determined amounts beginning in 2024. The projection of cash flows assumes full funding of the actuarially assumed contributions will be made at rates sufficient to fund the benefits by amortizing the unfunded liability over a closed 30-year period, based on the System's adopted funding policy.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return as of June 30, 2023 for each major asset class included in the pension plan's target asset allocation, as disclosed in the investment footnote, are summarized in the following table:

Asset Class	Long-term Expected Real Rate of Return
Global equity	4.58 %
Global fixed income	4.09
Real estate/Real assets	4.64
Diversifying strategies	4.30

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 7 - Net Pension Liability for Component II (Legacy Plan) (Continued)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability, calculated using the discount rate of 6.76 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.76 percent) or 1 percentage point higher (7.76 percent) than the current rate:

	1 Percentage Point Decrease (5.76%)	Current Discount Rate (6.76%)	1 Percentage Point Increase (7.76%)
Net pension liability	\$ 1,115,770,578	\$ 922,964,285	\$ 756,452,874

Note 8 - Net Pension Asset of the City for Component I (Hybrid Plan)

The net pension asset of the City has been measured as of June 30, 2023 based on benefits in force as of that date and is composed of the following:

Total pension liability	\$ 242,486,802
Plan fiduciary net position	<u>275,775,230</u>
City's net pension asset	<u>\$ (33,288,428)</u>
Plan fiduciary net position as a percentage of the total pension liability	113.73 %

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2022, which used update procedures to roll forward the estimated liability to June 30, 2023. The following are the significant assumptions:

Wage inflation assumption was 3 percent.

The investment rate of return (net of pension plan investment expense, including inflation) applied to the beginning of year total pension liability was 6.75 percent as compared to 6.76 percent, which was the assumed long-term rate of return as of the end of year. The rates were determined in accordance with generally accepted accounting principles. This rate will change annually based on capital market expectations in consideration of the System's most recently approved asset mix. This should not be confused with the provisions in the Plan of Adjustment, which established a 6.75 percent assumed rate of return that does not change annually, as it is set by the POA for the purpose of the various provisions within the plan; the Plan of Adjustment did not attempt to dictate the long-term rate of return to be used for accounting purposes.

The mortality table assumption was based on the PubG-2010(B) Below-Median General mortality Table. The tables are projected to be fully generational, based on the two-dimensional, sex-distinct mortality scale MP-2021.

The actuarial assumptions, other than the investment rate of return, used in the June 30, 2022 valuation to calculate the total pension liability as of June 30, 2023 were based on the results of an actuarial experience study for the period from July 1, 2015 through June 30, 2020.

Cost of living adjustments (COLA): This plan has a postretirement COLA feature known as the Variable Pension Improvement Factor (VPIF) of a 2 percent simple COLA. It can be granted beginning on July 1, 2018 only if the five-year projection shows the plan's funded status at 100 percent based upon 6.75 percent future investment return. For the purpose of the total pension liability, the actuary assumed a 0.50 percent simple COLA beginning in fiscal year 2023 to model the potential average COLA over time. Had no COLA been assumed, the net pension asset would have been \$(41,114,167). Had the full 2 percent COLA been assumed, the net pension asset would have been \$(9,504,195).

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 8 - Net Pension Asset of the City for Component I (Hybrid Plan) (Continued)

There were no changes in benefit provisions during the year affecting the total pension liability.

Discount Rate

The discount rate used to measure the total pension liability as of June 30, 2023 was 6.76 percent; however, the single discount rate used at the beginning of the year was 6.75 percent. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that city contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee rate.

Projected Cash Flows

Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees at both the beginning of the year and the end of the year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate. Contributions to the Combined Plan are projected to be at the actuarially determined amounts beginning in 2024. The projection of cash flows assumes full funding of the actuarially assumed contributions will be made at rates sufficient to fund the benefits by amortizing the unfunded liability over a closed 15-year period, based on the System's adopted funding policy.

The long-term expected rate of return on future pension plan investments is the same as Component II given that the assets are commingled (see Note 7).

Sensitivity of the Net Pension Asset to Changes in the Discount Rate

The following presents the net pension asset of the City, calculated using the discount rate of 6.76 percent, as well as what the City's net pension asset would be if it were calculated using a discount rate that is 1 percentage point lower (5.76 percent) or 1 percentage point higher (7.76 percent) than the current rate:

	1 Percentage Point Decrease (5.76%)	Current Discount Rate (6.76%)	1 Percentage Point Increase (7.76%)
Net pension asset of the City	\$ (253,550)	\$ (33,288,428)	\$ (60,140,882)

Note 9 - Other Postemployment Benefit Plan

Closed Death Benefit Plan (Closed Plan) and Death Benefit Plan (Open Plan)

Plan Description

The City of Detroit Employees Death Benefit Board of Trustees administers the Death Benefit Plans, which are single-employer defined benefit OPEB plans used to provide death benefits to employees and retirees. The Death Benefit Board of Trustees is the same as the board of trustees of the General Retirement System of the City of Detroit, with the exception of the civilian member. Also, the one representative from the Detroit City Council is the City Council president.

In accordance with the City of Detroit, Michigan's plan of adjustment, the Death Benefit Plan was split into two parts: an Open Plan and a Closed Plan. Members retired on or before December 10, 2014 are in the Closed Plan. Members who retire after December 10, 2014 (provided they were active on or after December 10, 2014) are in the Open Plan. The City has no further obligations to Closed Plan members. Closed Plan members will receive benefits only if the Closed Plan assets are sufficient.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 9 - Other Postemployment Benefit Plan (Continued)

Benefits Provided

In accordance with the City of Detroit, Michigan Code of Ordinances, effective July 1, 1999, prior to retirement from city services, a death benefit in the amount of \$10,000 or the amount designated in the member's labor agreement, shall be paid. After retirement of the member from the City, the amount of death benefits paid is based upon the retiree's years of city service ranging from \$1,860 (for 8 to 10 years of service) to \$3,720 (for 30 years of service). For years of service beyond 30 years, \$93 will be added per year for each additional year of service.

Employees Covered by Benefit Terms

Closed plan: As of June 30, 2022, 8,874 retirees are covered by the benefit terms in the Closed Plan.

Open plan: The following members were covered by the benefit terms in the Open Plan:

Date of member count	June 30, 2022
Retirees and beneficiaries	3,269
Active plan members	<u>7,163</u>
Total employees covered by the plan	<u><u>10,432</u></u>

Contributions

Open Plan

The City of Detroit Employee Benefit Plan board establishes contribution rates for the Death Benefit Plan; however, the City of Detroit, Michigan is under no legal obligation to prefund the plan benefits. The board's policy is to develop an employer contribution that is the greater of (1) the per active person rate provided for in the City of Detroit, Michigan Ordinance or (2) normal cost plus a 27-year closed (30-year closed period beginning with the June 30, 2019 valuation) amortization of unfunded actuarial accrued liability on a per active person basis. For the year ended June 30, 2023, the employer contribution rate for each active member was \$13.30 a year, except for police lieutenants and sergeants and fire equivalents. For police lieutenants and sergeants and fire equivalents, the employer contribution rate for each member was \$20.70 a year. For retirees, no employer contribution is required. Active plan members are required to contribute \$10.40 a year, except for police lieutenants and sergeants and fire equivalents, who contribute \$13.00 a year. For retired plan members, required contributions are \$1.08 a year. During the year ended June 30, 2023, the Open Plan received employer contributions of \$126,937 and employee contributions of \$89,485.

Closed Plan

The City of Detroit, Michigan allocated \$30,423,997 to the Closed Death Benefit Plan as of December 31, 2014 to fully fund the plan. There are no required additional employer contributions. For retired plan members, required employee contributions are \$1.08 a year. Total employee contributions for the year ended June 30, 2023 for the closed plan were \$9,244.

Net OPEB Liability

Closed Plan

The Closed Death Benefit Plan will provide future benefits only to the extent that plan assets are available to pay them. After the contribution in 2014, no further employer contributions will be made to the Plan. As such, the total OPEB liability as of June 30, 2023 is equal to the plan net position of \$21,310,495.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 9 - Other Postemployment Benefit Plan (Continued)

Open Plan

The net OPEB liability has been measured as of June 30, 2023 and is composed of the following:

Total OPEB liability	\$ 6,192,161
Plan fiduciary net position	<u>4,805,598</u>
Net OPEB liability of the City	<u>\$ 1,386,563</u>
Plan fiduciary net position as a percentage of the total OPEB liability	77.61 %

Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of June 30, 2022, which used update procedures to roll forward the estimated liability to June 30, 2023. The valuation used the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

The inflation assumption was 2.5 percent. The investment rate of return (net of pension plan investment expense, including inflation) was 5.50 percent, which was also the investment rate of return used at the beginning of the year. The rate was determined in accordance with generally accepted accounting principles.

For members in the general retirement system, the mortality table assumption was based on the PubG-2010(B) Below-Median General Retiree Table. For members in the police and fire retirement system, the mortality table assumption was based on the PubS-2010 Safety Retiree Table. All mortality tables are projected to 2021 based on the two-dimensional, sex-distinct mortality improvement scale MP-2021.

Discount Rate

The discount rate used to measure the total OPEB liability was 5.50 percent, which was also the single discount rate used at the beginning of the year. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made at the current contribution rate.

Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

The actuarial assumptions, other than the investment rate of return, used in the June 30, 2022 valuation to calculate the total pension liability as of June 30, 2023 were based on the results of an actuarial experience study for the period from July 1, 2015 through June 30, 2020.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 9 - Other Postemployment Benefit Plan (Continued)

Investment Rate of Return

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The board has not adopted a formal investment policy; however, the pension board approved a formal investment allocation in August 2014. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic equity	26.00 %	4.96 %
International equities	25.00	5.57
Bonds	25.00	2.93
REITs	4.00	3.75
Global multisector fixed income	20.00	2.46
Total	100.00 %	

Sensitivity of the City's Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of the City, calculated using the discount rate of 5.50 percent, as well as what the City's net OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower (4.50 percent) or 1 percentage point higher (6.50 percent) than the current rate:

	1 Percentage Point Decrease (4.50%)	Current Discount Rate (5.50%)	1 Percentage Point Increase (6.50%)
Net OPEB liability of the City	\$ 2,579,412	\$ 1,386,563	\$ 448,739

Since the OPEB benefits in this plan are life insurance only, there is no health care trend assumption. The sensitivity of net OPEB liability using +/-1 percent health care trend is not applicable to this plan.

Rate of Return

For the year ended June 30, 2023, the annual money-weighted rate of return on OPEB plan investments, net of OPEB plan investment expense, was 10.19 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 10 - Leases

The System leases its office building from a third party. Payments are generally fixed monthly with certain variable payments not included in the measurement of the lease liability, such as common area maintenance (CAM) and taxes.

The lease asset of the System, reported with other capital assets on the statement of fiduciary net position, is \$2,320,754, with accumulated amortization of \$480,881 as of June 30, 2023.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 10 - Leases (Continued)

Future principal and interest payment requirements related to the System's lease liability at June 30, 2023 are as follows:

Years Ending	Principal	Interest	Total
2024	\$ 198,620	\$ 103,928	\$ 302,548
2025	219,132	92,491	311,623
2026	241,081	79,891	320,972
2027	264,556	66,046	330,602
2028	289,651	50,869	340,520
2029-2031	782,823	51,058	833,881
Total	\$ 1,995,863	\$ 444,283	\$ 2,440,146

Note 11 - Commitments

The Combined Plan document setting forth the Legacy Plan (Component II) contains a provision for the transfer of certain excess investment returns to the new Hybrid Plan (Component I). In any plan year during the period beginning on or after July 1, 2014 and ending on June 30, 2023, if the annual rate of return credited to member annuity savings fund accounts is less than the actual rate of return net of expenses of the plan's invested assets for the second plan year preceding the plan year in which the annual rate of return is credited, the excess earned shall be transferred to the pension accumulation fund maintained under Component I of the Combined Plan and will be used to fund transition costs related to Component I. The transition cost is a measure of the liability that Component I of the Combined Plan has at its inception due to the fact that members in Component I receive vesting and eligibility credit under Component I for service that was earned prior to July 1, 2014 and is otherwise credited to members under Component II. Such transition costs have been calculated by the plan's actuary. Yearly transfers to fund these costs are required in the second year following the year in which the return is earned based on a two-year look-back; therefore, as an example, any transfers based on the plan year ended June 30, 2021 will be calculated and transferred during the plan year ended June 30, 2023.

Based on these provisions, \$15,592,259 and \$0 was transferred from Component II to Component I toward the transition costs in the fiscal years ended June 30, 2023 and 2022, respectively. The cumulative amount of transfers from prior fiscal years was \$10,193,807. No more transfers will occur given the combined plan document only specified transfers to be made through June 30, 2023.

Account Pledge Agreement

In 2022, the System entered into a collateral pledge agreement with the U.S. Department of Housing and Urban Development, as allowed under MCL 38.1133(8). This collateral pledge agreement requires the System to pledge to HUD as collateral for the City of Detroit, Michigan on its outstanding loan with HUD, an amount equal to the balance of the HUD loan to the City that exceeds \$2 million. The City has provided a covenant that it will make all payments to HUD on this related obligation. As the HUD loan balance held by the City is reduced as the City makes payments, the collateral will decrease in a similar amount. According to the repayment schedule, the City is due to pay off the principal balance in August 2026. As of June 30, 2023, the amount of pledged collateral is \$5,512,390.

Note 12 - City of Detroit, Michigan's Chapter 9 Bankruptcy Plan of Adjustment and Continuing Impact on the Plan

In March 2013, after enduring years of financial difficulty, the City of Detroit, Michigan filed for bankruptcy protection. The Eighth Amended Plan for Adjustment of Debts of the City of Detroit was filed with the Bankruptcy Court on October 22, 2014. In November 2014, after a confirmation hearing lasting several weeks, the Bankruptcy Court confirmed the Plan of Adjustment, which became effective December 10, 2014.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 12 - City of Detroit, Michigan's Chapter 9 Bankruptcy Plan of Adjustment and Continuing Impact on the Plan (Continued)

Legacy Plan (Component II)

The pension settlement, as part of the Plan of Adjustment, compromised pension claims and provided funding support for legacy pension benefit obligations under the General Retirement System of the City of Detroit Component II from the State of Michigan, the Detroit Institute of Arts, and certain foundation donors. The Plan of Adjustment also required certain governance changes for DGRS. Those governance changes included establishment of the Investment Committee effective December 10, 2014, which officially marked the beginning of implementation of the Plan of Adjustment, although DGRS had for months already undertaken contingency planning for all of the pension adjustments. In addition to governance changes, the POA requires of the System, through its board of trustees and the Investment Committee, certain periodic and interim reporting obligations to the City, the Foundation for Detroit's Future, and the State of Michigan. Although there were some delays in meeting certain obligations because of new actuarial reporting requirements for governmental systems, which in turn impacted the preparation of the System's audited financial statements, the System believes it has ultimately met its special reporting obligations in fiscal year 2016 and continued to do so in fiscal years 2017 through 2023.

For DGRS, with respect to Component II benefit adjustments, the pension settlement (for which benefit levels were and are contingent on other factors, including receipt of outside contributions) is provided for the following:

- A loss of cost of living adjustments, or escalators, paid after July 1, 2014
- A 4.5 percent cut to the remaining accrued pension benefit after the COLA loss
- For DGRS members who participated in the annuity savings fund plan between 2003 and 2013, subject to certain caps, recoupment of certain amounts of interest deemed by the City to be in excess of that which should have been credited to individual ASF accounts, referred to as "ASF Recoupment." ASF Recoupment, like other provisions of the pension settlement, was not optional. Most members will pay their ASF Recoupment by a monthly deduction from their future pension benefits for a set term of months, including interest calculated at 6.75 percent. All members were offered a lump-sum cash option, which was limited in the aggregate to \$30 million in member recoupment. In fiscal year 2016, the Bankruptcy Court approved certain additional members whose application submissions were not timely received to participate in the lump-sum cash option.
- The possibility of restoration of certain pension benefit cuts, based on a program for the most financially vulnerable pensioners and beneficiaries through the State of Michigan Treasury Department, as well as a new feature of Component II allowing restoration depending on the System's funding level over time
- An Income Stabilization Program (the "ISF Program") was established as part of the State Contribution Agreement, another facet of the pension settlement. The ISF Program, supported by city funds arising from an unlimited tax general obligation bonds settlement, is intended to ensure that the most financially vulnerable retirees and beneficiaries do not fall below the poverty line as a result of bankruptcy-related pension changes. Beginning on March 1, 2015, certain DGRS members also received benefit pension cut restoration under the ISF Program administered by DGRS, pursuant to the State Contribution Agreement, based on eligibility and benefit payments calculated by the State of Michigan. Following the close of the fiscal year ended June 30, 2016 and pursuant to Component II of the Combined Plan and the State Contribution Agreement, the System implemented the first annual ISF Program benefit adjustments effective July 1, 2016.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 12 - City of Detroit, Michigan's Chapter 9 Bankruptcy Plan of Adjustment and Continuing Impact on the Plan (Continued)

- The POA also discusses a restoration plan. Terms of the pension restoration are contained in Exhibit II.B.3.r.ii.C of the POA, and the terms govern how accrued pensions, including COLA benefits that were reduced as a part of the POA, may be restored over the 30-year period following the confirmation order. The Investment Committee will supervise the restoration process in accordance with the restoration plan. The restoration plan shall be deemed a part of Component II. The funding levels have not been attained as of June 30, 2023 for the restoration process to initiate.

The obligations for contributions to support Component II of the System through 2023 was determined as fixed amounts by the provisions in the Plan of Adjustment. Pursuant to the Plan of Adjustment, the System was expected to receive contributions totaling \$718.6 million through fiscal year 2023. The Plan of Adjustment calls for the System to receive \$98.8 million from the State of Michigan; \$428.5 million from DWSD; \$31.7 million from UTGO settlement proceeds; the actual or present value equivalent of \$50 million from the DIA and its foundation donors; and \$114.6 million from the other city-related employer contribution sources, such as the General Fund, Detroit Library Commission, and COBO Authority, over a 10-year period covering fiscal year 2014 through fiscal year 2023. Between 2025 and 2034, DGRS will receive \$18.3 million per year from certain foundation donors. After 2023, the City, and various other employer constituents, such as the Library, DWSD, and COBO Authority, will retain responsibility for the full funding obligations of Component I of the System, consistent with Michigan law.

In fiscal year 2017, DGRS received from the City, its employer-related contribution sources, and the DIA and its foundation donors all contributions required by the Plan of Adjustment. The City was to remit payments on the UTGO Stub Bonds to the Combined Plan through 2028. In fiscal year 2017, the City of Detroit, Michigan refunded all of its outstanding UTGO Stub Bonds. Upon refunding, the payments to the Combined Plan were accelerated, with a majority of the outstanding balance paid to the Combined Plan in fiscal year 2017; as a result, the Combined Plan received approximately \$9.4 million in the ISF and \$18.3 million in the Component II Defined Benefit Fund related to this transaction.

DGRS continues to implement the POA, which includes ongoing compliance and additional reporting requirements by the board and the Investment Committee, annual review of benefit levels, and essentially provides for a 40-year plan to close the DGRS Legacy Component II underfunded liability. ASF Recoupment, in particular, is a notable facet of the Plan of Adjustment that will continue to be implemented as members apply for Component II pension benefits over time.

Note 13 - City of Detroit, Michigan Commitment to Future Funding

In anticipation of significant actuarially required contributions commencing in fiscal year 2024, the City, independent of the System, has established a Retiree Protection Trust Fund (the "Trust"). The Trust, a permanent irrevocable trust under Sections 115 and 414(d) of the Internal Revenue Code, is to receive, maintain, and invest city funds restricted for future deposits to the General Retirement System Plan and the Police and Fire Retirement System Plan as part of an effort to manage and stabilize future required city contributions to the plans. The City has set aside approximately \$465 million for this Trust as of June 30, 2023 for future contributions to the General Retirement System Plan and the Police and Fire Retirement System Plan. Contributions to the System will be recognized as the City makes distributions from this independent trust to the System.

Note 14 - Pension Reporting Agreement

Effective January 1, 2016, Great Lakes Water Authority was launched. Accordingly, the prior DWSD division in Component II was split into two - one representing the ongoing DWSD department, now referenced as DWSD-Retail, and another to represent the GLWA serving water and sewer customers in areas outside of the City.

General Retirement System of the City of Detroit

Notes to Financial Statements

June 30, 2023

Note 14 - Pension Reporting Agreement (Continued)

On December 1, 2015, a triparty agreement referred to as the pension reporting agreement between the City of Detroit, Michigan; the General Retirement System of the City of Detroit; and GLWA was signed. Per the Plan of Adjustment and Section 4.3 of the lease agreements, GLWA is required to pay a portion of the pension obligation that would otherwise have been allocated in full to the DWSD pension pool.

The purpose of the pension reporting agreement is to set forth determining the funding status for the DWSD pension pool and for DGRS to agree to provide GLWA with certain actuarial and other reports to enable GLWA to properly manage and pay its portion of the pension obligation that is allocable to the DWSD pension pool. In accordance with the pension reporting agreement, the net position and liabilities of the DWSD pension pool were allocated between DWSD-R and GLWA. Per written directions, GLWA is to be allocated 70.3 percent of the net position and liabilities of the DWSD pension pool.

Additionally, per Section 2.3 of the pension reporting agreement, the DWSD pension pool was to pay \$2.5 million annually for administrative expenses into the System. This annual payment occurred for the nine years ending with fiscal year June 30, 2023. According to the pension reporting agreement, DGRS was to track the actual annual administrative expenses allocable to the DWSD pension pool, and then, beginning with the fiscal year commencing on July 1, 2023, DGRS was required to calculate the actual aggregate amount of administrative expenses allocable to the DWSD pension pool during such nine-year period. In the event that the aggregate amount paid by the DWSD pension pool was more than the actual aggregate amount of administrative expenses allocable to the DWSD pension pool during such nine-year period, such amount was to be considered the aggregate excess of administrative expenses as of June 30, 2023. Based on this required reporting by DGRS, as of June 30, 2023, the aggregate excess of administrative expenses paid by the DWSD pension pool are approximately \$13 million.

During the fiscal year beginning on July 1, 2023, the parties to the pension reporting agreement are to mutually determine and resolve whether any aggregate excess or shortfall of administrative expenses as of June 30, 2023 shall have any effect on the obligation of DWSD-R or GLWA to make payments to the General Retirement System of the City of Detroit under the pension reporting agreement. To date, no decisions have been made related to how this aggregate excess of administrative expenses paid by GLWA and DWSD-R are to be treated going forward.

Note 15 - Subsequent Events

Protecting Michigan Pension Grant Program

Under its fiscal year 2022-2023 budget, the Michigan Department of Treasury was appropriated funds to establish and operate a local unit municipal pension principal payment grant program for qualified retirement systems with a funded ratio below 60 percent, as defined in the Protecting Local Government Retirement and Benefits Act, Public Act 202 of 2017. As part of this grant program, the General Retirement System of the City of Detroit Defined Benefit Component II (Legacy) plan received \$23 million subsequent to June 30, 2023.

Required Supplementary Information

General Retirement System of the City of Detroit

**Required Supplementary Information
Schedule of Changes in the Net Pension Liability and Related Ratios
Legacy Plan**

Last Ten Fiscal Years

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service cost	\$ 157,105,662	\$ 188,079,194	\$ 182,140,105	\$ 192,888,245	\$ 195,489,643	\$ 192,359,745	\$ 201,919,236	\$ 214,011,164	\$ 263,007,329	\$ 32,736,019
Interest	-	-	-	-	-	-	-	-	(731,824,895)	242,611,073
Changes in benefit terms	-	-	-	-	-	-	-	-	-	(113,311,571)
Differences between expected and actual experience	(27,014,766)	(12,568,209)	(59,232,849)	(55,836,749)	13,596,902	34,154,327	(27,508,380)	(43,719,112)	24,644,530	-
Changes in assumptions	(1,789,161)	(181,357,524)	119,876,694	67,677,535	-	(110,274,515)	76,925,957	90,034,927	(101,559,893)	(271,190,194)
Benefit payments, including refunds	(228,438,915)	(236,552,949)	(237,123,777)	(239,881,652)	(248,790,017)	(253,442,630)	(267,249,539)	(292,282,179)	(297,538,990)	(397,733,807)
Net Change in Total Pension Liability	(100,137,180)	(262,399,488)	5,660,173	(35,152,621)	(39,703,472)	(137,203,073)	(15,912,726)	(31,955,200)	(843,271,919)	(506,888,480)
Total Pension Liability - Beginning of year	2,441,710,745	2,704,110,233	2,698,450,060	2,733,602,681	2,773,306,153	2,910,509,226	2,926,421,952	2,958,377,152	3,801,649,071	4,308,537,551
Total Pension Liability - End of year	\$ 2,341,573,565	\$ 2,441,710,745	\$ 2,704,110,233	\$ 2,698,450,060	\$ 2,733,602,681	\$ 2,773,306,153	\$ 2,910,509,226	\$ 2,926,421,952	\$ 2,958,377,152	\$ 3,801,649,071
Plan Fiduciary Net Position										
Contributions - Employer, state, and foundation	\$ 48,281,252	\$ 48,275,000	\$ 48,275,000	\$ 48,275,000	\$ 68,275,000	\$ 68,275,000	\$ 91,238,402	\$ 104,792,657	\$ 189,282,094	\$ 25,126,131
Contributions - Employee	80,971,836	(102,790,030)	406,977,916	(14,002,111)	47,170,004	155,423,193	206,896,568	(12,450,547)	93,054,981	10,241,761
Net investment income (loss)	(2,680,907)	(2,541,080)	(1,987,194)	(2,351,273)	(3,023,939)	(3,313,418)	(6,021,837)	(3,742,618)	(4,617,194)	289,789,607
Administrative expenses	(228,438,915)	(236,552,949)	(237,123,777)	(239,881,652)	(248,790,017)	(253,442,630)	(267,249,539)	(292,282,179)	(297,538,991)	(11,237,667)
Benefit payments, including refunds	(9,370,281)	4,806,056	6,405,364	5,155,198	(5,347,863)	6,952,522	8,324,074	5,945,783	135,280,369	(397,733,807)
Other (includes ASF recoupment)	-	-	-	-	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	(111,237,015)	(288,803,003)	222,547,309	(202,804,838)	(141,716,815)	(26,105,333)	33,187,668	(197,736,904)	116,070,332	(83,814,075)
Plan Fiduciary Net Position - Beginning of year	1,529,846,295	1,818,649,298	1,596,101,989	1,798,906,827	1,940,623,642	1,966,728,975	1,933,541,307	2,131,278,211	2,015,207,879	2,099,021,954
Plan Fiduciary Net Position - End of year	\$ 1,418,609,280	\$ 1,529,846,295	\$ 1,818,649,298	\$ 1,596,101,989	\$ 1,798,906,827	\$ 1,940,623,642	\$ 1,966,728,975	\$ 1,933,541,307	\$ 2,131,278,211	\$ 2,015,207,879
Net Pension Liability - Ending	\$ 922,964,285	\$ 911,864,450	\$ 885,460,935	\$ 1,102,348,071	\$ 934,695,854	\$ 832,682,511	\$ 943,780,251	\$ 992,880,645	\$ 827,098,941	\$ 1,786,441,192
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	60.58 %	62.65 %	67.25 %	59.15 %	65.81 %	69.98 %	67.57 %	66.07 %	72.04 %	53.01 %
Covered Payroll	\$ -	\$ 83,104,746	\$ 102,653,636	\$ 111,124,304	\$ 142,215,060	\$ 149,373,313	\$ 141,454,717	\$ 143,882,722	\$ 200,722,197	\$ 203,507,079
Net Pension Liability as a Percentage of Covered Payroll	- %	1,097.25 %	862.57 %	992.00 %	657.24 %	557.45 %	667.20 %	690.06 %	412.06 %	877.83 %

GASB Statement No. 67, as amended, requires covered payroll to be presented, as well as the net pension liability as a percentage of covered payroll. Covered payroll for 2023 is not available.

See notes to required supplementary information.

General Retirement System of the City of Detroit

Required Supplementary Information
 Schedule of Investment Returns
 Legacy and Hybrid Plans

	Last Ten Fiscal Years									
	Years Ended June 30									
	2023	2022	2021	2020	2019	2018	2017	2016	2015*	2014*

Annual money-weighted rate of return - Net of investment expense	4.94 %	(7.27)%	28.31 %	(0.78)%	3.28 %	6.70 %	12.60 %	1.10 %	2.40 %	16.30 %
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*Fiscal years 2014 and 2015 do not include information related to the Hybrid Plan. The Hybrid Plan was effective July 1, 2014, and for the first year (fiscal year 2015), it did not invest in anything other than cash and cash equivalents.

General Retirement System of the City of Detroit

Required Supplementary Information
 Schedule of Pension Contributions
 Legacy Plan

	2023*	2022*	2021*	2020*	2019*	2018*	2017*	2016*	2015*	2014
Actuarially determined contribution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 72,643,307
Contributions in relation to the actuarially determined contribution	-	-	-	-	-	-	-	-	-	25,126,131
Contribution Deficiency	\$ -	\$ (47,517,176)								
Covered Payroll	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 238,669,871
Contributions as a Percentage of Covered Payroll	- %	- %	- %	- %	- %	- %	- %	- %	- %	10.53 %

*The contributions starting with fiscal year 2015 were determined by the provisions of the POA; the contributions were not actuarially determined and, therefore, not subject to disclosure within this schedule in accordance with GASB Statement No. 67.

General Retirement System of the City of Detroit

**Required Supplementary Information
Schedule of Changes in the City's Net Pension (Asset) Liability and Related Ratios
Hybrid Plan**

	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability									
Service cost	\$ 22,742,191	\$ 27,040,658	\$ 25,208,118	\$ 22,532,002	\$ 20,171,596	\$ 17,056,732	\$ 18,417,036	\$ 18,302,706	\$ 19,318,576
Interest	14,296,616	14,050,863	12,218,430	10,270,622	7,531,400	5,438,061	4,084,390	2,493,896	695,469
Differences between expected and actual experience	(6,162,346)	(18,137,902)	(10,183,406)	(7,484,424)	7,556,858	4,546,865	(4,667,487)	(1,263,760)	(1,202,108)
Changes in assumptions	(278,694)	(22,668,570)	14,453,739	6,518,200	-	(5,758,189)	2,780,462	2,111,451	-
Changes in benefit terms	3,617,374	-	-	-	-	-	-	-	-
Voluntary employee contributions	6,588,107	5,691,594	5,183,291	5,723,982	5,804,274	5,302,650	5,043,347	5,213,744	5,775,885
Benefit payments, including refunds	(7,013,532)	(7,395,729)	(5,118,404)	(3,629,833)	(3,539,384)	(2,390,592)	(2,134,809)	(2,287,214)	-
Net Change in Total Pension Liability	33,789,716	(1,419,086)	41,761,768	33,950,549	37,524,744	24,195,527	23,522,939	24,572,823	24,587,822
Total Pension Liability - Beginning of year	208,697,086	210,116,172	168,354,404	134,403,855	96,879,111	72,683,584	49,160,645	24,587,822	-
Total Pension Liability - End of year	\$ 242,486,802	\$ 208,697,086	\$ 210,116,172	\$ 168,354,404	\$ 134,403,855	\$ 96,879,111	\$ 72,683,584	\$ 49,160,645	\$ 24,587,822
Plan Fiduciary Net Position									
Contributions - Employer	\$ 15,126,876	\$ 15,689,188	\$ 11,690,984	\$ 12,515,861	\$ 12,205,699	\$ 14,673,644	\$ 9,484,992	\$ 9,048,831	\$ 8,811,369
Mandatory employee contributions	12,149,463	10,418,809	9,333,975	10,205,770	9,765,911	8,837,967	7,752,058	7,345,515	6,970,544
Net investment income (loss)	12,717,757	(13,857,941)	41,527,492	(2,216,167)	3,270,862	8,445,590	9,109,732	(76,608)	20,690
Administrative expenses	(2,022,440)	(1,894,415)	(1,316,430)	(1,540,433)	(1,942,064)	(2,171,693)	(2,648,385)	(3,094,197)	(1,481,590)
Voluntary employee contributions	6,588,107	5,691,594	5,183,291	5,723,982	5,804,274	5,302,650	5,043,347	5,213,744	5,786,488
Benefit payments, including refunds of mandatory contributions	(4,621,285)	(4,058,032)	(2,743,760)	(2,048,198)	(1,920,550)	(1,308,550)	(1,021,847)	(1,031,060)	(10,603)
Refunds based on voluntary contributions	(2,392,247)	(3,337,697)	(2,374,644)	(1,581,635)	(1,618,834)	(1,082,042)	(1,112,962)	(1,256,154)	-
Other	15,642,655	40,981	32,244	1,237,613	9,066,288	12,436	61,834	6,586	-
Net Change in Plan Fiduciary Net Position	53,188,886	8,692,487	61,333,152	22,296,793	34,631,586	32,710,002	26,668,769	16,156,657	20,096,898
Plan Fiduciary Net Position - Beginning of year	222,586,344	213,893,857	152,560,705	130,283,912	95,632,326	62,922,324	36,253,555	20,096,898	-
Plan Fiduciary Net Position - End of year	\$ 275,775,230	\$ 222,586,344	\$ 213,893,857	\$ 152,560,705	\$ 130,263,912	\$ 95,632,326	\$ 62,922,324	\$ 36,253,555	\$ 20,096,898
City's Net Pension (Asset) Liability - Ending	\$ (33,288,428)	\$ (13,889,258)	\$ (3,777,685)	\$ 15,793,699	\$ 4,139,943	\$ 1,246,785	\$ 9,761,260	\$ 12,907,090	\$ 4,490,924
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	113.73 %	106.66 %	101.80 %	90.62 %	96.92 %	98.71 %	86.57 %	73.75 %	81.74 %
Covered Payroll	\$ 293,017,696	\$ 260,683,104	\$ 233,681,019	\$ 245,732,111	\$ 224,726,503	\$ 246,173,916	\$ 199,307,987	\$ 185,147,364	\$ 180,069,852
City's Net Pension (Asset) Liability as a Percentage of Covered Payroll	(11.36)%	(5.33)%	(1.62)%	6.43 %	1.84 %	0.51 %	4.90 %	6.97 %	2.49 %

See notes to required supplementary information.

General Retirement System of the City of Detroit

Required Supplementary Information Schedule of Changes in the City's Net OPEB Liability and Related Ratios Open Death Benefit Plan

	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability							
Service cost	\$ 132,945	\$ 154,693	\$ 129,692	\$ 142,198	\$ 129,558	\$ 114,919	\$ 103,457
Interest	326,131	331,758	311,172	281,348	255,501	223,231	215,053
Differences between expected and actual experience	21,270	33,174	2,304	215,945	197,652	325,148	-
Changes in assumptions	-	117,486	806,689	-	-	-	-
Benefit payments, including refunds	(260,207)	(186,198)	(213,821)	(205,148)	(234,422)	(184,826)	(230,000)
Net Change in Total OPEB Liability	220,139	450,913	1,036,036	434,343	348,289	478,472	88,510
Total OPEB Liability - Beginning of year	5,972,022	5,521,109	4,485,073	4,050,730	3,702,441	3,223,969	3,135,459
Total OPEB Liability - End of year	\$ 6,192,161	\$ 5,972,022	\$ 5,521,109	\$ 4,485,073	\$ 4,050,730	\$ 3,702,441	\$ 3,223,969
Plan Fiduciary Net Position							
Contributions - Employer	\$ 126,937	\$ 106,510	\$ 114,790	\$ 113,842	\$ 92,990	\$ 107,627	\$ 88,709
Contributions - Employee	89,485	85,236	96,996	86,147	73,457	96,337	80,151
Net investment income (loss)	393,971	(671,339)	1,128,321	11,617	246,685	296,957	315,310
Administrative expenses	(5,104)	(6,584)	(18,094)	(55,108)	(61,160)	(32,001)	(61,755)
Benefit payments, including refunds	(260,207)	(186,198)	(213,821)	(205,148)	(234,422)	(184,826)	(230,000)
Other	-	-	-	-	-	(221,948)	-
Net Change in Plan Fiduciary Net Position	345,082	(672,375)	1,108,192	(48,650)	117,550	62,146	192,415
Plan Fiduciary Net Position - Beginning of year	4,460,516	5,132,891	4,024,699	4,073,349	3,955,799	3,893,653	3,701,238
Plan Fiduciary Net Position - End of year	\$ 4,805,598	\$ 4,460,516	\$ 5,132,891	\$ 4,024,699	\$ 4,073,349	\$ 3,955,799	\$ 3,893,653
City's Net OPEB Liability (Asset) - Ending	\$ 1,386,563	\$ 1,511,506	\$ 388,218	\$ 460,374	\$ (22,619)	\$ (253,358)	\$ (669,684)
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	77.61 %	74.69 %	92.97 %	89.74 %	100.56 %	106.84 %	120.77 %

Contributions to the OPEB plan are not based on a measure of pay; therefore, no covered payroll is presented.

GASB Statement No. 74 was implemented on June 30, 2017 and does not require retroactive implementation. Data will be added as information is available until 10 years of such information is available.

See notes to required supplementary information.

General Retirement System of the City of Detroit

Required Supplementary Information Schedule of OPEB Contributions Open Death Benefit Plan

	Last Seven Fiscal Years						
	Years Ended June 30						
	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Actuarially determined contribution	\$ 126,937	\$ 106,510	\$ 114,790	\$ 113,842	\$ 92,990	\$ 93,797	\$ 104,659
Contributions in relation to the actuarially determined contribution	<u>126,937</u>	<u>106,510</u>	<u>114,790</u>	<u>113,842</u>	<u>92,990</u>	<u>107,627</u>	<u>88,709</u>
Contribution Excess (Deficiency)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 13,830</u>	<u>\$ (15,950)</u>

GASB Statement No. 74 was implemented for the fiscal year ended June 30, 2017 and does not require retrospective implementation. Data will be added as information is available until 10 years of such information is reported.

Notes to Schedule of Contributions

Actuarial valuation information relative to the determination of contributions:

Valuation date Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Level dollar entry age normal
Amortization method	Level dollar, closed
Remaining amortization period	28 years, board policy
Asset valuation method	3-year smoothed market, no corridor
Inflation	N/A
Investment rate of return	5.50 percent, net of OPEB plan expenses, including price inflation at 2.50 percent
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	For members in the General Retirement System, the PubG-2010(B) Below-Median General Retiree table for males and females with male rates multiplied by 97 percent and female rates multiplied by 126 percent For members in the Police and Fire Retirement System, the PubS-2010 Safety Retiree table for males and females with male rates multiplied by 115 percent and female rates multiplied by 125 percent All mortality tables are projected to 2021, based on the two-dimensional, sex-distinct mortality improvement scale MP-2021. This table contains no margin for future improvements in life expectancies for conservatism in this valuation.
Other information	There were no benefit changes during the year.

General Retirement System of the City of Detroit

Required Supplementary Information Schedule of OPEB Investment Returns Open and Closed Death Benefit Plans

	Last Seven Fiscal Years						
	Years Ended June 30						
	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expense	10.19 %	(14.46)%	24.52 %	0.30 %	2.97 %	5.93 %	7.23 %

GASB Statement No. 74 was implemented for the fiscal year ended June 30, 2017 and does not require retrospective implementation. Data will be added as information is available until 10 years of such information is reported.

General Retirement System of the City of Detroit

Required Supplementary Information
 Schedule of Changes in the City's Net OPEB Liability and Related Ratios
 Closed Death Benefit Plan

	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability -							
Increase (decrease) in total OPEB liability due to availability of assets	\$ 553,487	\$ (4,209,561)	\$ 4,496,393	\$ (944,616)	\$ 12,295	\$ 38,822	\$ (15,035)
Total OPEB Liability - Beginning of year	20,757,008	24,966,569	20,470,176	21,414,792	21,402,497	21,363,675	21,378,710
Total OPEB Liability - End of year	\$ 21,310,495	\$ 20,757,008	\$ 24,966,569	\$ 20,470,176	\$ 21,414,792	\$ 21,402,497	\$ 21,363,675
Plan Fiduciary Net Position							
Retiree contribution	\$ 9,244	\$ 9,390	\$ 19,867	\$ 12,925	\$ 9,080	\$ 9,528	\$ -
Net investment income (loss)	1,880,092	(3,277,720)	5,538,571	63,605	1,295,090	1,416,686	1,996,352
Administrative expenses	(24,922)	(32,147)	(18,096)	-	-	-	-
Benefit payments, including refunds	(1,310,927)	(909,084)	(1,043,949)	(1,074,935)	(1,230,715)	(1,355,391)	(1,949,612)
Other	-	-	-	53,789	(61,160)	(32,001)	(61,775)
Net Change in Plan Fiduciary Net Position	553,487	(4,209,561)	4,496,393	(944,616)	12,295	38,822	(15,035)
Plan Fiduciary Net Position - Beginning of year	20,757,008	24,966,569	20,470,176	21,414,792	21,402,497	21,363,675	21,378,710
Plan Fiduciary Net Position - End of year	\$ 21,310,495	\$ 20,757,008	\$ 24,966,569	\$ 20,470,176	\$ 21,414,792	\$ 21,402,497	\$ 21,363,675
City's Net OPEB Liability - Ending	\$ -						
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	100.00 %						

GASB Statement No. 74 was implemented for the fiscal year ended June 30, 2017 and does not require retrospective implementation. Data will be added as information is available until 10 years of such information is reported.

As the plan will provide future benefits only to the extent that plan assets are available to pay them, the total OPEB liability is equal to the plan's ending net position. Contributions to the OPEB plan are not based on a measure of pay, nor is there applicable payroll; therefore, no covered payroll is presented.

General Retirement System of the City of Detroit

Notes to Required Supplementary Information

June 30, 2023

Pension Information

Benefit Changes

Legacy Plan

In 2014, the pension plan was frozen. No new employees are allowed to participate in the plan. All benefits for actives were frozen as of June 30, 2014 based on service and average final compensation accrued as of that date.

In 2015, benefits were reduced by 4.5 percent, and the cost of living adjustments were eliminated.

Hybrid Plan

In 2023, the bankruptcy court granted a change to the Hybrid plan to allow members in the work share program during the period April 1, 2020 through December 31, 2022 to get credited service for that period.

Changes in Assumptions

Legacy Plan

In 2014, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 5.88 percent to 7.2 percent and updating the mortality tables from RP-2000 Combined Table to RP-2014 Blue Collar Mortality Table, and adjustments for longevity and unused sick leave were eliminated.

Legacy and Hybrid Plan

In 2015, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.2 to 7.61 percent.

In 2016, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.61 to 7.23 percent.

In 2017, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.23 to 6.91 percent.

In 2018, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.91 to 7.38 percent.

In 2020, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.38 to 7.06 percent.

In 2021, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.06 to 6.50 percent.

In 2022, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.50 to 6.75 percent and updating the mortality tables from the RP-2014 Blue Collar Annuitant Table to the Pub-2010 General Employee table, as well as updates to wage inflation, withdrawal, and disability rates.

In 2023, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.75 to 6.76 percent.

OPEB Information

Changes in Assumptions

In 2021, the discount rate changed from 7.00 to 5.99 percent.

General Retirement System of the City of Detroit

Notes to Required Supplementary Information (Continued)

June 30, 2023

In 2022, the discount rate changed from 5.99 to 5.50 percent and updating the mortality tables from the RP-2014 Blue Collar Annuitant Table to the PubG-2010(B) Below-Median General Retiree table for members in the general retirement system and to the PubS-2010 Safety Retiree table for members in the police and fire retirement system, as well as updates to the withdrawal and disability rates.

Other Supplementary Information

Combined Plan for the General Retirement System of the City of Detroit

Statement of Changes in Fiduciary Net Position by Division - Legacy Defined Benefit Plan
For the Year Ended June 30, 2023

	DWSB Subdivisions		General Retirement System - Divisions				Total - General Retirement System (all Divisions)
	GLWA	DWSB-R	DWSB - Division Total (all DWSB Subdivisions)	General Division	DOT	Library	
Beginning Net Position - July 1, 2022	406,972,233	171,935,643	578,907,876	776,443,791	94,217,535	80,277,093	1,529,846,295
Additions:							
Investment income (loss):							
Interest, dividends, and other income	9,132,208	3,858,131	12,990,339	17,775,651	2,396,031	1,931,458	35,093,479
Net increase in fair value of investments	14,823,480	6,262,551	21,086,031	27,161,903	2,807,530	2,726,073	53,781,537
Net unrealized loss on collateralized securities	(14,675)	(6,200)	(20,875)	(26,064)	(2,250)	(2,498)	(51,687)
Investment related expenses	(2,164,059)	(914,261)	(3,078,320)	(3,965,330)	(409,867)	(397,976)	(7,851,493)
Net investment income	21,776,954	9,200,221	30,977,175	40,946,160	4,791,444	4,257,057	80,971,836
Contributions:							
Employer contributions:							
Originating from DWSB:							
Regular pension contribution	30,158,700	12,741,300	42,900,000	-	-	-	42,900,000
Contribution for administrative expenses	1,757,500	742,500	2,500,000	-	-	-	2,500,000
DWSB transfer to General Division for administrative expenses	(1,757,500)	(742,500)	(2,500,000)	2,500,000	-	-	-
Total contributions originating from DWSB	30,158,700	12,741,300	42,900,000	2,500,000	-	-	45,400,000
Employee contributions - military service purchase	-	-	-	-	6,252	-	6,252
Contributions from other divisions	-	-	-	-	-	2,500,000	2,500,000
Total employer contributions	30,158,700	12,741,300	42,900,000	2,500,000	6,252	2,500,000	47,906,252
Foundation for Detroit's Future	-	-	-	265,012	109,988	-	375,000
Total contributions	30,158,700	12,741,300	42,900,000	2,765,012	116,240	2,500,000	48,281,252
ASF recoupment interest	1,080,790	456,607	1,537,397	2,849,863	1,006,368	115,431	5,509,059
Other income	543,246	229,508	772,754	1,065,819	139,985	113,450	2,092,008
Total additions - net	53,559,690	22,627,636	76,187,326	47,626,854	6,054,037	6,985,938	136,854,155
Deductions:							
Member refunds and withdrawals	906,168	382,833	1,289,001	5,796,776	3,040,273	743,347	10,869,397
Retirees' pension and annuity benefits	41,837,725	17,675,398	59,513,123	120,817,855	30,703,630	6,534,910	217,569,518
General and administrative expenses	713,179	301,301	1,014,480	1,360,842	165,107	140,678	2,680,907
ASF Recoupment Write-off	397,676	168,008	565,684	573,726	234,041	5,638	1,379,089
Transfer of general and administrative expenses to General Division	(713,179)	(301,301)	(1,014,480)	1,014,480	-	-	-
Transfer to Component I (Transition Cost)	4,147,878	1,752,375	5,900,253	7,913,549	960,269	818,188	15,592,259
Total deductions	47,289,447	19,978,614	67,268,061	137,477,028	35,103,320	8,242,761	248,091,170
Net Increase (Decrease) in Net Position	6,270,243	2,649,022	8,919,265	(89,850,174)	(29,049,283)	(1,256,823)	(111,237,015)
End of Year Net Position Restricted for Pensions - June 30, 2023	413,242,476	174,584,665	587,827,141	686,593,617	65,168,252	79,020,270	1,418,609,280

Combined Plan for the General Retirement System of the City of Detroit

Schedule of DWSD/GLWA Contributions Toward Administrative Expenses as Compared to Actual
DWSD/GLWA Allocable Administrative Expenses

For the Year Ended June 30, 2023

	DWSD Division Total	
	GLWA	DWSD-R
Amount Paid in Excess of Administrative Expenses		
Otherwise Allocable - June 30, 2022	\$ 8,067,659	\$ 3,408,388
DWSD/GLWA contribution for administrative expenses in accordance with plan of adjustment and bankruptcy order	1,757,500	742,500
Administrative expenses otherwise allocable to DWSD/GLWA	(713,179)	(301,301)
Cumulative Amount Paid in Excess of Administrative Expenses		
Otherwise Allocable - June 30, 2023	\$ 9,111,980	\$ 3,849,587

Combined Plan for the General Retirement System of the City of Detroit

Notes to Other Supplementary Information

June 30, 2023

Allocation Between Divisions

The Combined Plan's allocation methodology to allocate fiscal year 2023 activity between the four main divisions (General Division, DOT, DWSD, and Library) is dependent upon each revenue or expense type. Below is a description of the allocation methodology used by the Combined Plan. Where applicable, the allocation methodology outlined in the pension reporting agreement was utilized.

Investment Income - Investment income (including income from securities lending activity) and investment expenses were allocated to the divisions, with the exception of the allocation between DWSD-R and GLWA, based on the net position of each division compared to total net position (excluding the Annuity Savings Fund) as of fiscal year ended June 30, 2023. The investment income and expenses allocated were after adjusting for interest credited to the Annuity Savings Fund.

Administrative Expenses - In accordance with Section 2.3 of the pension reporting agreement, DWSD-R and GLWA's collective allocable share of administrative expenses of approximately \$1 million has been allocated to the general division. Correspondingly, the expenses transferred to the general division are offset by a \$2.5 million contribution made by DWSD-R and GLWA, collectively, for administrative expenses, which was credited to the general division. This will occur until 2023, at which point the City and GLWA will mutually determine and resolve whether any aggregate over- or underpayment will impact the obligation of DWSD-R and GLWA to make payments to GRS under the pension reporting agreement.

Contributions - In fiscal year 2023, the Plan received contributions from the divisions and the Foundation for Detroit's Future. The employer contributions were allocated between the divisions according to which division the contribution was received from, with the exception of DWSD-R and GLWA's collective payments of \$45,400,00, which were allocated as outlined in the POA and/or the pension reporting agreement (see below). Of the total payment of \$45,400,000, \$2,500,000 reflects DWSD-R and GLWA's agreed-upon share of administrative expenses which, per the pension reporting agreement, is to be transferred to the credit of the general division. The payment from the Foundation was allocated based on a common understanding from the bankruptcy proceedings, which was ultimately determined by the City of Detroit and agreed to by the other divisions. The Foundation proceeds were allocated solely to the general division and DOT in proportion to their respective net pension liability as determined by the City's actuary as of June 30, 2023.

ASF Recoupment - Revenue from the ASF recoupment was allocated between the divisions, other than between DWSD-R and GLWA, according to the division under which the individual's ASF earnings were originally accumulated and paid out.

Member Refunds, Withdrawals, Retirees' Pension, and Annuity Benefits - These deductions were allocated, other than the allocation between DWSD-R and GLWA, based on the original division from which benefits were being provided and withdrawals were being made.

Allocation between DWSD-R and GLWA - Once the above activity was allocated to the divisions, the DWSD division was further subdivided between DWSD-R and GLWA in accordance with the pension reporting agreement, which stipulated such allocation would be dictated to the Plan by DWSD-R and GLWA. Per those instructions, the Plan allocated the DWSD activity between GLWA (70.3 percent) and DWSD-R (29.7 percent).

The General Retirement System of the City of Detroit

GASB Statement Nos. 67 and 68 Accounting and Financial
Reporting for Pension Plans of Component II
June 30, 2023





November 1, 2023

Board of Trustees
The General Retirement System of the City of Detroit

Dear Board Members:

This report provides information required for the General Retirement System of the City of Detroit in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 "Financial Reporting for Pension Plans" and Statement No. 68 "Employer Reporting for Pension Plans." These calculations have been made on a basis that is consistent with our understanding of this Statement. This information is subject to a review by the System's auditor. Please let us know if the System's auditor recommends any changes. This report covers the General Retirement System Plan known as Component II (also known as the Legacy Plan). Since Component I is a separate plan, it is detailed in a separate report.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 67 and 68. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. In particular, this is not a funding report and nothing in this report should be construed as a funding recommendation. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The Appendix of this report also provides some of the information necessary to complete the reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form 5572). This information is not required to be included in your financial statements. The calculations in the Appendix are based on assumptions that satisfy the Uniform Assumptions criteria published by the Michigan Treasury for Fiscal Year 2023 reporting requirements.

This report is based upon information, furnished to us by System staff, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This report is based on the valuation date of June 30, 2022. The total pension liability was rolled-forward from the valuation date to the plan year ending June 30, 2023 using generally accepted actuarial principles. The asset information as of June 30, 2023 was provided by the System. This information was checked for internal consistency, but it was not audited by Gabriel, Roeder, Smith & Company. A description of the adjustments made to the data is incorporated in this report (either directly or by reference). GRS is not responsible for the accuracy of the data provided by the Retirement System. This report is based upon estimates of frozen accrued benefits. Future measurements based on final calculation of benefit amounts will differ.

Board of Trustees
The General Retirement System of the City of Detroit
November 1, 2023
Page 2

At the direction of the System and approval of the System's auditor, the long-term expected return on assets used to determine the discount rate was changed to 6.76% as of June 30, 2023, from 6.75% as of June 30, 2022. We have reviewed this assumption based on the System's asset allocation and have determined it does not significantly conflict with what, in our professional judgement, would be reasonable for purposes of the measurement.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the System on the measurement date for purposes of GASB Statement Nos. 67 and 68 reporting. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

The signing actuaries are independent of the plan sponsor.

Jamal Adora, Judith A. Kermans, and James R. Sparks are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Jamal Adora, ASA, EA, MAAA
Consultant



Judith A. Kermans, EA, FCA, MAAA
Senior Consultant and President



James R. Sparks, ASA, FCA, MAAA
Consultant

JA/JAK/JRS:sc



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SECTION A

EXECUTIVE SUMMARY

Executive Summary as of June 30, 2023

Actuarial Valuation Date	June 30, 2022
Measurement Date of the Net Pension Liability	June 30, 2023
Employer's Fiscal Year Ending Date (GASB No. 68 Reporting Date)	June 30, 2024

Membership

Number of	
- Retirees and Beneficiaries	10,918
- Inactive, Nonretired Members	2,633
- Active Members	1,850
- Total	15,401
Covered Payroll	\$ 83,104,746

Net Pension Liability

Total Pension Liability	\$ 2,341,573,565
Plan Fiduciary Net Position	1,418,609,280
Net Pension Liability	\$ 922,964,285
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	60.58%
Net Pension Liability as a Percentage of Covered Payroll	1,110.60%

Development of the Single Discount Rate

Single Discount Rate	6.76%
Long-Term Expected Rate of Investment Return	6.76%
Long-Term Municipal Bond Rate*	3.86%
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	2123

Total Pension Expense	\$ 75,335,447
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Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ -
Changes in assumptions	-	-
Net difference between projected and actual earnings on pension plan investments	169,577,605	120,321,408
Total	\$ 169,577,605	\$ 120,321,408

*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2023. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.



Discussion

Changes Compared to Funding Valuation

For purposes of determining the Total Pension Liability (TPL) as of June 30, 2023, we note the following differences from the assumptions used in the June 30, 2022 funding valuation:

- At the direction of the System and approval of the System's auditor, the long-term expected return on assets was 6.76% as of June 30, 2023. It was 6.75% in the June 30, 2022 funding valuation, as required by the Plan of Adjustment.
- The funding valuation includes a liability for excess Annuity Savings Fund (ASF) earnings that are expected to be transferred to Component I after the valuation date. In accordance with the Plan's auditor's prior instructions, excess Annuity Savings Fund (ASF) earnings that are expected to be transferred to Component I after the valuation date are not reflected in the TPL and will be reflected in the assets, once the transfer occurs. Based on the return for the 2021 and 2022 fiscal year, the June 30, 2022 funding valuation included \$20,646,129 in liabilities to account for this activity.

All other actuarial assumptions were the same as those used in the June 30, 2022 actuarial valuation (the funding valuation).

Changes Compared to Prior Year's GASB Report

The change in actuarial assumptions compared to the June 30, 2022 GASB Statement No. 68 reporting was:

- The long-term expected rate of investment return and single discount rate went from 6.75% to 6.76%.

This change decreased the TPL by \$1.8 million resulting in a new deferred inflow for recognition in the pension expense.

Data Approximations and Assumptions

A description of the data approximations and assumptions used in completing this report are included in the June 30, 2022 funding valuation report.

Discussion

Development of Employer Proportionate Shares

As instructed, we have developed the proportionate employer shares as follows:

- General, DOT, DWSD, and Library have contribution rates assessed on separate relationships and are, therefore, accounted for separately under Paragraph 49 of GASB Statement No. 68.
- The component units in the General Division were 1) General City; 2) Parking; and 3) Airport.
- Proportionate shares in the General Division were determined by prorating based on the Total Pension Liability.

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the General Retirement System of the City of Detroit subsequent to the measurement date of June 30, 2023.

Discussion

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the certain changes in the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan’s reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer’s financial statements to disclose the total pension expense, the pension plan’s liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan’s funding policy, which includes member and employer contribution requirements;
- The pension plan’s investment policies;
- The pension plan’s fiduciary net position and the net pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan’s Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Discussion

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- A comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2022, rolled forward to the plan year end of June 30, 2023.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.76%; the municipal bond rate is 3.86% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.76%.

The expected rate of return was provided by the Retirement System and approved by the System's auditor.

Discussion

Limitation of Assets as a Percent of Total Pension Liability Measurements

This report includes a measure of the plan fiduciary net position as a percent of total pension liability (60.58% as of June 30, 2023). Unless otherwise indicated, with regard to any such measurements presented in this report:

- (1) This measurement is not intended to be a funded ratio or a measure of funded progress.
- (2) This measurement is inappropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations.
- (3) The measurement is inappropriate for assessing the need for or amount of future employer contributions.

Limitations of Project Scope

Actuarial Standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entities to make required contributions when due. Such an evaluation was not within the scope of this project and is not within our area of expertise. Consequently, we have not made such an evaluation.

ASF Recoupments

The reported June 30, 2023 assets included a receivable, computed by the System's auditor, that accounts for future ASF recoupments. We understand this amount was originally determined as of June 30, 2015 and updated to June 30, 2023 in accordance with GAAP.

SECTION B

FINANCIAL STATEMENTS

This information is subject to the System's auditor's review. Please let us know if the System's auditor recommends any changes.

Statement of Fiduciary Net Position as of June 30, 2023

Assets

Cash and Cash Equivalents	\$ (39,120,673)
Receivables	99,393,340
Investments at Fair Value	1,360,960,461
Cash and Investments held as collateral for securities lending	41,621,048
Capital Assets - Net	<u>4,042,692</u>
Total Assets	<u><u>\$ 1,466,896,868</u></u>

Liabilities

Accounts Payable	<u>\$ 48,287,588</u>
Total Liabilities	<u><u>\$ 48,287,588</u></u>

Net Position Restricted for Pensions	<u><u>\$ 1,418,609,280</u></u>
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ASF Reserve	\$ 82,885,035
Other Reserves	<u>1,335,724,245</u>
Plan Fiduciary Net Position	<u><u>\$ 1,418,609,280</u></u>

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2023

Additions

Contributions	
Employer	\$ 47,900,000
Employee	-
Foundation Contribution	375,000
Total Contributions	<u>\$ 48,275,000</u>
Investment Income	
Investment Income	<u>\$ 80,971,836</u>
Net Investment Income	<u>\$ 80,971,836</u>
Other Income (Including ASF Interest)^	<u>\$ 7,607,319</u>
Total Additions	<u><u>\$ 136,854,155</u></u>

Deductions

Benefit Payments, including Refunds of Employee Contributions	\$ 228,438,915
Pension Plan Administrative Expense	2,680,907
Other (including ASF write-offs and transfers to Comp I)	<u>16,971,348</u>
Total Deductions	<u>\$ 248,091,170</u>
Net Increase in Net Position	<u>\$ (111,237,015)</u>

Net Position Restricted for Pensions

Beginning of Year	<u>\$ 1,529,846,295</u>
End of Year	<u><u>\$ 1,418,609,280</u></u>

^ Following discussions with the auditor, we understand that for purposes of determining the Pension Expense for GASB Statement No. 68, ASF Interest should be treated as Other Changes in Plan Fiduciary Net Position and recognized immediately.

Statement of Pension Expense Under GASB Statement No. 68

Fiscal Year Ended June 30, 2023*

A. Expense	General	DOT	DWSD	Library	Total
1. Service Cost	\$ -	\$ -	\$ -	\$ -	-
2. Interest on the Total Pension Liability	84,530,943	24,338,578	43,090,051	5,146,090	157,105,662
3. Current-Period Benefit Changes	-	-	-	-	-
4. Employee Contributions (made negative for addition here)	-	-	-	-	-
5. Projected Earnings on Plan Investments (made negative for addition here)	(47,995,580)	(5,217,559)	(38,331,827)	(5,232,610)	(96,777,576)
6. Pension Plan Administrative Expense	2,375,122	165,107	-	140,678	2,680,907
7. Other Changes in Plan Fiduciary Net Position	4,571,593	41,705	4,155,786	594,945	9,364,029
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	(11,695,092)	(5,615,417)	(10,535,881)	(957,537)	(28,803,927)
9. Recognition of Outflow (Inflow) of Resources due to Assets	16,505,135	2,458,775	11,157,339	1,645,103	31,766,352
10. Total Pension Expense	\$ 48,292,121	\$ 16,171,189	\$ 9,535,468	\$ 1,336,669	\$ 75,335,447

**Totals may not add due to rounding.*



Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2023*

A. Outflows (Inflows) of Resources due to Liabilities	General	DOT	DWSO	Library	Total
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (10,746,246)	\$ (5,329,700)	\$ (10,036,313)	\$ (902,507)	\$ (27,014,766)
2. Assumption Changes (gains) or losses	\$ (948,846)	\$ (285,717)	\$ (499,568)	\$ (55,030)	\$ (1,789,161)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	1.0000	1.0000	1.0000	1.0000	1.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (10,746,246)	\$ (5,329,700)	\$ (10,036,313)	\$ (902,507)	\$ (27,014,766)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ (948,846)	\$ (285,717)	\$ (499,568)	\$ (55,030)	\$ (1,789,161)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (11,695,092)	\$ (5,615,417)	\$ (10,535,881)	\$ (957,537)	\$ (28,803,927)
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ -	\$ -	\$ -	\$ -	\$ -
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ -	\$ -	\$ -	\$ -	\$ -
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ -	\$ -	\$ -	\$ -	\$ -
B. Outflows (Inflows) of Resources due to Assets					
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 7,049,420	\$ 426,115	\$ 7,354,652	\$ 975,553	\$ 15,805,740
2. Recognition period for Assets {in years}	5.0000	5.0000	5.0000	5.0000	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ 1,409,884	\$ 85,223	\$ 1,470,930	\$ 195,111	\$ 3,161,148
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 5,639,536	\$ 340,892	\$ 5,883,722	\$ 780,442	\$ 12,644,592

*Totals may not add due to rounding.



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30 General

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ -	\$ 11,695,092	\$ (11,695,092)
2. Due to Assets	49,250,259	32,745,124	16,505,135
3. Total	\$ 49,250,259	\$ 44,440,216	\$ 4,810,043

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 10,746,246	\$ (10,746,246)
2. Assumption Changes	-	948,846	(948,846)
3. Net Difference between projected and actual earnings on pension plan investments	49,250,259	32,745,124	16,505,135
4. Total	\$ 49,250,259	\$ 44,440,216	\$ 4,810,043

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ -	\$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	88,312,603	65,490,250	22,822,353
4. Total	\$ 88,312,603	\$ 65,490,250	\$ 22,822,353

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources General Total
2024	\$ 6,511,977
2025	(8,922,316)
2026	23,822,808
2027	1,409,884
2028	-
Thereafter	-
Total	\$ 22,822,353



Recognition of Deferred Outflows and Inflows of Resources Fiscal Year Ended June 30, 2023 General

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2023	\$ (10,746,246)	1.0000	\$ (10,746,246)	-	0.0000
Total			\$ (10,746,246)	\$ -	
Deferred Outflow (Inflow) due to Assumption Changes					
2023	\$ (948,846)	1.0000	\$ (948,846)	-	0.0000
Total			\$ (948,846)	\$ -	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 49,965,808	5.0000	\$ 9,993,160	\$ -	0.0000
2020	77,171,447	5.0000	15,434,289	15,434,291	1.0000
2021	(163,725,622)	5.0000	(32,745,124)	(65,490,250)	2.0000
2022	112,064,628	5.0000	22,412,926	67,238,776	3.0000
2023	7,049,420	5.0000	1,409,884	5,639,536	4.0000
Total			\$ 16,505,135	\$ 22,822,353	

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30 DOT

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ -	\$ 5,615,417	\$ (5,615,417)
2. Due to Assets	7,057,508	4,598,733	2,458,775
3. Total	\$ 7,057,508	\$ 10,214,150	\$ (3,156,642)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 5,329,700	\$ (5,329,700)
2. Assumption Changes	-	285,717	(285,717)
3. Net Difference between projected and actual earnings on pension plan investments	7,057,508	4,598,733	2,458,775
4. Total	\$ 7,057,508	\$ 10,214,150	\$ (3,156,642)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ -	\$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	11,452,621	9,197,466	2,255,155
4. Total	\$ 11,452,621	\$ 9,197,466	\$ 2,255,155

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ 782,521
2025	(1,605,661)
2026	2,993,072
2027	85,223
2028	-
Thereafter	-
Total	\$ 2,255,155

Recognition of Deferred Outflows and Inflows of Resources Fiscal Year Ended June 30, 2023 DOT

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2023	\$ (5,329,700)	1.0000	\$ (5,329,700)	-	0.0000
Total			\$ (5,329,700)	\$ -	
Deferred Outflow (Inflow) due to Assumption Changes					
2023	\$ (285,717)	1.0000	\$ (285,717)	-	0.0000
Total			\$ (285,717)	\$ -	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 8,381,262	5.0000	\$ 1,676,254	\$ -	0.0000
2020	11,940,910	5.0000	2,388,182	2,388,182	1.0000
2021	(22,993,665)	5.0000	(4,598,733)	(9,197,466)	2.0000
2022	14,539,245	5.0000	2,907,849	8,723,547	3.0000
2023	426,115	5.0000	85,223	340,892	4.0000
Total			\$ 2,458,775	\$ 2,255,155	

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30 DWSD

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ -	\$ 10,535,881	\$ (10,535,881)
2. Due to Assets	31,285,312	20,127,973	11,157,339
3. Total	\$ 31,285,312	\$ 30,663,854	\$ 621,458

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 10,036,313	\$ (10,036,313)
2. Assumption Changes	-	499,568	(499,568)
3. Net Difference between projected and actual earnings on pension plan investments	31,285,312	20,127,973	11,157,339
4. Total	\$ 31,285,312	\$ 30,663,854	\$ 621,458

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ -	\$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	61,439,407	40,255,948	21,183,459
4. Total	\$ 61,439,407	\$ 40,255,948	\$ 21,183,459

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ 5,787,725
2025	(3,101,586)
2026	17,026,388
2027	1,470,932
2028	-
Thereafter	-
Total	\$ 21,183,459

Recognition of Deferred Outflows and Inflows of Resources Fiscal Year Ended June 30, 2023 DWSD

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2023	\$ (10,036,313)	1.0000	\$ (10,036,313)	-	0.0000
Total			\$ (10,036,313)	\$ -	
Deferred Outflow (Inflow) due to Assumption Changes					
2023	\$ (499,568)	1.0000	\$ (499,568)	-	0.0000
Total			\$ (499,568)	\$ -	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 26,848,067	5.0000	\$ 5,369,615	\$ -	0.0000
2020	44,446,541	5.0000	8,889,308	8,889,309	1.0000
2021	(100,639,867)	5.0000	(20,127,973)	(40,255,948)	2.0000
2022	77,777,294	5.0000	15,555,459	46,666,376	3.0000
2023	7,354,652	5.0000	1,470,930	5,883,722	4.0000
Total			\$ 11,157,339	\$ 21,183,459	

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30 Library

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ -	\$ 957,537	\$ (957,537)
2. Due to Assets	4,333,976	2,688,873	1,645,103
3. Total	\$ 4,333,976	\$ 3,646,410	\$ 687,566

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 902,507	\$ (902,507)
2. Assumption Changes	-	55,030	(55,030)
3. Net Difference between projected and actual earnings on pension plan investments	4,333,976	2,688,873	1,645,103
4. Total	\$ 4,333,976	\$ 3,646,410	\$ 687,566

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ -	\$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	8,372,974	5,377,744	2,995,230
4. Total	\$ 8,372,974	\$ 5,377,744	\$ 2,995,230

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ 868,511
2025	(378,631)
2026	2,310,241
2027	195,109
2028	-
Thereafter	-
Total	\$ 2,995,230



Recognition of Deferred Outflows and Inflows of Resources Fiscal Year Ended June 30, 2023 Library

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2023	\$ (902,507)	1.0000	\$ (902,507)	-	0.0000
Total			\$ (902,507)	\$ -	
Deferred Outflow (Inflow) due to Assumption Changes					
2023	\$ (55,030)	1.0000	\$ (55,030)	-	0.0000
Total			\$ (55,030)	\$ -	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 3,882,957	5.0000	\$ 776,593	\$ -	0.0000
2020	6,235,716	5.0000	1,247,143	1,247,144	1.0000
2021	(13,444,363)	5.0000	(2,688,873)	(5,377,744)	2.0000
2022	10,575,646	5.0000	2,115,129	6,345,388	3.0000
2023	975,553	5.0000	195,111	780,442	4.0000
Total			\$ 1,645,103	\$ 2,995,230	

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30 Total

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ -	\$ 28,803,927	\$ (28,803,927)
2. Due to Assets	91,927,055	60,160,703	31,766,352
3. Total	\$ 91,927,055	\$ 88,964,630	\$ 2,962,425

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 27,014,766	\$ (27,014,766)
2. Assumption Changes	-	1,789,161	(1,789,161)
3. Net Difference between projected and actual earnings on pension plan investments	91,927,055	60,160,703	31,766,352
4. Total	\$ 91,927,055	\$ 88,964,630	\$ 2,962,425

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ -	\$ -
2. Assumption Changes	-	-	-
3. Net Difference between projected and actual earnings on pension plan investments	169,577,605	120,321,408	49,256,197
4. Total	\$ 169,577,605	\$ 120,321,408	\$ 49,256,197

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ 13,950,734
2025	(14,008,194)
2026	46,152,509
2027	3,161,148
2028	-
Thereafter	-
Total	\$ 49,256,197

Schedule of Proportionate Employer Share for Year Ended June 30, 2023 General Subgroup*

Deferred Outflows of Resources								
Employer	TPL	Prop. Share	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Outflows of Resources
General City	\$ 1,240,135,182	98.28%	\$ 565,350,976	\$ -	\$ 86,793,626	\$ -	\$ -	\$ 86,793,626
Parking	19,306,134	1.53%	8,801,251	-	1,351,183	-	-	1,351,183
Airport	2,397,494	0.19%	1,092,966	-	167,794	-	-	167,794
Total for All Employers	\$ 1,261,838,810	100.00%	\$ 575,245,193	\$ -	\$ 88,312,603	\$ -	\$ -	\$ 88,312,603

Deferred Inflows of Resources						Pension Expense		
Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Inflows of Resources	Prop. Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
General City	\$ -	\$ 64,363,818	\$ -	\$ -	\$ 64,363,818	\$ 47,461,497	\$ (877,932)	\$ 46,583,565
Parking	-	1,002,001	-	-	1,002,001	738,869	1,014,244	1,753,113
Airport	-	124,431	-	-	124,431	91,755	(136,312)	(44,557)
Total for All Employers	\$ -	\$ 65,490,250	\$ -	\$ -	\$ 65,490,250	\$ 48,292,121	\$ -	\$ 48,292,121

* Totals may not add due to rounding.



Schedule of Proportionate Employer Share for Year Ended June 30, 2023 General Subgroup*

		Schedule of Deferred Inflows and Outflows						
Employer	Employer Allocation Percentage	2024	2025	2026	2027	2028	Thereafter	Total
General City	98.28%	\$ 6,399,971	\$ (8,768,853)	\$ 23,413,056	\$ 1,385,634	\$ -	\$ -	\$ 22,429,808
Parking	1.53%	99,633	(136,511)	364,489	21,571	-	-	349,182
Airport	0.19%	12,373	(16,952)	45,263	2,679	-	-	43,363
TOTAL	100.00%	\$ 6,511,977	\$ (8,922,316)	\$ 23,822,808	\$ 1,409,884	\$ -	\$ -	\$ 22,822,353

* Totals may not add due to rounding.

Determination of Employer Contribution Allocation for Year Ended June 30, 2023

Employer	General City	Parking	Airport	General Total	DOT	DWSD	Library	Total
Contributions Before General Breakdown				\$ 2,765,012	\$ 109,988	\$ 42,900,000	\$ 2,500,000	\$ 48,275,000
General Employer Allocation Percent	100.00%	0.00%	0.00%	100.00%	N/A	N/A	N/A	N/A
Times General Total	\$ 2,765,012	\$ 2,765,012	\$ 2,765,012	2,765,012	N/A	N/A	N/A	N/A
Contribution Allocation Dollar	\$ 2,765,012	\$ -	\$ -	\$ 2,765,012	\$ 109,988	\$ 42,900,000	\$ 2,500,000	\$ 48,275,000

We understand that the General contributions should be split between the General component units (General City, Parking, and Airport) according to the above schedule. Please let us know if a different allocation should be used.



SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios Current Period

Fiscal Year Ended June 30, 2023*

A. Total Pension Liability	General	DOT	DWSD	Library	Total
1. Service Cost	\$ -	\$ -	\$ -	\$ -	\$ -
2. Interest on the Total Pension Liability	84,530,943	24,338,578	43,090,051	5,146,090	157,105,662
3. Changes of benefit terms	-	-	-	-	-
4. Difference between expected and actual experience of the Total Pension Liability	(10,746,246)	(5,329,700)	(10,036,313)	(902,507)	(27,014,766)
5. Changes of assumptions	(948,846)	(285,717)	(499,568)	(55,030)	(1,789,161)
6. Benefit payments, including refunds of employee contributions	(126,614,631)	(33,743,903)	(60,802,124)	(7,278,257)	(228,438,915)
7. Net change in Total Pension Liability	\$ (53,778,780)	\$ (15,020,742)	\$ (28,247,954)	\$ (3,089,704)	\$ (100,137,180)
8. Total Pension Liability – Beginning	1,315,617,590	377,443,473	668,772,184	79,877,498	2,441,710,745
9. Total Pension Liability – Ending	\$ 1,261,838,810	\$ 362,422,731	\$ 640,524,230	\$ 76,787,794	\$ 2,341,573,565
B. Plan Fiduciary Net Position					
1. Contributions – employer	\$ 2,765,012	\$ 109,988	\$ 42,900,000	\$ 2,500,000	\$ 48,275,000
2. Contributions – employee	-	-	-	-	-
3. Net investment income	40,946,160	4,791,444	30,977,175	4,257,057	80,971,836
4. Benefit payments, including refunds of employee contributions	(126,614,631)	(33,743,903)	(60,802,124)	(7,278,257)	(228,438,915)
5. Pension Plan Administrative Expense	(2,375,122)	(165,107)	-	(140,678)	(2,680,907)
6. Other	(4,571,593)	(41,705)	(4,155,786)	(594,945)	(9,364,029)
7. Net change in Plan Fiduciary Net Position	\$ (89,850,174)	\$ (29,049,283)	\$ 8,919,265	\$ (1,256,823)	\$ (111,237,015)
8. Plan Fiduciary Net Position – Beginning	776,443,791	94,217,535	578,907,876	80,277,093	1,529,846,295
9. Plan Fiduciary Net Position – Ending	\$ 686,593,617	\$ 65,168,252	\$ 587,827,141	\$ 79,020,270	\$ 1,418,609,280
C. Net Pension Liability	\$ 575,245,193	\$ 297,254,479	\$ 52,697,089	\$ (2,232,476)	\$ 922,964,285
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	54.41%	17.98%	91.77%	102.91%	60.58%
E. Covered-employee payroll	\$ 53,915,327	\$ 12,056,318	\$ 10,506,161	\$ 6,626,940	\$ 83,104,746
F. Net Pension Liability as a percentage of covered-employee payroll	1066.94%	2465.55%	501.58%	-33.69%	1110.60%

*Totals may not add due to rounding.

A Special Funding Situation may occur if a non-city entity has a legal obligation to contribute directly to the Retirement System. The Net Pension Liability shown here has not been adjusted for any potential Special Funding Situation.



Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Last 10 Fiscal Years

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,736,019
Interest on the Total Pension Liability	157,105,662	168,079,194	182,140,105	192,888,245	195,489,643	192,359,745	201,919,236	214,011,164	263,007,329	242,611,073
Benefit Changes	-	-	-	-	-	-	-	-	(731,824,895)	(113,311,571)
Difference between Expected and Actual Experience	(27,014,766)	(12,568,209)	(59,232,849)	(55,836,749)	13,596,900	34,154,327	(27,508,380)	(43,719,112)	24,644,530	-
Assumption Changes	(1,789,161)	(181,357,524)	119,876,694	67,677,535	-	(110,274,515)	76,925,957	90,034,927	(101,559,893)	(271,190,194)
Benefit Payments	(217,569,517)	(222,756,595)	(225,790,173)	(230,537,598)	(235,153,732)	(239,301,938)	(242,938,006)	(242,470,451)	(253,217,949)	(253,683,194)
Refunds*	(10,869,398)	(13,796,354)	(11,333,604)	(9,344,054)	(13,636,283)	(14,140,692)	(24,311,533)	(49,811,728)	(44,321,041)	(144,050,613)
Net Change in Total Pension Liability	(100,137,180)	(262,399,488)	5,660,173	(35,152,621)	(39,703,472)	(137,203,073)	(15,912,726)	(31,955,200)	(843,271,919)	(506,888,480)
Total Pension Liability - Beginning	2,441,710,745	2,704,110,233	2,698,450,060	2,733,602,681	2,773,306,153	2,910,509,226	2,926,421,952	2,958,377,152	3,801,649,071	4,308,537,551
Total Pension Liability - Ending (a)	\$ 2,341,573,565	\$ 2,441,710,745	\$ 2,704,110,233	\$ 2,698,450,060	\$ 2,733,602,681	\$ 2,773,306,153	\$ 2,910,509,226	\$ 2,926,421,952	\$ 2,958,377,152	\$ 3,801,649,071
Plan Fiduciary Net Position										
Employer Contributions	\$ 48,275,000	\$ 48,275,000	\$ 48,275,000	\$ 47,900,000	\$ 67,900,000	\$ 68,275,000	\$ 91,238,402	\$ 104,792,657	\$ 189,282,095	\$ 25,126,131
Employee Contributions	-	-	-	-	-	-	-	-	609,073	10,241,761
Pension Plan Net Investment Income	80,971,836	(102,790,030)	406,977,917	(14,002,111)	47,170,007	155,423,193	206,896,567	(7,865,094)	93,054,978	289,789,607
Benefit Payments	(217,569,517)	(222,756,595)	(225,790,173)	(230,537,598)	(235,153,732)	(239,301,938)	(242,938,006)	(242,470,451)	(253,217,949)	(253,683,194)
Refunds*	(10,869,398)	(13,796,354)	(11,333,604)	(9,344,054)	(13,636,283)	(14,140,692)	(24,311,533)	(49,811,728)	(44,321,041)	(144,050,613)
Pension Plan Administrative Expense	(2,680,907)	(2,541,080)	(1,987,193)	(2,351,273)	(3,023,943)	(3,313,418)	(6,021,837)	(3,742,618)	(7,556,822)	(11,237,767)
Other	(9,364,029)	4,806,056	6,405,362	5,530,198	(4,972,864)	6,952,522	8,324,075	1,360,330	138,219,998	-
Net Change in Plan Fiduciary Net Position	(111,237,015)	(288,803,003)	222,547,309	(202,804,838)	(141,716,815)	(26,105,333)	33,187,668	(197,736,904)	116,070,332	(83,814,075)
Plan Fiduciary Net Position - Beginning	1,529,846,295	1,818,649,298	1,596,101,989	1,798,906,827	1,940,623,642	1,966,728,975	1,933,541,307	2,131,278,211	2,015,207,879	2,099,021,954
Plan Fiduciary Net Position - Ending (b)	\$ 1,418,609,280	\$ 1,529,846,295	\$ 1,818,649,298	\$ 1,596,101,989	\$ 1,798,906,827	\$ 1,940,623,642	\$ 1,966,728,975	\$ 1,933,541,307	\$ 2,131,278,211	\$ 2,015,207,879
Net Pension Liability - Ending (a) - (b)	\$ 922,964,285	\$ 911,864,450	\$ 885,460,935	\$ 1,102,348,071	\$ 934,695,854	\$ 832,682,511	\$ 943,780,251	\$ 992,880,645	\$ 827,098,941	\$ 1,786,441,192
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	60.58 %	62.65 %	67.25 %	59.15 %	65.81 %	69.98 %	67.57 %	66.07 %	72.04 %	53.01 %
Covered-Employee Payroll	\$ 83,104,746	\$ 102,653,636	\$ 111,124,304	\$ 142,215,060	\$ 149,373,313	\$ 141,454,717	\$ 143,882,722	\$ 200,722,197	\$ 203,507,079	\$ 213,291,083
Net Pension Liability as a Percentage										
of Covered-Employee Payroll	1,110.60 %	888.29 %	796.82 %	775.13 %	625.74 %	588.66 %	655.94 %	494.65 %	406.42 %	837.56 %
Notes to Schedule:	N/A									

* For FY 2017, includes approximately \$2.9 million of adjusted loan balances that were treated as refunds of ASF contributions.

A Special Funding Situation may occur if a non-city entity has a legal obligation to contribute directly to the Retirement System. The Net Pension Liability shown here has not been adjusted for any potential funding situation. Our understanding is that the City makes all the employer contributions into the fund, even though the City may receive monies from other entities as a result of the POA.



Schedules of Required Supplementary Information

Schedule of the Net Pension Liability Multiyear

Last 10 Fiscal Years

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll*	Net Pension Liability as a % of Covered Payroll
2014	\$ 3,801,649,071	\$ 2,015,207,879	\$ 1,786,441,192	53.01%	\$ 213,291,083	837.56%
2015	2,958,377,152	2,131,278,211	827,098,941	72.04%	203,507,079	406.42%
2016	2,926,421,952	1,933,541,307	992,880,645	66.07%	200,722,197	494.65%
2017	2,910,509,226	1,966,728,975	943,780,251	67.57%	143,882,722	655.94%
2018	2,773,306,153	1,940,623,642	832,682,511	69.98%	141,454,717	588.66%
2019	2,733,602,681	1,798,906,827	934,695,854	65.81%	149,373,313	625.74%
2020	2,698,450,060	1,596,101,989	1,102,348,071	59.15%	142,215,060	775.13%
2021	2,704,110,233	1,818,649,298	885,460,935	67.25%	111,124,304	796.82%
2022	2,441,710,745	1,529,846,295	911,864,450	62.65%	102,653,636	888.29%
2023	2,341,573,565	1,418,609,280	922,964,285	60.58%	83,104,746	1,110.60%

* Covered payroll shown is the reported payroll on the actuarial valuation date (census date). Actual covered payroll paid during the year was unavailable.



Schedule of Contributions Multiyear

Last 10 Fiscal Years

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contribution as a % of Covered Payroll
2014	\$80,627,791	\$ 25,126,131	\$55,501,660	\$213,291,083	11.78%
2015	N/A	189,282,095	N/A	203,507,079	93.01%
2016	N/A	104,792,657	N/A	200,722,197	52.21%
2017	N/A	91,238,402	N/A	143,882,722	63.41%
2018	N/A	68,275,000	N/A	141,454,717	48.27%
2019	N/A	68,275,000	N/A	149,373,313	45.71%
2020	N/A	48,275,000	N/A	142,215,060	33.95%
2021	N/A	48,275,000	N/A	111,124,304	43.44%
2022	N/A	48,275,000	N/A	102,653,636	47.03%
2023	N/A	48,275,000	N/A	83,104,746	58.09%

* Covered payroll shown is the reported payroll from the actuarial valuation date (census date). Actual covered payroll paid during the year was unavailable.

Notes to Schedule of Contributions

Contribution Requirement: The expected contributions from Fiscal Year 2015 to Fiscal Year 2023 are provided in the POA.

Beginning with Fiscal Year 2024, employer contributions will be actuarially determined.

Schedule of Investment Returns

This information should be provided by the plan's investment consultant.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Single Discount Rate

A Single Discount Rate of 6.76% was used to measure the total pension liability as of June 30, 2023. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.76% as directed by the System and approved by the System's auditor. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions have ceased and that employer contributions will be made at rates equal to those set by System's funding policy. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 6.76%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher.

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

	Current Single Discount		
	1% Decrease 5.76%	Rate Assumption 6.76%	1% Increase 7.76%
Total Pension Liability (TPL)	\$2,534,379,858	\$2,341,573,565	\$2,175,062,154
Net Position Restricted for Pensions	1,418,609,280	1,418,609,280	1,418,609,280
Net Pension Liability (NPL)	\$1,115,770,578	\$ 922,964,285	\$ 756,452,874

The inclusion of discount rates shown on this required schedule does not imply the rate is reasonable (other than the current assumption).

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	10,918
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2,633
Active Plan Members	<u>1,850</u>
Total Plan Members	15,401

Additional information regarding the plan population may be found in the June 30, 2022 actuarial valuation of the System.

Additional Note

Potential future asset transfers from this Plan to Component I for payment of Transition Costs were not included in this calculation.

SECTION E

SUMMARY OF BENEFITS

Summary of Benefit Provisions Evaluated

Component II Frozen Benefits

All Component II benefits are frozen as of June 30, 2014 based on service and average final compensation accrued as of that date and the provisions of the Detroit General Retirement System as it existed on June 30, 2014. Frozen benefits are further reduced by 4.5% and all future Cost-of-Living Adjustments (“COLAs”) were eliminated. Benefits resulting from the Annuity Savings Fund and benefits paid from the Annuity Reserve Fund were subject to a separate reduction described as a “Claw-back.” Details of the claw-back provision are complicated and can be found in the Eighth Amended Plan of Adjustment. The benefits evaluated in this report are the frozen reduced benefits after the claw-back. Component II benefits are payable after separation from service, upon meeting the eligibility conditions of the plan as it existed on June 30, 2014, regardless of whether the individual is eligible to receive a Component I benefit at that time.

Our understanding of the June 30, 2014 plan provisions is provided below for completeness. The material below does not have legal standing and is not intended to cover all potential situations that could occur. If there are discrepancies between the description below, and appropriate legal documents, the latter necessarily govern.

Age and Service Pension

Eligibility - Any age (minimum age 55 for non-EMS members hired after 1995) with 30 years of service (25 for EMS members), or age 60 with 10 years of service, or age 65 with 8 years of service.

Annual Amount - EMS Members: Sum of a) a basic pension of \$12 for each of the first 10 years of service, plus b) a pension equal to 2.0% of AFC multiplied by years of service. Maximum benefit is 90% of AFC.

Other Members: Sum of a) a basic pension of \$12 for each of the first 10 years of service, plus b) a pension equal to the first 10 years of service multiplied by 1.6% of AFC, plus 1.8% of AFC for each year of service greater than 10 years up to 20 years, plus 2.0% of AFC for each year of service greater than 20 years up to 25 years, plus 2.2% of AFC for each year of service greater than 25 years. Future benefit accruals for certain active members (depending on bargaining unit) were reduced to 1.5% of final average compensation per year of service.

Type of Average Final Compensation (AFC) - Highest 3 consecutive years out of the last 10. Pension benefits will not be diminished if compensation is reduced because of a fiscal emergency. Effective July 1, 1999, in computing the AFC, a member shall have the option of adding the value of 25% of unused accrued sick leave to the earnings used in computing the AFC. Longevity is added to AFC in accordance with the following schedule: \$150 after 5 years, \$300 after 10 years, \$450 after 15 years, \$600 after 20 years, and \$750 after 25 years.

Early Retirement

Eligibility - Any age with 25 or more years of service (min. age 55 for members hired after 1995).

Annual Amount - Same as regular retirement but actuarially reduced.



Summary of Benefit Provisions Evaluated (Continued)

Deferred Retirement (Vested Benefit)

Eligibility - Hired prior to 7-1-80: Age 40 with 8 years of service. Hired on or after 7-1-80: Any age with 10 years of service.

Benefit Commencement - APTE hired prior to July 1, 1988: Benefit begins at the age the member would have become eligible for regular retirement if service had continued. **SAAA, Non-Union and lawyers hired prior to June 30, 1986:** Benefit begins at the age the member would have become eligible for regular retirement. **Others:** Benefits based on service rendered by June 30, 1986 begin at the age the member would have become eligible for regular retirement. Benefits based on service rendered after July 1, 1986 begin at age 62.

Annual Amount - Same as regular retirement but based on average final compensation and service at the time of termination.

Duty Disability Retirement

Eligibility - Service related disability before eligibility for service retirement prior to July 1, 2014. No service requirement.

Annual Amount - An annuity which is the actuarial equivalent of the accumulated contributions at date of disability plus a pension of two-thirds of average final compensation at time of disability. The maximum annual pension is \$5,700 (\$9,000 for EMS). At the earliest of when the member would have accrued 30 years of service credit (25 for EMS) or age 60, the annuity is recomputed assuming contributions would have continued at a salary level equal to final compensation. The pension is recomputed with additional service credit granted from the date of disability to age 60 (or 30 years of service credit) or June 30, 2014, whichever is earlier. Benefits payable prior to conversion/re-computation, if any, were assumed to be paid outside the trust.

Non-Duty Disability Retirement

Eligibility - Disability from any cause before age 60 with 10 or more years of service prior to July 1, 2014.

Annual Amount - Computed in the same manner as a regular retirement benefit. Maximum annual pension to age 60 is \$6,000. Benefit is recomputed at age 60 with no maximum. Benefits payable prior to age 60, if any, were assumed to be paid from outside the trust.

Duty Death Before Retirement

Eligibility - Death from service related causes. No age or service requirements.

Annual Amount - One-third of final compensation as of June 30, 2014 to the surviving spouse for life or until remarriage, plus an equal share of 1/4 of final compensation to each unmarried child under age 18. If there is no eligible spouse, eligible children each receive 1/4 of final compensation; if there are more than 2 such children, each child shares an equal part of 1/2 of final compensation. Maximum total amount for spouse and children is \$9,000 annually. If there is no eligible spouse or children, dependent parents each receive 1/6 of deceased's final compensation, to a total maximum of \$600 annually.



Summary of Benefit Provisions Evaluated (Concluded)

Non-Duty Death Before Retirement

Eligibility - Death-in-service at any age with 15 years of service; or after age 60 with 10 years of service; or after age 65 with 8 years of service.

Annual Amount - To Surviving Spouse: Computed as a regular retirement benefit but reduced in accordance with a 100% joint and survivor election for members with 20 or more years of service. For members with 15 years of service but less than 20, benefit is reduced in accordance with a 50% joint and survivor election. To Dependent Children if no Surviving Spouse: \$9,000 payable to age 19 of the youngest child or for life if child is physically or mentally impaired for members with 20 or more years of service (\$6,000 if less than 20 years of service).

Post-Retirement Cost-of-Living Adjustments

Benefit is increased annually by 2.25% of the **original** pension amount at retirement. Post-retirement cost-of-living increases were eliminated on future accruals for certain active members (depending on bargaining unit).

Member Contributions

Members had the option of choosing one of four contribution amounts: (1) 0%; (2) 3.0% of compensation up to the Social Security wage base, plus 5.0% of compensation in excess of the Social Security wage base; (3) 5.0% of total compensation; or (4) 7.0% of total compensation. Member contributions can be paid as a lump sum or annuitized at retirement to provide an annuity in addition to the pension (which is not affected by the level of member contributions).

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Summary of Assumptions and Methods Used for the GASB Actuarial Valuations Adopted by Board of Trustees

All assumptions are estimates of future experience except as noted. The rationale for the assumptions is based on experience studies where noted.

Economic Assumptions

The investment return rate is 6.76% per year, compounded annually (net after investment expenses) as of June 30, 2023. This assumption was provided by the Retirement System.

Price inflation is not directly used in the valuation. For purposes of assessing the reasonability of the investment return assumptions, we assumed price inflation of 2.50% per year.

Future **administrative expenses** are assumed to be 1.01% of benefit payments and refunds.

Non-Economic Assumptions

For healthy post-retirement mortality, the PubG-2010(B) Below-Median General Retiree table was used for mortality assumptions going forward, decreased by 3% for males and increased by 26% for females.

For disabled post-retirement mortality, the PubNS-2010 Non-Safety Disabled Retiree mortality table was used, increased 4% for males and decreased 2% for females.

For pre-retirement mortality rates, the PubG-2010(B) Below-Median General Employee mortality table was used for both males and females.

The tables are projected to be fully generational, based on the 2-dimensional, sex distinct mortality improvement scale MP-2021 (which was intended to be used with the Pub-2010). 75% of all deaths-in-service are assumed to be non-duty related. This table was first used as of June 30, 2021. The rationale for the mortality assumption is based on the 2015-2020 Experience Study

The probabilities of retirement for members eligible to retire are shown on the following pages. These probabilities were revised for the June 30, 2021 valuation. The rationale is based on the 2015-2020 Experience Study.

The probabilities of separation from service (including *death-in-service* and *disability*) are shown for sample ages on the following pages. These probabilities were revised for the June 30, 2021 valuation. The rationale is based on the 2015-2020 Experience Study.

Single Life Retirement Values

Based on PubG-2010(B)
 97% of Male Rates/126% of Female Rates
 Using Projection Scale MP-2021

Sample Attained Ages in 2022	Future Life Expectancy (years)	
	Men	Women
45	37.56	40.04
50	32.64	34.98
55	28.26	30.39
60	24.02	25.88
65	19.92	21.43
70	15.95	17.10
75	12.31	13.09
80	9.11	9.55

Probabilities of Age/Service Retirement for Members Eligible to Retire

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year with Unreduced Benefits		
	EMS	D.O.T.	Others
62	40%	20%	20%
63	40%	20%	20%
64	40%	20%	20%
65	40%	20%	20%
66	40%	20%	20%
67	40%	30%	20%
68	40%	30%	20%
69	40%	30%	20%
70	100%	100%	20%
71			20%
72			20%
73			20%
74			20%
75			20%
76			20%
77			20%
78			20%
79			20%
80			100%
Ref	851	3304	3305

All members are assumed to retire while eligible for Component I (Hybrid) retirement only. The rationale is based on the 2015-2020 Experience Study.

Probabilities of Early Retirement for Members Eligible for Early Retirement

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year with Reduced Benefits
55	6.5%
56	6.5%
57	6.5%
58	7.5%
59	8.5%
60	9.5%
61	9.5%
62	9.5%
Ref	3303

All members are assumed to retire while eligible for Component I (Hybrid) retirement only. The rationale is based on the 2015-2020 Experience Study.

Sample Rates of Separation from Active Employment Before Retirement

Sample Ages	Years of Service	% of Active Members	
		Withdrawal	
		EMS	Other
ALL	0	16.00%	28.00%
	1	15.00%	19.00%
	2	15.00%	15.00%
	3	11.00%	14.00%
	4	11.00%	14.00%
25	5 & Over	10.05%	13.00%
30		8.85%	11.91%
35		7.80%	9.25%
40		6.60%	7.19%
45		5.10%	5.91%
50		3.60%	5.00%
55		3.00%	5.00%
60		3.00%	5.00%
Ref		1405	1406
		1608	1609

Sample Ages	% of Active Members Becoming Disabled within Next Year			
	D.O.T.		Others	
	Ordinary	Duty	Ordinary	Duty
25	0.16%	0.24%	0.03%	0.03%
30	0.19%	0.28%	0.04%	0.04%
35	0.26%	0.39%	0.05%	0.05%
40	0.37%	0.56%	0.08%	0.08%
45	0.56%	0.84%	0.12%	0.12%
50	0.70%	1.05%	0.15%	0.15%
55	0.82%	1.23%	0.17%	0.17%
60	0.94%	1.41%	0.20%	0.20%
Ref	1238 x 1.20	1238 x 1.80	1238 x 0.25	1238 x 0.25

Rationale for assumption is based upon a 2015-2020 Experience Study.

Miscellaneous and Technical Assumptions

Benefit Service	Exact Fractional service is used to determine the amount of benefit payable.
Decrement Operation	Disability and mortality decrements do not operate during the first five years of service. Disability and withdrawal do not operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and rounded service on the date the decrement is assumed to occur.
Forfeitures	None.
Incidence of Contributions	Contributions are assumed to be received at the end of the year.
Marriage Assumption	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Normal Form of Benefit	Straight life is the normal form of benefit. The Board adopted assumptions for Actuarial Equivalence to be an 80%/20% unisex blend of RP-2014 mortality (Male/Female) with Blue Collar Adjustment, set ahead one year for males and females, projected 11 years with MP-2014, an interest rate of 6.75%, and no COLA for optional forms of payment and early retirement reduction. Assumptions for annuitizing member contributions are the same except for using a 60%/40% unisex blend and a 5.25% assumed rate of interest. Prior to the use of these factors, actuarial equivalent factors were based on 7.5% interest and the 1984 Group Annuity Mortality table.
Service Credit Accruals	Service accruals stop as of June 30, 2014 for measurement of Component II liabilities. However, future service in Component I may be used to satisfy benefit eligibility requirement in Component II. Members who became duty disabled prior to June 30, 2014 are assumed to get projected service from date of disability to conversion date. Member who become disabled after June 30, 2014 are assumed to get their frozen accrued benefit as of June 30, 2014 at date of conversion.
Administrative Expenses	Administrative expenses are assumed to be 1.01% of benefit payments and are to be included in the employer contribution.
Sick Leave	Sick leave banks as of June 30, 2014 were included in the 2014 data file provided by the System.
Member Contributions	Member contributions to this Component II plan are assumed to have ceased with the bankruptcy.
Pop-Up Benefits	For current retirees with a pop-up benefit, the value of the pop-up was estimated by valuing a non-pop-up option and increasing the associated liabilities by 2%.

Rationale for assumptions is based upon a 2015-2020 Experience Study, modified as necessary for changes in data or administration.



SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate at End of Year

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.76%; the municipal bond rate is 3.86%; and the resulting SDR is 6.76% as of June 30, 2023.

The tables in this section provide background for the development of the SDR.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities). For purposes of determining the discount rate as of June 30, 2023, employer contributions were determined by a closed 30-year level principle amortization of any unfunded actuarial accrued liability using 6.76% interest, net of investment expenses.

Note that these projections are specifically used to determine the GASB discount rate and should not be interpreted as a funding projection or recommendation.

Rates of Return: Note that these projections are specifically used to determine the SDR and should not be interpreted as a funding recommendation. The 6.76% rate of return was before administrative expenses. Therefore, the projections assumed that any administrative expenses incurred by the plan will directly increase employer contributions beginning with FY 2024. The rate is net of investment expenses.

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

Unfunded Actuarial Accrued Liabilities. Actual employer contributions through June 30, 2023 are set by the POA.

The **Present Values of Projected Benefit Payments** table shows the development of the SDR. It breaks down the benefit payments into present values for funded and unfunded portions (if any) and shows the equivalent total at the SDR. For purposes of determining the discount rate as of June 30, 2023, the benefit payments reflect the plan provisions in force as of June 30, 2023.



Single Discount Rate Development Projection of Contributions End of Year

Fiscal Year Ending June 30,	Projected Contributions from Current Employees	Projected Service Cost	Administrative Expense Contributions (EOY)	Projected UAL Contributions (EOY)	Projected Total Contributions (EOY)
2024	\$ -	\$ -	\$ 2,315,823	\$ 80,090,882	\$ 82,406,705
2025	-	-	2,277,170	92,412,029	94,689,199
2026	-	-	2,241,595	90,301,823	92,543,418
2027	-	-	2,202,740	88,191,617	90,394,357
2028	-	-	2,159,871	86,081,412	88,241,283
2029	-	-	2,112,740	83,971,206	86,083,946
2030	-	-	2,064,487	81,861,000	83,925,487
2031	-	-	2,013,506	79,750,794	81,764,300
2032	-	-	1,959,970	77,640,589	79,600,559
2033	-	-	1,902,262	75,530,383	77,432,645
2034	-	-	1,840,234	73,420,177	75,260,411
2035	-	-	1,772,935	71,309,971	73,082,906
2036	-	-	1,702,640	69,199,766	70,902,405
2037	-	-	1,629,449	67,089,560	68,719,008
2038	-	-	1,554,904	64,979,354	66,534,258
2039	-	-	1,477,590	62,869,148	64,346,738
2040	-	-	1,398,748	60,758,942	62,157,691
2041	-	-	1,318,841	58,648,737	59,967,578
2042	-	-	1,238,311	56,538,531	57,776,842
2043	-	-	1,158,196	54,428,325	55,586,521
2044	-	-	1,078,915	52,318,119	53,397,034
2045	-	-	1,000,575	50,207,914	51,208,489
2046	-	-	923,761	48,097,708	49,021,469
2047	-	-	849,157	45,987,502	46,836,659
2048	-	-	777,314	43,877,296	44,654,610
2049	-	-	708,491	41,767,091	42,475,582
2050	-	-	642,940	39,656,885	40,299,825
2051	-	-	580,974	37,546,679	38,127,653
2052	-	-	522,734	35,436,473	35,959,208
2053	-	-	468,320	33,326,267	33,794,588
2054	-	-	417,829	-	417,829
2055	-	-	371,204	-	371,204
2056	-	-	328,422	-	328,422
2057	-	-	289,395	-	289,395
2058	-	-	254,001	-	254,001
2059	-	-	222,086	-	222,086
2060	-	-	193,464	-	193,464
2061	-	-	167,926	-	167,926
2062	-	-	145,260	-	145,260
2063	-	-	125,240	-	125,240
2064	-	-	107,640	-	107,640
2065	-	-	92,235	-	92,235
2066	-	-	78,807	-	78,807
2067	-	-	67,148	-	67,148
2068	-	-	57,062	-	57,062
2069	-	-	48,365	-	48,365
2070	-	-	40,893	-	40,893
2071	-	-	34,491	-	34,491
2072	-	-	29,023	-	29,023
2073	-	-	24,368	-	24,368

Employer contributions as shown may differ substantially from those determined by a funding valuation.



Single Discount Rate Development Projection of Plan Fiduciary Net Position End of Year

Fiscal Year Ending June 30,	Projected Beginning Plan Net Position	Projected Total Contributions (EOY)	Projected Benefit Payments	Projected ASF Refund	Projected Administrative Expenses	Projected Investment Earnings at 6.76% (5.25% for ASF)	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(a)+(b)-(c)-(d)-(e)+(f)
2024	\$ 1,418,609,280	\$ 82,406,705	\$ 221,911,454	\$ 10,590,258	\$ 2,241,306	\$ 86,919,509	\$ 1,353,192,476
2025	1,353,192,476	94,689,199	218,207,501	10,590,258	2,203,896	82,720,073	1,299,600,093
2026	1,299,600,093	92,543,418	214,798,602	10,590,258	2,169,466	79,315,223	1,243,900,408
2027	1,243,900,408	90,394,357	211,075,362	10,590,258	2,131,861	75,783,910	1,186,281,193
2028	1,186,281,193	88,241,283	206,967,520	10,590,258	2,090,372	72,141,472	1,127,015,798
2029	1,127,015,798	86,083,946	202,451,202	10,590,258	2,044,757	68,407,491	1,066,421,018
2030	1,066,421,018	83,925,487	197,827,399	10,590,258	1,998,057	64,593,589	1,004,524,379
2031	1,004,524,379	81,764,300	192,942,164	10,590,258	1,948,716	60,707,130	941,514,671
2032	941,514,671	79,600,559	187,812,163	10,590,258	1,896,903	56,760,666	877,576,571
2033	877,576,571	77,432,645	182,282,343	10,590,258	1,841,052	52,772,257	813,067,820
2034	813,067,820	75,260,411	176,338,660	-	1,781,020	49,041,385	759,249,936
2035	759,249,936	73,082,906	169,889,673	-	1,715,886	45,619,873	706,347,156
2036	706,347,156	70,902,405	163,153,749	-	1,647,853	42,269,858	654,717,817
2037	654,717,817	68,719,008	156,140,250	-	1,577,017	39,015,250	604,734,808
2038	604,734,808	66,534,258	148,997,137	-	1,504,871	35,876,286	556,643,344
2039	556,643,344	64,346,738	141,588,585	-	1,430,045	32,874,106	510,845,559
2040	510,845,559	62,157,691	134,033,671	-	1,353,740	30,031,893	467,647,731
2041	467,647,731	59,967,578	126,376,620	-	1,276,404	27,368,867	427,331,151
2042	427,331,151	57,776,842	118,659,881	-	1,198,465	24,902,618	390,152,265
2043	390,152,265	55,586,521	110,983,005	-	1,120,928	22,647,139	356,281,992
2044	356,281,992	53,397,034	103,385,953	-	1,044,198	20,612,641	325,861,517
2045	325,861,517	51,208,489	95,879,099	-	968,379	18,808,321	299,030,848
2046	299,030,848	49,021,469	88,518,497	-	894,037	17,241,759	275,881,542
2047	275,881,542	46,836,659	81,369,589	-	821,833	15,916,949	256,443,728
2048	256,443,728	44,654,610	74,485,349	-	752,302	14,834,147	240,694,834
2049	240,694,834	42,475,582	67,890,484	-	685,694	13,990,997	228,585,235
2050	228,585,235	40,299,825	61,609,112	-	622,252	13,383,337	220,037,033
2051	220,037,033	38,127,653	55,671,243	-	562,280	13,004,890	214,936,053
2052	214,936,053	35,959,208	50,090,458	-	505,914	12,847,484	213,146,373
2053	213,146,373	33,794,588	44,876,340	-	453,251	12,901,608	214,512,978
2054	214,512,978	417,829	40,038,035	-	404,384	13,156,476	187,644,863
2055	187,644,863	371,204	35,570,326	-	359,260	11,490,231	163,576,713
2056	163,576,713	328,422	31,470,735	-	317,854	10,000,901	142,117,446
2057	142,117,446	289,395	27,731,013	-	280,083	8,675,846	123,071,592
2058	123,071,592	254,001	24,339,431	-	245,828	7,502,246	106,242,580
2059	106,242,580	222,086	21,281,232	-	214,940	6,467,309	91,435,802
2060	91,435,802	193,464	18,538,507	-	187,239	5,558,480	78,462,001
2061	78,462,001	167,926	16,091,348	-	162,523	4,763,634	67,139,690
2062	67,139,690	145,260	13,919,391	-	140,586	4,071,187	57,296,160
2063	57,296,160	125,240	12,001,021	-	121,210	3,470,189	48,769,357
2064	48,769,357	107,640	10,314,500	-	104,176	2,950,416	41,408,736
2065	41,408,736	92,235	8,838,331	-	89,267	2,502,412	35,075,785
2066	35,075,785	78,807	7,551,598	-	76,271	2,117,517	29,644,241
2067	29,644,241	67,148	6,434,377	-	64,987	1,787,864	24,999,889
2068	24,999,889	57,062	5,467,884	-	55,226	1,506,364	21,040,205
2069	21,040,205	48,365	4,634,597	-	46,809	1,266,674	17,673,838
2070	17,673,838	40,893	3,918,481	-	39,577	1,063,157	14,819,829
2071	14,819,829	34,491	3,305,001	-	33,381	890,828	12,406,766
2072	12,406,766	29,023	2,781,073	-	28,089	745,300	10,371,927
2073	10,371,927	24,368	2,335,038	-	23,584	622,724	8,660,398

Employer contributions as shown may differ substantially from those determined by a funding valuation. Projected ASF refunds assume the ASF balance will be depleted in equal amounts over ten years.



Single Discount Rate Development Projection of Plan Fiduciary Net Position End of Year (Concluded)

Fiscal Year Ending June 30,	Projected Beginning Plan Net Position	Projected Total Contributions (EOY)	Projected Benefit Payments	Projected ASF Refund	Projected Administrative Expenses	Projected Investment Earnings at 6.76% (5.25% for ASF)	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(a)+(b)-(c)-(d)-(e)+(f)
2074	\$ 8,660,398	\$ 20,418	\$ 1,956,511	\$ -	\$ 19,761	\$ 519,737	\$ 7,224,281
2075	7,224,281	17,075	1,636,267	-	16,526	433,410	6,021,974
2076	6,021,974	14,257	1,366,167	-	13,798	361,205	5,017,471
2077	5,017,471	11,886	1,139,028	-	11,504	300,929	4,179,754
2078	4,179,754	9,899	948,549	-	9,580	250,696	3,482,220
2079	3,482,220	8,236	789,235	-	7,971	208,893	2,902,144
2080	2,902,144	6,849	656,319	-	6,629	174,144	2,420,189
2081	2,420,189	5,694	545,670	-	5,511	145,279	2,019,981
2082	2,019,981	4,735	453,734	-	4,583	121,313	1,687,713
2083	1,687,713	3,939	377,467	-	3,812	101,413	1,411,786
2084	1,411,786	3,280	314,269	-	3,174	84,883	1,182,504
2085	1,182,504	2,734	261,940	-	2,646	71,141	991,793
2086	991,793	2,281	218,620	-	2,208	59,703	832,950
2087	832,950	1,907	182,747	-	1,846	50,170	700,435
2088	700,435	1,596	153,011	-	1,545	42,211	589,686
2089	589,686	1,339	128,328	-	1,296	35,553	496,954
2090	496,954	1,125	107,802	-	1,089	29,974	419,162
2091	419,162	946	90,707	-	916	25,289	353,775
2092	353,775	798	76,458	-	772	21,348	298,690
2093	298,690	674	64,571	-	652	18,023	252,164
2094	252,164	570	54,638	-	552	15,211	212,755
2095	212,755	484	46,316	-	468	12,827	179,281
2096	179,281	410	39,327	-	397	10,799	150,766
2097	150,766	349	33,436	-	338	9,069	126,410
2098	126,410	297	28,446	-	287	7,590	105,564
2099	105,564	252	24,198	-	244	6,324	87,698
2100	87,698	215	20,556	-	208	5,238	72,387
2101	72,387	182	17,411	-	176	4,309	59,290
2102	59,290	153	14,682	-	148	3,515	48,129
2103	48,129	128	12,304	-	124	2,840	38,669
2104	38,669	106	10,234	-	103	2,270	30,708
2105	30,708	88	8,437	-	85	1,793	24,067
2106	24,067	72	6,882	-	70	1,396	18,583
2107	18,583	58	5,543	-	56	1,070	14,113
2108	14,113	45	4,398	-	44	806	10,522
2109	10,522	36	3,434	-	35	596	7,686
2110	7,686	28	2,630	-	27	431	5,487
2111	5,487	21	1,972	-	20	305	3,820
2112	3,820	15	1,443	-	15	210	2,588
2113	2,588	10	1,028	-	10	140	1,701
2114	1,701	7	710	-	7	91	1,082
2115	1,082	5	475	-	5	57	664
2116	664	3	307	-	3	35	392
2117	392	2	191	-	2	20	222
2118	222	1	114	-	1	11	119
2119	119	1	65	-	1	6	60
2120	60	-	36	-	-	3	27
2121	27	-	19	-	-	1	9
2122	9	-	10	-	-	0	-
2123	-	-	-	-	-	0	0

Employer contributions as shown may differ substantially from those determined by a funding valuation.



Single Discount Rate Development

Present Values of Projected Benefits

End of Year (Excluding ASF)

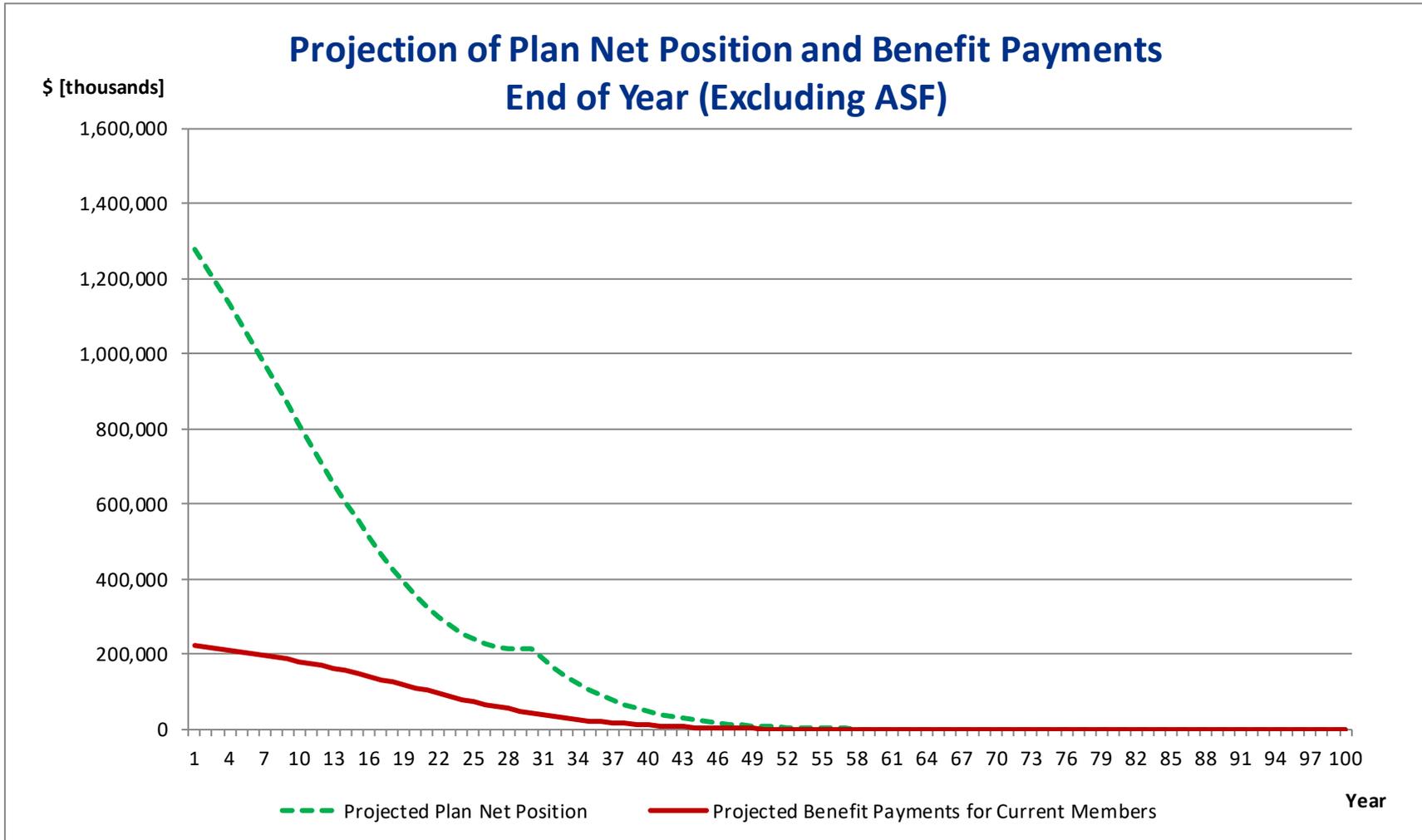
Fiscal Year Ending June 30,	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a /(a)-.5	(g)=(e)*vf ^a /(a)-.5	(h)=(c)/(1+sdr) ^a /(a)-.5
2024	\$ 1,335,724,245	\$ 221,911,454	\$ 221,911,454	\$ -	\$ 214,770,899	\$ -	\$ 214,770,899
2025	1,276,820,673	218,207,501	218,207,501	-	197,813,910	-	197,813,910
2026	1,230,083,467	214,798,602	214,798,602	-	182,393,786	-	182,393,786
2027	1,181,598,855	211,075,362	211,075,362	-	167,883,326	-	167,883,326
2028	1,131,573,505	206,967,520	206,967,520	-	154,192,643	-	154,192,643
2029	1,080,300,653	202,451,202	202,451,202	-	141,277,581	-	141,277,581
2030	1,028,118,023	197,827,399	197,827,399	-	129,309,600	-	129,309,600
2031	975,075,174	192,942,164	192,942,164	-	118,130,735	-	118,130,735
2032	921,384,079	187,812,163	187,812,163	-	107,708,732	-	107,708,732
2033	867,253,819	182,282,343	182,282,343	-	97,918,157	-	97,918,157
2034	813,067,820	176,338,660	176,338,660	-	88,727,369	-	88,727,369
2035	759,249,936	169,889,673	169,889,673	-	80,069,752	-	80,069,752
2036	706,347,156	163,153,749	163,153,749	-	72,026,116	-	72,026,116
2037	654,717,817	156,140,250	156,140,250	-	64,565,310	-	64,565,310
2038	604,734,808	148,997,137	148,997,137	-	57,710,353	-	57,710,353
2039	556,643,344	141,588,585	141,588,585	-	51,368,334	-	51,368,334
2040	510,845,559	134,033,671	134,033,671	-	45,548,344	-	45,548,344
2041	467,647,731	126,376,620	126,376,620	-	40,226,926	-	40,226,926
2042	427,331,151	118,659,881	118,659,881	-	35,378,992	-	35,378,992
2043	390,152,265	110,983,005	110,983,005	-	30,994,844	-	30,994,844
2044	356,281,992	103,385,953	103,385,953	-	27,044,936	-	27,044,936
2045	325,861,517	95,879,099	95,879,099	-	23,493,071	-	23,493,071
2046	299,030,848	88,518,497	88,518,497	-	20,316,146	-	20,316,146
2047	275,881,542	81,369,589	81,369,589	-	17,492,861	-	17,492,861
2048	256,443,728	74,485,349	74,485,349	-	14,998,955	-	14,998,955
2049	240,694,834	67,890,484	67,890,484	-	12,805,322	-	12,805,322
2050	228,585,235	61,609,112	61,609,112	-	10,884,738	-	10,884,738
2051	220,037,033	55,671,243	55,671,243	-	9,212,879	-	9,212,879
2052	214,936,053	50,090,458	50,090,458	-	7,764,454	-	7,764,454
2053	213,146,373	44,876,340	44,876,340	-	6,515,755	-	6,515,755
2054	214,512,978	40,038,035	40,038,035	-	5,445,171	-	5,445,171
2055	187,644,863	35,570,326	35,570,326	-	4,531,250	-	4,531,250
2056	163,576,713	31,470,735	31,470,735	-	3,755,161	-	3,755,161
2057	142,117,446	27,731,013	27,731,013	-	3,099,408	-	3,099,408
2058	123,071,592	24,339,431	24,339,431	-	2,548,091	-	2,548,091
2059	106,242,580	21,281,232	21,281,232	-	2,086,857	-	2,086,857
2060	91,435,802	18,538,507	18,538,507	-	1,702,794	-	1,702,794
2061	78,462,001	16,091,348	16,091,348	-	1,384,431	-	1,384,431
2062	67,139,690	13,919,391	13,919,391	-	1,121,736	-	1,121,736
2063	57,296,160	12,001,021	12,001,021	-	905,899	-	905,899
2064	48,769,357	10,314,500	10,314,500	-	729,292	-	729,292
2065	41,408,736	8,838,331	8,838,331	-	585,349	-	585,349
2066	35,075,785	7,551,598	7,551,598	-	468,462	-	468,462
2067	29,644,241	6,434,377	6,434,377	-	373,881	-	373,881
2068	24,999,889	5,467,884	5,467,884	-	297,604	-	297,604
2069	21,040,205	4,634,597	4,634,597	-	236,277	-	236,277
2070	17,673,838	3,918,481	3,918,481	-	187,120	-	187,120
2071	14,819,829	3,305,001	3,305,001	-	147,831	-	147,831
2072	12,406,766	2,781,073	2,781,073	-	116,519	-	116,519
2073	10,371,927	2,335,038	2,335,038	-	91,637	-	91,637



Single Discount Rate Development Present Values of Projected Benefits End of Year (Excluding ASF) (Concluded)

Fiscal Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
Ending June 30,	(b)	(c)	(d)	(e)	(f)=(d)*v ⁿ ((a)-.5)	(g)=(e)*vf ⁿ ((a)-.5)	(h)=(c)/(1+sdr) ⁿ ((a)-.5)
2074	\$ 8,660,398	\$ 1,956,511	\$ 1,956,511	\$ -	\$ 71,920	\$ -	\$ 71,920
2075	7,224,281	1,636,267	1,636,267	-	56,340	-	56,340
2076	6,021,974	1,366,167	1,366,167	-	44,061	-	44,061
2077	5,017,471	1,139,028	1,139,028	-	34,409	-	34,409
2078	4,179,754	948,549	948,549	-	26,841	-	26,841
2079	3,482,220	789,235	789,235	-	20,919	-	20,919
2080	2,902,144	656,319	656,319	-	16,294	-	16,294
2081	2,420,189	545,670	545,670	-	12,689	-	12,689
2082	2,019,981	453,734	453,734	-	9,883	-	9,883
2083	1,687,713	377,467	377,467	-	7,701	-	7,701
2084	1,411,786	314,269	314,269	-	6,006	-	6,006
2085	1,182,504	261,940	261,940	-	4,689	-	4,689
2086	991,793	218,620	218,620	-	3,666	-	3,666
2087	832,950	182,747	182,747	-	2,870	-	2,870
2088	700,435	153,011	153,011	-	2,251	-	2,251
2089	589,686	128,328	128,328	-	1,768	-	1,768
2090	496,954	107,802	107,802	-	1,391	-	1,391
2091	419,162	90,707	90,707	-	1,097	-	1,097
2092	353,775	76,458	76,458	-	866	-	866
2093	298,690	64,571	64,571	-	685	-	685
2094	252,164	54,638	54,638	-	543	-	543
2095	212,755	46,316	46,316	-	431	-	431
2096	179,281	39,327	39,327	-	343	-	343
2097	150,766	33,436	33,436	-	273	-	273
2098	126,410	28,446	28,446	-	218	-	218
2099	105,564	24,198	24,198	-	173	-	173
2100	87,698	20,556	20,556	-	138	-	138
2101	72,387	17,411	17,411	-	109	-	109
2102	59,290	14,682	14,682	-	86	-	86
2103	48,129	12,304	12,304	-	68	-	68
2104	38,669	10,234	10,234	-	53	-	53
2105	30,708	8,437	8,437	-	41	-	41
2106	24,067	6,882	6,882	-	31	-	31
2107	18,583	5,543	5,543	-	24	-	24
2108	14,113	4,398	4,398	-	17	-	17
2109	10,522	3,434	3,434	-	13	-	13
2110	7,686	2,630	2,630	-	9	-	9
2111	5,487	1,972	1,972	-	6	-	6
2112	3,820	1,443	1,443	-	4	-	4
2113	2,588	1,028	1,028	-	3	-	3
2114	1,701	710	710	-	2	-	2
2115	1,082	475	475	-	1	-	1
2116	664	307	307	-	1	-	1
2117	392	191	191	-	0	-	0
2118	222	114	114	-	0	-	0
2119	119	65	65	-	0	-	0
2120	60	36	36	-	0	-	0
2121	27	19	19	-	0	-	0
2122	9	10	10	-	0	-	0
2123	0	-	-	-	-	-	-
Totals					\$ 2,258,688,530	\$ -	\$ 2,258,688,530





SECTION H

GLOSSARY OF TERMS

Glossary of Terms

<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>AFC</i>	Average Final Compensation.
<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>APTE</i>	Association of Professional and Technical Employees.
<i>ASF</i>	Annuity Savings Fund.
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>DIA</i>	Detroit Institute of Art.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none"> 1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above,

discounted using the municipal bond rate.

Glossary of Terms

<i>D.O.T.</i>	Department of Transportation.
<i>DWSD</i>	Detroit Water and Sewerage Department.
<i>EMS</i>	Emergency Medical Service.
<i>Entry Age Actuarial Cost Method (EAN)</i>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>GLWA</i>	Great Lakes Water Authority.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.



Glossary of Terms

<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method. Also known as service cost.
<i>POA</i>	The 8th Amended Plan for the Adjustment of the Debt of the City of Detroit.
<i>SAAA</i>	Senior Accountants, Analysts, and Appraisers Association.
<i>UTGO</i>	Unlimited Tax General Obligation.

APPENDIX

MICHIGAN PUBLIC ACT 202

State Reporting Assumptions for Fiscal Year 2023 Calculations as of June 30, 2022

The Protecting Local Government Retirement and Benefits Act, Public Act 202 (PA 202) of 2017, was put into law effective December 20, 2017. One outcome of the law is the requirement for the local unit of government to provide select reporting disclosures to the State. Sec. 5(1) of the Act provides the State treasurer with the authority to annually establish uniform actuarial assumptions for purposes of developing the requisite disclosures. Below you will find information which may be used to assist the local unit of government with required reporting.

Uniform Assumptions, as applicable to the measurement and the required disclosures under uniform assumptions, are denoted below. Additional discussion of PA 202 and uniform assumptions published for Fiscal Year 2023 reporting may be found on the State website in the uniform assumptions memo dated April 4, 2023.

	PA 202	Assumptions used for GASB	Uniform Assumptions used for Fiscal Year 2022
Investment Rate of Return Discount Rate	Maximum of 6.85%^	6.75%	6.75%^
Salary Increase	Minimum of 3.25% or based on experience study within last 5 years	N/A	N/A
Mortality	Version of Pub-2010 with future mortality improvement projected generationally using Scale MP-2021 or based on experience study within last 5 years	Version of Pub-2010 with future mortality improvement projected generationally using Scale MP-2021 based on the 2015-2020 Experience Study	Version of Pub-2010 with future mortality improvement projected generationally using Scale MP-2021 based on the 2015-2020 Experience Study
Amortization of the Unfunded Accrued Actuarial Liability: Period	Maximum Period of 16 Years	N/A	16
Method	Closed Plans: Level Dollar Open Plans: Level Percent of Payroll or Level Dollar	Other	Level Dollar

^ A blended rate calculated using GASB Statement No. 68 methodology. For periods in which projected plan assets are sufficient to make projected benefit payments – maximum of 6.85%; for periods in which projected plan assets are NOT sufficient to make projected benefit payments – 2.16%.

The calculations for PA 202 use a June 30, 2022 valuation date and a June 30, 2022 measurement date. With the exception of the assumptions and methods listed above, all other assumptions and methods are the same as those listed in the June 30, 2023 GASB report which has a valuation date of June 30, 2022. The 6.75% Investment Rate of Return was provided to us to be used for calculations performed for GASB reporting purposes with a measurement date of June 30, 2022, the same measurement date as the PA 202 calculations.



State Reporting for Fiscal Year 2023 Calculations as of June 30, 2022

The following information has been prepared to provide some of the information necessary to complete the pension reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form 5572). The local unit of government is required to complete/develop all of the remaining reporting requirements necessary for Form 5572. Additional resources are available on the State website.

Line	Descriptive Information	
18	Actuarial Assumptions	
19	Actuarial assumed Rate of Investment Return	6.75%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Other
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any	N/A
22	Is each division within the system closed to new employees? ~	yes
23	Uniform Assumptions[^]	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions ⁺	\$ 1,529,846,295
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions	\$ 2,417,953,326
26	Funded ratio using uniform assumptions	63.3%
27	Actuarially Determined Contribution (ADC) using uniform assumptions	\$ 94,874,725
28	All systems combined ADC/Governmental fund revenues	Auto*

[^] Information on lines 24-28 is based on the Uniform Assumptions used, listed on the prior page, as of the most recent valuation date, June 30, 2022.

⁺ The actuarial value of assets is equal to the market value of assets as of the June 30, 2022.

* Automatically calculated by State of Michigan Form 5572.

~ This Component II plan is closed to new employees. The Component I plan is open to new employees and its PA 202 information is in the Component I GASB Statement No. 68 report.

The General Retirement System of the City of Detroit

Annual Actuarial Valuation of Component II (Legacy)
June 30, 2023





December 22, 2023

Board of Trustees
The General Retirement System of the City of Detroit

**Re: The General Retirement System of the City of Detroit Actuarial Valuation of Component II
as of June 30, 2023**

Dear Board Members:

This report provides key results from the **Annual Actuarial Valuation** of the annuity and pension liabilities of the General Retirement System of the City of Detroit – Component II benefits. The date of the valuation was **June 30, 2023**.

In very general terms, Component II provides benefits for service rendered prior to July 1, 2014. The results provided herein relate solely to the Component II benefits. Benefits provided under Component I are the subject of a separate report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to measure the funding progress and to calculate the fiscal year 2025 Actuarially Determined Employer Contribution (ADEC) of Component II. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different. In particular, the information provided in this report is not suitable for financial reporting in connection with GASB Statement No. 67. Such information is provided in a separate report. Information regarding potential benefit restoration as allowed for in the POA will also be provided in a separate report, at the Board's request.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section D of this report. Users of this report should be aware that contributing these amounts does not guarantee benefit security. This report includes risk metrics but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed. Given the funded level of this plan, plan sponsor contributions are critical if further benefit reductions are to be avoided.

This valuation was based upon records maintained and furnished by the Retirement System staff concerning active members, retirees and beneficiaries, and financial accounts as of the valuation date. Data was checked for year-to-year consistency, but was not audited by the actuary. We are not responsible for the completeness or accuracy of the data. Certain necessary data was not available in time to be considered in this report and, therefore, it was necessary for us to use approximations. Please see related discussion in the Comments section as well as the Data section of this report.

The assumptions used in the valuations concerning future experience are summarized in Section D of this report. Other than the prescribed assumed rate of return, this report reflects the actuarial assumptions as adopted by the Board and the Investment Committee based on the July 1, 2015 to June 30, 2020 experience study. The assumed rate of investment return was set to 6.75% in the POA and is, therefore, a “prescribed assumption set by another party” as discussed in Actuarial Standard of Practice No. 4. We have reviewed this assumption based on the System’s asset allocation and have determined it does not significantly conflict with what, in our professional judgement, would be reasonable for purposes of the measurement being taken. In our judgement, all of the other actuarial assumptions used for the valuation are also reasonable for purposes of the measurement being taken. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Component II Plan of the General Retirement System of the City of Detroit as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.



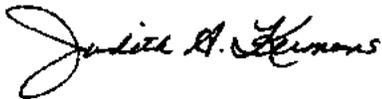
Board of Trustees
The General Retirement System of the City of Detroit
December 22, 2023
Page 3

Jamal Adora, Judith A. Kermans and James R. Sparks are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The actuaries signing the report are independent of the plan sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Jamal Adora, ASA, EA, MAAA



Judith A. Kermans, EA, FCA, MAAA



James R. Sparks, ASA, FCA, MAAA

JA/JAK/JRS:rmn

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SECTION A

VALUATION RESULTS

Executive Summary

(\$ in Millions)

Valuation Date	June 30, 2023	June 30, 2022
Contributions for Fiscal Year Ending	June 30, 2025	June 30, 2024
Employer Contributions		
Actuarially Determined Employer Contribution:	\$ 82.7	\$ 82.4
Membership		
Number of:		
Active Members	1,737	1,850
Retirees and Beneficiaries	10,792	10,918
Inactive, Nonretired Members	2,391	2,633
Total	14,920	15,401
Assets		
Funding Value of Assets (FVA)	\$ 1,501.0	\$ 1,671.6
Market Value of Assets (MVA)	\$ 1,418.6	\$ 1,529.8
Return on Funding Value (net of all expenses)	1.80 %	2.58 %
Return on Market Value (net of all expenses)	6.20 %	(5.77)%
Actuarial Information (MVA)		
Actuarial Accrued Liability (AAL)	\$ 2,327.5	\$ 2,438.6
Unfunded Actuarial Accrued Liability: (AAL) - (MVA)	908.9	908.8
Funded Ratio: (MVA) / (AAL)	60.95 %	62.73 %
Actuarial Information (FVA)		
Actuarial Accrued Liability (AAL)	\$ 2,327.5	\$ 2,438.6
Unfunded Actuarial Accrued Liability: (AAL) - (FVA)	826.5	767.0
Funded Ratio: (FVA) / (AAL)	64.49 %	68.55 %

The Level Principal amortization method is used to systematically eliminate (pay off) the Unfunded Actuarial Accrued Liability (UAAL) over a closed period of 30 years from July 1, 2023 (29 years remaining for the fiscal year ending June 30, 2025 contribution).

Liability by Division

(\$ Thousands)

	General	D.O.T.	DWSD	Library	Totals
Accrued Pension Liabilities					
Retirees and beneficiaries	\$ 970,301	\$ 272,501	\$ 511,372	\$ 48,073	\$ 1,802,247
Inactive members future deferred pensions	101,031	25,186	64,010	5,128	195,355
Active members	<u>90,823</u>	<u>31,676</u>	<u>19,218</u>	<u>12,753</u>	<u>154,470</u>
Total accrued pension liabilities	\$ 1,162,155	\$ 329,363	\$ 594,600	\$ 65,954	\$ 2,152,072
Pension fund balance (MVA)#	<u>668,199</u>	<u>50,946</u>	<u>588,524</u>	<u>74,404</u>	<u>1,382,073</u>
Unfunded accrued pension liabilities	<u>\$ 493,956</u>	<u>\$ 278,417</u>	<u>\$ 6,076</u>	<u>\$ (8,450)</u>	<u>\$ 769,999</u>
Accrued Annuity Liabilities					
Retirees and beneficiaries#	\$ 51,132	\$ 9,514	\$ 28,926	\$ 2,974	\$ 92,546
Members annuities & future refunds	<u>45,551</u>	<u>16,839</u>	<u>13,512</u>	<u>6,983</u>	<u>82,885</u>
Total accrued annuity liabilities	\$ 96,683	\$ 26,353	\$ 42,438	\$ 9,957	\$ 175,431
Annuity fund balances (MVA)	<u>18,394</u>	<u>14,223</u>	<u>(697)</u>	<u>4,617</u>	<u>36,537</u>
Unfunded accrued annuity liabilities#	<u>\$ 78,289</u>	<u>\$ 12,130</u>	<u>\$ 43,135</u>	<u>\$ 5,340</u>	<u>\$ 138,894</u>
Totals - Market Value of Assets (MVA)					
Actuarial Accrued Liabilities#	\$ 1,258,838	\$ 355,716	\$ 637,038	\$ 75,911	\$ 2,327,503
Market Value of Assets#	<u>686,593</u>	<u>65,169</u>	<u>587,827</u>	<u>79,021</u>	<u>1,418,610</u>
Unfunded Actuarial Accrued Liabilities	<u>\$ 572,245</u>	<u>\$ 290,547</u>	<u>\$ 49,211</u>	<u>\$ (3,110)</u>	<u>\$ 908,893</u>
Funded Ratio	54.5%	18.3%	92.3%	104.1%	60.9%
Totals - Funding Value of Assets (FVA)					
Actuarial Accrued Liabilities	\$ 1,258,838	\$ 355,716	\$ 637,038	\$ 75,911	\$ 2,327,503
Funding Value of Assets	<u>726,489</u>	<u>68,955</u>	<u>621,984</u>	<u>83,612</u>	<u>1,501,039</u>
Unfunded Actuarial Accrued Liabilities	<u>\$ 532,349</u>	<u>\$ 286,761</u>	<u>\$ 15,054</u>	<u>\$ (7,701)</u>	<u>\$ 826,464</u>
Funded Ratio	57.7%	19.4%	97.6%	110.1%	64.5%

Totals may be off slightly due to rounding.

The pension fund balance includes a receivable for future claw-back payments. Liabilities are shown gross, before the annuity savings claw-back.



Valuation Results

Actuarially Determined Employer Contributions (ADEC)

	(\$ Millions)				
	General City	D.O.T.	DWSD	Library	System Total
Actuarial Accrued Liability	\$ 1,258.8	\$ 355.7	\$ 637.0	\$ 75.9	\$ 2,327.5
Funding Value of Assets (FVA)	<u>726.5</u>	<u>69.0</u>	<u>622.0</u>	<u>83.6</u>	<u>1,501.0</u>
UAAL ¹ as of June 30, 2023	\$ 532.3	\$ 286.8	\$ 15.1	\$ (7.7)	\$ 826.5
Expected Contribution (EOY) ²	(67.6)	(37.3)	(0.7)	(0.1)	(105.6)
Assumed Expenses ³	1.3	0.3	0.6	0.1	2.3
Interest at 6.75%	<u>36.0</u>	<u>19.4</u>	<u>1.0</u>	<u>(0.5)</u>	<u>55.9</u>
Projected UAAL as of June 30, 2024	<u>\$ 502.1</u>	<u>\$ 269.2</u>	<u>\$ 16.1</u>	<u>\$ (8.2)</u>	<u>\$ 779.1</u>
Actuarially Determined Employer Contribution (ADEC) for FY 2025⁴					
Remaining Amortization Years	29	29	29	29	29
UAAL Contribution	<u>\$ 51.2</u>	<u>\$ 27.5</u>	<u>\$ 1.6</u>	<u>\$ (0.8)</u>	<u>\$ 79.5</u>
\$0 Minimum UAAL Contribution	51.2	27.5	1.6	-	80.3
Administrative Expense Contribution ³	<u>1.3</u>	<u>0.3</u>	<u>0.6</u>	<u>0.1</u>	<u>2.4</u>
Total Contribution	<u>\$ 52.5</u>	<u>\$ 27.8</u>	<u>\$ 2.3</u>	<u>\$ 0.1</u>	<u>\$ 82.7</u>

Totals may not add due to rounding.

¹ Unfunded Actuarial Accrued Liability in accordance with the Funding Policy including the use of the Funding Value of Assets (FVA) shown in Section G.

² Includes one-time grant proceeds of \$15.8 million for General City and \$7.4 million for D.O.T.

³ Administrative expenses were allocated (see Section D of the report) and assumed to be paid by the individual units.

⁴ Total employer contributions, including amounts paid by the employer but funded from other sources as required by POA, if any. Employer contributions are assumed to be made at the end of the fiscal year.

The Level Principal amortization method is used to systematically eliminate (pay off) the Unfunded Actuarial Accrued Liability (UAAL) over a closed period of 30 years from July 1, 2023 (29 years remaining for the fiscal year ending June 30, 2025 contribution).

Valuation Results (Continued)

Actuarially Determined Employer Contributions (ADEC) (Concluded)

Fiscal year 2024 is the first year (post-bankruptcy) the employer is required to make actuarially determined employer contributions in accordance with the plan document. The Fiscal Year 2024 employer contribution was computed in the June 30, 2022 valuation. The June 30, 2023 valuation computes the employer contribution for the 2025 Fiscal Year.

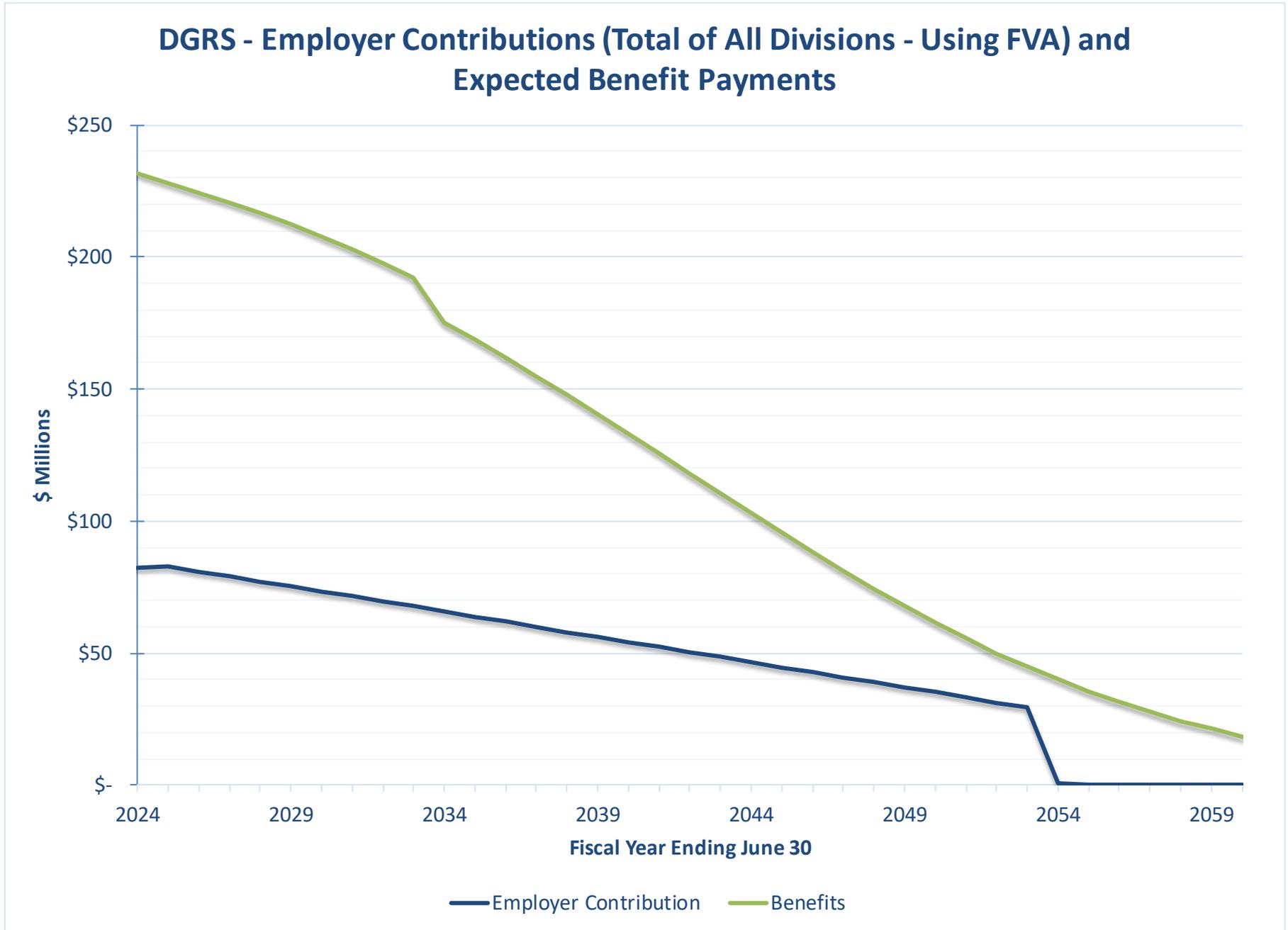
We understand the Employer has set aside some money to contribute to the Pension Plans at some point in the future. This valuation does not reflect any of those assets since they are not being held within the Retirement System trust.

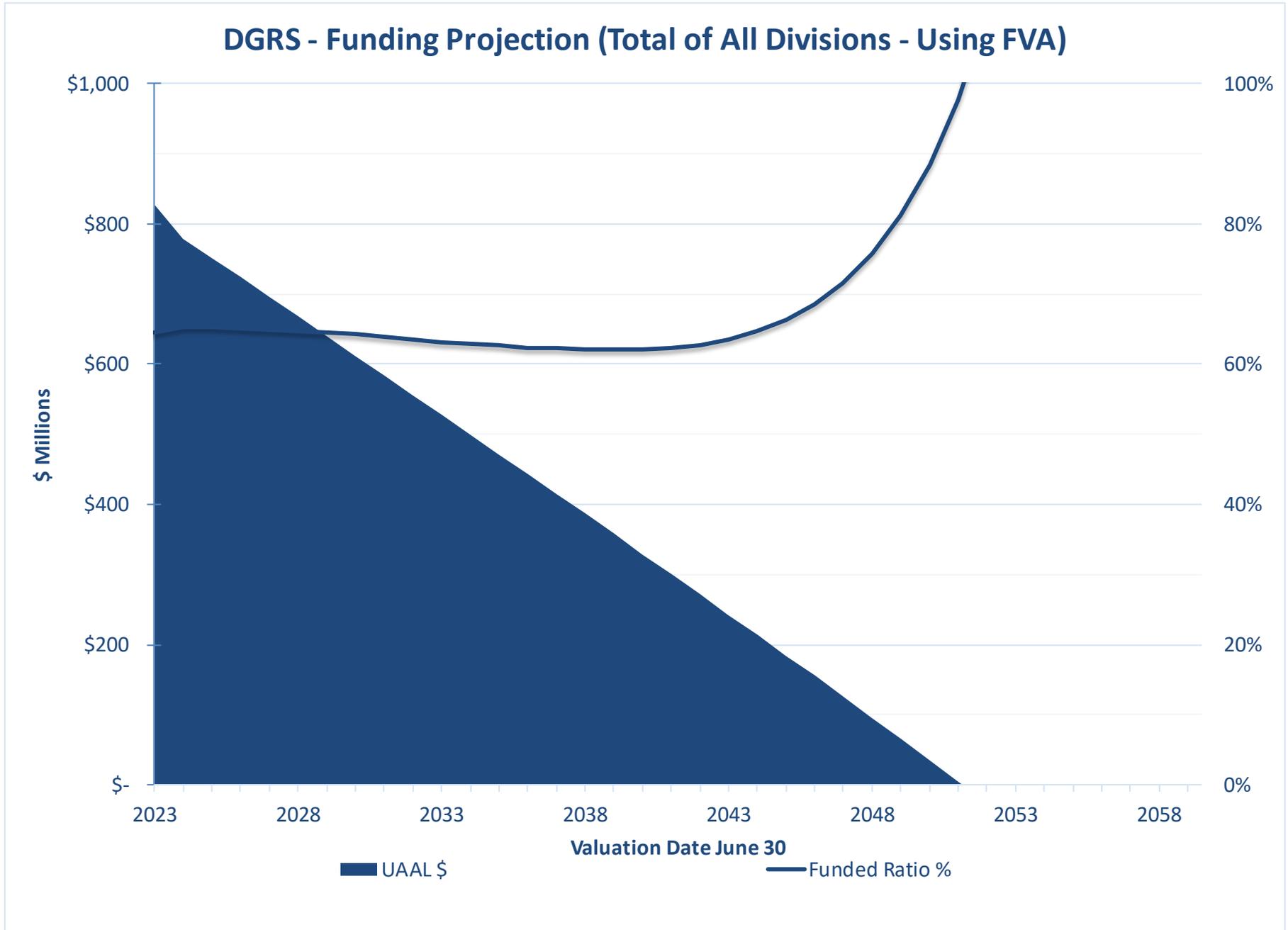
The charts that follow show projections of employer contributions, benefit payments, Unfunded Actuarial Accrued Liabilities (UAAL) and funded ratio under the Board adopted Funding Policy which uses a Funding Value of Assets (FVA). For purposes of these projections, we have assumed that the Funding Value of Assets would have a recognized rate of return of 6.75%.

As shown on the next page, contributions are expected to be significantly less than benefit payments for many years. The assets in the plan are not sufficient to cover current retiree liabilities and the ratio of assets (Market Value) to retiree benefit payroll is 6.2 years. In a closed/frozen mature plan such as this one, it may become difficult to manage the significant amount of cash needed to pay retirement benefits.

The charts on the following pages are based upon the System in aggregate. Individual division results may appear materially different. Specifically:

- The Library group is already more than 100% funded and is projected to have a funded ratio that continues growing, resulting in the total plan being above 100% funded at the end of the amortization period.
- The only contributions for divisions that are more than 100% funded is for administrative expenses (in accordance with the Funding Policy included in the appendix).
- On a Funding Value of Assets basis, the funded ratio for D.O.T. is currently 19% and is expected to decline even further.
- We understand that the City, System and GLWA have a Memorandum of Understanding dated December 1, 2015 for assessing contributions, if any, to GLWA. This report does not reflect that agreement.





Valuation Results (Concluded)

Present Value	June 30, 2023	June 30, 2022
Accrued Pension Liabilities (Employer Financed)		
Retirees and beneficiaries	\$ 1,802,247,467	\$ 1,856,204,265
Inactive members future deferred pensions	195,354,839	212,577,507
Active members	<u>154,470,893</u>	<u>183,430,716</u>
Total accrued pensions	\$ 2,152,073,199	\$ 2,252,212,488
Pension fund balances (MVA)	<u>1,382,072,875</u>	<u>1,475,568,437</u>
Unfunded accrued pension liabilities	<u>\$ 770,000,324</u>	<u>\$ 776,644,051</u>
Accrued Annuity Liabilities (Member Financed)		
Retirees and beneficiaries future annuities	\$ 92,546,717	\$ 94,991,973
Member annuities & future refunds	<u>82,885,035</u>	<u>91,394,995</u>
Total accrued annuity liabilities	\$ 175,431,752	\$ 186,386,968
Annuity fund balances (MVA)	<u>36,536,405</u>	<u>54,277,858</u>
Unfunded accrued annuity liabilities*	<u>\$ 138,895,347</u>	<u>\$ 132,109,110</u>
Totals - Market Value of Assets (MVA)		
Actuarial Accrued Liabilities (AAL)	\$ 2,327,504,951	\$ 2,438,599,456
Market Value of Assets (MVA)	<u>1,418,609,280</u>	<u>1,529,846,295</u>
Unfunded Actuarial Accrued Liabilities (UAAL)	<u>\$ 908,895,671</u>	<u>\$ 908,753,161</u>
Funded Ratio	60.9%	62.7%
Totals - Market Value of Assets (FVA)		
Actuarial Accrued Liabilities (AAL)	\$ 2,327,504,951	\$ 2,438,599,456
Funding Value of Assets (FVA)	<u>1,501,039,291</u>	<u>1,671,628,547</u>
Unfunded Actuarial Accrued Liabilities (UAAL)	<u>\$ 826,465,660</u>	<u>\$ 766,970,909</u>
Funded Ratio	64.5%	68.5%

* Liabilities are gross before accounting for ASF claw-back. We understand that assets currently include a receivable related to the ASF claw-back. We believe the receivable is included in the pension fund balances.

Historical Results (\$ Millions)							
	2021	2020	2019	2018	2017	2016	2015
Total AAL	\$ 2,542.6	\$ 2,716.5	\$ 2,866.1	\$ 2,929.1	\$ 2,995.8	\$ 3,032.3	\$ 3,139.1
MVA	<u>1,818.6</u>	<u>1,596.1</u>	<u>1,798.9</u>	<u>1,940.6</u>	<u>1,966.7</u>	<u>1,933.5</u>	<u>2,131.3</u>
UAAL	<u>\$ 724.0</u>	<u>\$ 1,120.4</u>	<u>\$ 1,067.2</u>	<u>\$ 988.4</u>	<u>\$ 1,029.1</u>	<u>\$ 1,098.8</u>	<u>\$ 1,007.8</u>
POA Funded Ratio	71.5%	58.8%	62.8%	66.3%	65.6%	63.8%	67.9%



Comments

Component II History

The City of Detroit filed for bankruptcy on July 18, 2013. A final Plan of Adjustment (“POA”) was confirmed on November 7, 2014 and the official exit from bankruptcy was on December 10, 2014. In connection with the POA, very significant changes were made to the benefits that the General Retirement System provides and to the contributions that it will receive. In particular, the benefits provided by the Retirement System were divided into two separate plans, referred to as “Component I” and “Component II.” The benefits provided in each component were effective July 1, 2014 and are described in detail in the Emergency Manager Order No. 44, dated December 8, 2014.

Experience

Experience was less favorable than assumed during the year ending June 30, 2023. The chart below shows the estimated loss by division.

Development of Actuarial Gain or Loss

	(\$ Millions)				
	General		System		
	City	D.O.T.	DWSD	Library	Total
(1) UAAL as of June 30, 2022 (BOY)	\$ 469.2	\$ 274.0	\$ 30.7	\$ (7.0)	\$ 767.0
(2) Actual POA Contribution (EOY)	2.8	0.1	42.9	2.5	48.3
(3) Actual Administrative Expenses	2.4	0.2	-	0.1	2.7
(4) Interest at 6.75%	31.8	18.5	2.1	(0.5)	51.9
(5) Benefit Changes	-	-	-	-	-
(6) Assumption Changes	-	-	-	-	-
(7) Projected UAAL* as of June 30, 2023	\$ 500.6	\$ 292.5	\$ (10.1)	\$ (9.8)	\$ 773.2
(8) Actual UAAL* as of June 30, 2023	532.3	286.8	15.1	(7.7)	826.5
Gain or (Loss) (FVA): (7) - (8)	<u>\$ (31.8)</u>	<u>\$ 5.8</u>	<u>\$ (25.1)</u>	<u>\$ (2.1)</u>	<u>\$ (53.2)</u>
Gain or (Loss) from Excess Interest Transfers	\$ 4.1	\$ 3.7	\$ (2.3)	\$ 1.0	\$ 6.4
Gain or (Loss) from Liabilities	4.5	7.1	4.4	1.0	17.0
Gain or (Loss) from Investments (FVA)	<u>(40.4)</u>	<u>(5.0)</u>	<u>(27.2)</u>	<u>(4.0)</u>	<u>(76.7)</u>
Total Gain or (Loss) (FVA)	<u>\$ (31.8)</u>	<u>\$ 5.8</u>	<u>\$ (25.1)</u>	<u>\$ (2.1)</u>	<u>\$ (53.2)</u>

* *Unfunded actuarial accrued liability.*

Comments (Continued)

Experience (Continued)

Source of Actuarial Gain or Loss

Type of Risk Area	Gain (Loss) in Period	
	Totals (\$ in Millions)	Percent of AAL [^]
Risks Related to Experience		
Economic Risk Areas:		
Investment Return (FVA)	\$ (76.7)	(3.1)%
Demographic Risk Areas:		
Active Experience	3.1	0.1 %
Post-Retirement Mortality	5.5	0.2 %
Total Gain or (Loss) Related to Experience	\$ (68.1)	(2.8)%
Data Improvements	8.5	0.3 %
Excess Interest Transfers	6.4	0.3 %
Total Gain or (Loss) During Period (FVA)	\$ (53.2)	(2.2)%

[^] Beginning of year Actuarial Accrued Liabilities were \$2,438.6 million.

Demographic Experience

	Number Count		A/E%
	Actual	Expected	
	A	E	
Post-Retirement Mortality	450	458	98%

Expected counts are based on the assumptions used in the prior valuation.

Comments (Continued)

Actuarial Assumptions

We understand that the Board may continue to explore changes in the assumed rate of return. However, per legal counsel, we also understand that for the annual actuarial valuation the 6.75% assumed rate of return cannot be changed until the June 30, 2024 valuation, including for purposes of calculating the actuarially determined contribution. We recommend the Board review the investment return assumption prior to the June 30, 2024 valuation.

We anticipate the next comprehensive review of experience to cover the period from July 1, 2020 to June 30, 2025.

Annuity Reserve Fund (ARF)

Typically, we would compare the Annuity Reserve Fund (ARF) to the ARF liabilities and recommend a transfer if liabilities exceed assets. However, the annuity claw-back receivable created by the Bankruptcy (which relates to the ARF and the ASF) makes this analysis much more complicated. If the System would like us to perform this calculation, we will need additional information not routinely provided for the valuation. Please let us know if this is needed.

In general, assets were reviewed for reasonableness. During that review, we discovered that the ARF does not appear to have been credited with any interest. As a result, we recommend that all the reserve amounts be reviewed.

Annuity Savings Fund (ASF) Claw-Back Data

For the June 30, 2015 valuation, the System's auditors determined a receivable in accordance with GAAP accounting that was included in the reported June 30, 2015 assets. The reported assets for the June 30, 2023 status valuation also included a receivable for the remaining claw-back payments. We have assumed this information, received by the System's auditors, was reasonable. This assumption complies with the Actuarial Standards of Practice.

Comments (Continued)

Option Factors

The Board adopted option factors for the Plan in 2018. We have assumed the new factors apply to all retirements after the date of this valuation. We will continue to work with the System in the calculation of optional forms of payment. In particular, the Board may want to consider updating the assumptions used in optional forms of payment in order to recognize recent changes to the assumptions used in the annual actuarial valuations.

New Data System

We understand that the Retirement System is in the process of moving to a new data system. We also understand that data may have gone through additional cleaning/auditing as it has been entered into the new system. We anticipate that data will be more precise for valuation purposes once the new system is providing that data. Please note that changes in data may impact future valuation results and generate gains or losses.

Restoration

This valuation assumes no future restoration of Component II benefits.

DWSD (Water/Sewer) Contributions

The DWSD contributions and liabilities determined in this report do not consider the separation of DWSD-R and GLWA from the DWSD. For the employer contributions in this report, we have assumed that contributions would be assessed to the City based on the total unfunded liability for DWSD and without regard to any contribution agreement with GLWA. Our understanding is that the split of DWSD liabilities between DWSD-R and GLWA will be determined by the System's staff under previously established procedures.

We recommend that the proposed administrative expense contribution for DWSD be reviewed in the context of the 2015 agreement between the City, the Retirement System, and the Great Lakes Water Authority. We further recommend that the Retirement System inform us of how the administrative expense contribution for DWSD should be treated.

We understand that the City, System and GLWA have a Memorandum of Understanding dated December 1, 2015 for assessing contributions, if any, to GLWA. This report does not reflect that agreement.

Comments (Concluded)

Divisional Results

Divisional results are shown on page 2. One result that stands out is the funded status (market value basis) of the DOT division at 18%. This is much lower than the other divisions. We expect that all of the assets in the Retirement System back all of the liabilities in the Retirement System. Therefore, if this division runs out of money before all of its benefits are paid, the Retirement System will pay DOT benefits from other divisional assets. In that case, the total Retirement System funded status is a better measure than individual division funded ratios. However, the Funding Policy states that divisions “shall not be permitted to have a funded status below 0% and contributions shall be accelerated as appropriate.” This low funded status for the DOT (relative to the other divisions) could result in a higher DOT employer contribution (relative to the other divisions). Consistent with the Funding Policy, the Board may want to consider more aggressive funding for the DOT division. Please let us know if the Board would like us to do any special projects related to this situation, such as divisional cash flow projections or divisional funding policy suggestions.

Funded Status of the Plan

The Retirement System was defunded because the POA mandated contributions were significantly less than what the actuarially computed contribution would have been for the 10-year period after the POA was established. We would be happy to assist the Board in determining what the funded status would be if actuarially determined contributions had been made in the 10-year period after the POA was established.

Recommendation

In order to minimize the risk of insolvency, it is important that employer contributions in an amount greater than or equal to the actuarially determined amount (in accordance with the Funding Policy) are received.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Plan Risk Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk.

In our discussions with the Board and Investment Committee, we illustrated various investment return scenarios as part of the funding policy analysis. This type of analysis may also be considered a quantitative risk assessment. We recommend that the Board consider similar periodic analysis as appropriate under the Risk Controls of the newly approved funding policy.

The Board approved funding policy calls for illustrating the table of risk measures shown below. Please see the funding policy for additional information. In the table below, the acronyms are as follows: FVA = Funding Value of Assets; MVA = Market Value of Assets; AAL = Actuarial Accrued liability; UAAL = Unfunded Actuarial Accrued Liability.

Funded Ratio

The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

Rate of Return, Geometric Average, and Standard Deviation

Investment return is probably the largest single risk that most systems face. The year-by-year return and the geometric average give an indicator of the realism of the System's assumed return.

Duration of the Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Ratio of Unfunded Actuarial Accrued Liability to Payroll

The ratio of unfunded liability to payroll gives an indication of the plan's sensitivity to differences between assumed and actual experience related to the employer contributions. A value above approximately 300% or 400% may indicate high volatility relative to small gains and losses.

Ratio Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Non-Investment Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, and stress tests. We can provide additional risk assessments at the Board's request.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

	2023	2022
(i) Classic measures		
– Funded ratio		
MVA	60.9%	62.7%
FVA	64.5%	68.5%
– UAAL amortization period	29	30
– Portfolio rate of return		
MVA	6.20%	-5.77%
FVA	1.80%	2.58%
– Geometric average portfolio rate of return ¹		
5-year		
MVA	0.04%	-5.77%
FVA	2.19%	2.58%
10-year		
MVA	0.04%	-5.77%
FVA	2.19%	2.58%
– Standard deviation of return ¹		
5-year		
MVA	8.46%	0.00%
FVA	0.55%	0.00%
10-year		
MVA	8.46%	0.00%
FVA	0.55%	0.00%
(ii) Duration of the Actuarial Accrued Liability	7.9	8.1
(iii) Total UAAL / Covered Payroll ²		
MVA	2.8	3.2
FVA	2.6	2.7
(iv) Total Assets / Covered Payroll ²		
MVA	4.4	5.4
FVA	4.6	5.9
(v) Total AAL / Covered Payroll ²	7.2	8.6
(vi) Non-Investment Cash flow / Beginning of year MVA	-13.0%	-10.5%
(vii) MVA / Benefit Payments	6.2	6.5
(viii) Solvency Liability (\$ millions) ³	\$ 2,964.0	\$ 3,184.5
 Covered Payroll ²	 323,157,716	 284,435,666

¹ These are developed prospectively from 2022 and consequently do not yet reflect full 5 or 10 years of experience.

² Payroll for this purpose is Component I payroll.

³ See discussion on next page.



Low-Default Risk Obligation Measure (Solvency Liability)

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDRM). The rationale that the ASB cited for the calculation and disclosure of the LDRM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure **is not intended to suggest that this is the “right” liability** measure for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

Comparing the Accrued Liabilities and the LDRM

One of the fundamental financial objectives of the System is to finance each member’s retirement benefits. To fulfill this objective, the discount rate that is used to value the accrued liabilities is set equal to the **expected return** on the System’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the System, the investment return assumption is 6.75%.

The LDRM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDRM is very dependent upon market interest rates at the time of the LDRM measurement. The lower the market interest rates, the higher the LDRM, and vice versa. The LDRM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the June 2023 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.29%, 3.99%, 3.61% and 3.84%. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

Presented below are the actuarial accrued liability and the LDRM (Solvency Liability) as of June 30, 2023.

<u>Type of Liability</u>	<u>Valuation AAL</u>	<u>LDRM</u>
Defined Benefit	\$ 2,244,619,916	\$ 2,881,077,912
ASF	82,885,035	82,885,035
Total	<u>\$ 2,327,504,951</u>	<u>\$ 2,963,962,947</u>

The difference between the two measures (Valuation and Solvency) is one illustration of the savings the sponsor anticipates by taking on the risk in a diversified portfolio.



Low-Default Risk Obligation Measure (Solvency Liability)

Commentary Regarding the LDROM

Some ways in which the LDROM can assist the Board of Trustees in a decision-making process include:

- (1) It provides information to potentially allow for better risk management for the System;
- (2) It places the appropriateness of potential employer contribution rate reductions or benefit enhancements in a better context; and
- (3) It provides more complete information regarding the benefit security of the membership's benefits earned as of the measurement date.

Potentially Allows for Better Risk Management: A very useful risk metric to exhibit potential contribution rate volatility (or amortization period volatility for fixed rate plans) is the ratio of assets to payroll or AAL to payroll. How could we reduce that potential contribution rate volatility (or amortization period volatility for fixed rate plans)? The LDROM and liability driven investing (LDI) are closely related concepts.

Other than reducing benefits, all other things being equal, the only way to reduce that volatility is to immunize (i.e., LDI) a portion of the System's liability. This does not mean that the System needs to immunize all of the liability. For example, if they could immunize half of it, they could reduce the contribution rate volatility in half. This would require the actuary to use a cash flow matching method to value that portion of the liabilities. This means that the actuary would not use the System's investment return assumption for this portion of the liability, but the yield curve resulting from the fixed income portfolio that is being used to immunize the liability. The value of the assets (i.e., fixed income portfolio) and the value of the immunized liability would move in tandem with any changes (up or down) in future interest rates. The result being that the immunized portion of the System's liability would reduce the potential of producing new unfunded actuarial accrued liabilities. However, the fixed income portfolio would still have the minor potential for credit default risk.

Places the Appropriateness of Potential Employer Contribution Rate Reductions or Benefit Enhancements in a Better Context: Many PERS have adopted a funding policy. Many funding policies already take into account the System's funded ratio (based upon the AAL) when considering whether to allow for benefit enhancements or contribution rate reductions. For example, a System may not allow for a benefit enhancement if the funded ratio does not exceed a certain threshold. Similarly, a System may not allow for an employer contribution rate reduction in some circumstances. For example, a reduction to the employer normal cost contribution may not be allowed until the System reaches a funded ratio of 120%. Given the fact that most criteria are based upon the expectation of earning the investment return assumption, a System may want to consider extending these criteria to a funded ratio based upon the LDROM in addition to the AAL.

Provides more Complete Information Regarding the Benefit Security of the Membership's Benefits Earned as of the Measurement Date: Too often a high funded ratio (i.e., 100% funded) on an AAL basis is interpreted as benefit security for the participants. The fact that this funded ratio is based upon an expected measure is many times overlooked. If the AAL and LDROM measures are relatively close, then the System at least has the opportunity to make benefits payable in the future more secure.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.75% on the funding value of assets), it is expected that:

- 1) The unfunded actuarial accrued liabilities will be fully amortized 30 years after June 30, 2023.
- 2) The funded status and unfunded accrued liability will follow the pattern shown on page 6.

We have assessed that the Actuarially Determined Employer Contribution (ADEC) in this report is reasonable.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the funding value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- 1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- 2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future administrative expense contributions.
- 3) The measurement would produce a different result if the market value of assets were used instead of the funding value of assets, unless the market value of assets is used in the measurement.

Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

Risks to Future Employer Contribution Requirements

There are ongoing risks to future employer contribution requirements to which the Retirement System is exposed, such as:

- Actual and Assumed Investment Rate of Return;
- Actual and Assumed Mortality Rates; and
- Amortization Policy.

Scenario Testing/Sensitivity Testing

If the Board would like to see additional projections, we would be happy to perform such projections.



SECTION B

FUND ASSETS

Statement of Plan Assets (Reported Assets at Market Value)

Market Value - June 30, 2023	
Cash and Cash Equivalents	\$ (39,120,673)
Investments at Fair Value	1,360,960,461
Receivables	99,393,340
Cash and Investments held as collateral for securities lending	41,621,048
Capital Assets - Net	4,042,692
Accounts Payable	<u>(48,287,588)</u>
Total Current Assets	<u><u>\$ 1,418,609,280</u></u>

Market Value of Assets

Reserve Accounts

Funds	Fund Balances	
	June 30, 2023	June 30, 2022
Annuity Savings	\$ 82,885,035	\$ 91,394,995
Annuity Reserve	(46,348,630)	(37,117,137)
Pension Accumulation	(266,432,063)	(227,582,083)
Pension Reserve	1,648,504,938	1,703,150,520
Total Fund Balances	<u>\$ 1,418,609,280</u>	<u>\$ 1,529,846,295</u>

Revenues and Expenditures

	Pension Funds	Annuity Funds	Total Funds
Balance, July 1, 2022	\$ 1,475,568,437	\$ 54,277,858	\$ 1,529,846,295
Prior valuation audit adjustment	-	-	-
Market Value July 1, 2022	<u>\$ 1,475,568,437</u>	<u>\$ 54,277,858</u>	<u>\$ 1,529,846,295</u>
Revenues			
Employer Contributions	\$ 47,900,000	\$ -	\$ 47,900,000
Employee Contributions	-	-	-
Foundation Contributions	375,000	-	375,000
ASF Recoupment Interest	5,509,059	-	5,509,059
Investment Income (Net of Investment Expenses)	77,581,296	3,477,243	81,058,539
Other Income	2,490,401	(478,843)	2,011,558
Total	<u>\$ 133,855,756</u>	<u>\$ 2,998,400</u>	<u>\$ 136,854,156</u>
Expenditures			
Benefit Payments	\$ 207,699,062	\$ 9,870,455	\$ 217,569,517
Refund of Member Contributions	-	10,869,398	10,869,398
ASF Recoupment Write Off	1,379,090	-	1,379,090
Transfer to Component I (Transition Cost)	15,592,259	-	15,592,259
Administrative Expenses	2,680,907	-	2,680,907
Total	<u>\$ 227,351,318</u>	<u>\$ 20,739,853</u>	<u>\$ 248,091,171</u>
Market Value June 30, 2023	<u>\$ 1,382,072,875</u>	<u>\$ 36,536,405</u>	<u>\$ 1,418,609,280</u>
Market Value Rate of Return (Net of all expenses)	6.18%	6.83%	6.20%
Net Cash Flow as Percent of Assets	(12.04)%	(38.21)%	(12.97)%

Rates of return are dollar-weighted estimates assuming contributions occur at the end of the year and remaining items are mid-year cash flows. "ASF Recoupment Interest" and "Other" items are treated as investment cash flows.

Note that interest credits to the ASF (and other reserves) are determined by Plan provisions and Board policy (including any timing issues) as calculated by the Retirement System's staff.



Allocation of Assets Used for Valuation by Reserve Account and Division

	June 30, 2022	Adjustments	Contributions	Benefit Payments	Admin. Expenses	Investment and Other	June 30, 2023
Annuity Savings Fund							
General	\$ 49,966,339	\$ -	\$ -	\$ (5,796,777)	\$ -	\$ 1,381,733	\$ 45,551,295
D.O.T.	19,126,804	-	-	(3,040,273)	-	751,973	16,838,504
DWSD	14,936,834	-	-	(1,289,001)	-	(135,788)	13,512,045
Library	7,365,018	-	-	(743,347)	-	361,520	6,983,191
Totals	<u>\$ 91,394,995</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (10,869,398)</u>	<u>\$ -</u>	<u>\$ 2,359,438</u>	<u>\$ 82,885,035</u>
Annuity Reserve Fund							
General	\$ (21,914,891)	\$ -	\$ -	\$ (5,537,646)	\$ -	\$ 295,681	\$ (27,156,856)
D.O.T.	(1,732,899)	-	-	(883,081)	-	-	(2,615,980)
DWSD	(11,476,975)	-	-	(3,075,649)	-	343,281	(14,209,343)
Library	(1,992,372)	-	-	(374,079)	-	-	(2,366,451)
Totals	<u>\$ (37,117,137)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (9,870,455)</u>	<u>\$ -</u>	<u>\$ 638,962</u>	<u>\$ (46,348,630)</u>
Pension Accumulation Fund							
General	\$ (165,205,376)	\$ (83,488,281)	\$ 2,765,012	\$ -	\$ (2,375,122)	\$ 34,697,153	\$ (213,606,614)
D.O.T.	(177,494,430)	(25,893,938)	109,988	-	(165,107)	3,997,764	(199,445,723)
DWSD	84,086,095	(38,161,078)	42,900,000	-	-	26,613,896	115,438,913
Library	31,031,628	(5,510,183)	2,500,000	-	(140,678)	3,300,594	31,181,361
Totals	<u>\$ (227,582,083)</u>	<u>\$ (153,053,480)</u>	<u>\$ 48,275,000</u>	<u>\$ -</u>	<u>\$ (2,680,907)</u>	<u>\$ 68,609,407</u>	<u>\$ (266,432,063)</u>
Pension Reserve Fund							
General	\$ 913,597,719	\$ 83,488,281	\$ -	\$ (115,280,208)	\$ -	\$ -	\$ 881,805,792
D.O.T.	254,318,062	25,893,938	-	(29,820,549)	-	-	250,391,451
DWSD	491,361,922	38,161,078	-	(56,437,474)	-	-	473,085,526
Library	43,872,817	5,510,183	-	(6,160,831)	-	-	43,222,169
Totals	<u>\$ 1,703,150,520</u>	<u>\$ 153,053,480</u>	<u>\$ -</u>	<u>\$ (207,699,062)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,648,504,938</u>
Retirement System Totals	<u>\$ 1,529,846,295</u>	<u>\$ -</u>	<u>\$ 48,275,000</u>	<u>\$ (228,438,915)</u>	<u>\$ (2,680,907)</u>	<u>\$ 71,607,807</u>	<u>\$ 1,418,609,280</u>



Funding Value of Assets

	2021	2022	2023	2024	2025
A. Funding Value Beginning of Year	\$ 1,596,101,989	\$ 1,818,649,298	\$ 1,671,628,547		
B. Market Value End of Year	1,818,649,298	1,529,846,295	1,418,609,280		
C. Market Value Beginning of Year	1,596,101,989	1,818,649,298	1,529,846,295		
D. Contributions During Year:					
D1. City Contributions (End of Year)	48,275,000	48,275,000	48,275,000		
D2. Member Contributions	0	0	0		
D3. Total	<u>48,275,000</u>	<u>48,275,000</u>	<u>48,275,000</u>		
E. Disbursements:					
E1. Benefits Paid During Year	225,790,173	222,756,595	217,569,517		
E2. Refunds	11,333,604	13,796,354	10,869,398		
E3. Transfers	0	0	15,592,259		
E4. Administrative Expenses*	N/A	2,541,080	2,680,907		
E5. Total	<u>237,123,777</u>	<u>239,094,029</u>	<u>246,712,081</u>		
F. Investment Income:					
F1. Average Funding Value	1,477,540,101	1,699,102,284	1,548,272,507		
F2. Assumed Rate	6.75%	6.75%	6.75%		
F3. Amount for Immediate Recognition: F1 X F2		114,689,404	104,508,394		
F4. Market Total: B - C - D3 + E5	<u>411,396,086</u>	<u>(97,983,974)</u>	<u>87,200,066</u>		
F5. Amount for Phased-In Recognition: F4-F3		<u>(212,673,378)</u>	<u>(17,308,328)</u>		
G. Phased-In Recognition of Investment Income:					
G1. Current Year: F5/3		(70,891,126)	(5,769,443)		
G2. 1st Prior Year		0	(70,891,126)	\$ (5,769,443)	
G3. 2nd Prior Year		0	0	(70,891,126)	\$ (5,769,442)
G4. Total Recognized Investment Gain		<u>(70,891,126)</u>	<u>(76,660,569)</u>	<u>(76,660,569)</u>	<u>(5,769,442)</u>
H. Total Interest Distributed - Current Year: F3 + G4	411,396,086	43,798,278	27,847,825		
I. Funding Value End of Year:					
I1. Preliminary Funding Value End of Year: A + D - E + H		1,671,628,547	1,501,039,291		
I2. Upper Corridor Limit 115% x B		1,759,323,239	1,631,400,672		
I3. Lower Corridor Limit 85% x B		<u>1,300,369,351</u>	<u>1,205,817,888</u>		
I4. Funding Value End of Year	<u>\$ 1,818,649,298</u>	<u>\$ 1,671,628,547</u>	<u>\$ 1,501,039,291</u>		
J. Difference Between Market & Funding Value: B - I4	1,818,649,298	(141,782,252)	(82,430,011)		
K. Recognized Rate of Return: H / F1	27.84%	2.58%	1.80%		
L. Market Rate of Return: F4 / (F1 + C - A)	27.84%	(5.77)%	6.20%		
M. Ratio of Funding Value to Market Value: I4 / B	100.00%	109.27%	105.81%		

**Prior to the 2022 fiscal year, the investment return was net of administrative expenses.*

The Funding Value of Assets recognizes assumed investment income (line F3) fully each year. Differences between actual and assumed investment income (line F5) are phased-in over a closed 3-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value.

SECTION C

PARTICIPANT DATA

Reconciliation of Raw Data

Active Members

A) Count reported in Legacy file	1,908
B) In Legacy file but not in Hybrid file	(160)
C) Hired after plan closed	-
D) Non-active Status	(4)
E) Agency "88"	-
F) Non-eligible class code & bargaining unit	-
G) No hire date in Hybrid file	-
H) Zero salary in Hybrid file	<u>(7)</u>
I) Number of records to value	1,737

Inactive Vested Members

A) Number of records reported on data file	2,472
B) In Legacy active file but not otherwise in database and not in Hybrid active file	15
C) Valued as inactive in prior year and would not have otherwise been valued in Legacy this year	48
D) Valued as a vested active member in prior year but not in this year's active file and would not have otherwise been valued in Legacy this year	43
E) Deceased	-
F) Less than 8 years of vesting service	<u>(187)</u>
G) Number of records to value	2,391

Retired Members and Beneficiaries

A) Number of records reported on data file	46,487
B) Number of records in P/F plan	(17,339)
C) Records not currently in receipt of benefits based on reported status codes	(17,673)
D) Component I (Hybrid) Records	<u>(683)</u>
E) Number of records valued	10,792

Notes:

Active Row B: Are records that appeared in the Legacy active file but did not appear in the Hybrid active file. It was assumed that these members were no longer active in the General plan.

Active Row D: The Active data file contains a field titled "Stat." Active members were only valued if the record for this field had a value of "1."

Active Row E: Agency "88" is the 36th District Court. We understand that members in that agency are not eligible to receive benefits.

Active Row F: We have received a separate list of Class Codes and Bargaining Units that are not eligible to receive benefits.

Inactive Vested Row B: See the note for Row B of the active member reconciliation (these records are a subset of Active row B).

Inactive Vested Row C: Only includes records that appear in the raw database last year.

Retired Row C: The Retired Life file has a field named "STATUS." We understand that if this field is not blank or equal to zero, the member is no longer receiving a benefit and should not be valued.



Reconciliation of Year-to-Year Data as of June 30, 2023

	Active	Term. Vested	Retirees		Totals
	Count	Count	Count	Annual Benefits	Count
2022	1,850	2,633	10,918	\$ 207,143,779	15,401
Change in Pay/Pensions	N/A	N/A	N/A	(641,097)	
Rehired (Not Vested)	48				48
Rehired (Vested)	47	(46)	(1)	(4,569)	-
New Beneficiary			88	1,121,973	88
Retired	(94)	(106)	234	3,512,814	34
Non-Duty Disabled			-	-	-
Duty Disabled			-	-	-
Assumed Death/Removals		(162)	(450)	(7,591,115)	(612)
Vested Term	(68)	68			-
Non-Vested Terminated	(46)				(46)
Data Adjustment	-	4	3	190,135	7
2023	1,737	2,391	10,792	\$ 203,731,919	14,920

Notable Data Changes:

34 new retirees came from nowhere. We believe some of these are a result of new EDRO's.

162 Terminated Vested members were valued last year but will not be valued this year. We have assumed these members died or refunded and forfeited their defined benefit.

The data adjustments relate to records where we could not specifically identify the activity during the year. This could be the result of duplicate Social Security numbers or corrected Social Security numbers.

Data Approximations and Assumptions

As part of our review of the data received from the System, we discussed questionable or missing data with System staff and developed approximations and assumptions in order to perform the valuation. We provided System staff with a letter dated December 13, 2023 with additional information regarding data reconciliation, processing instructions, and assumptions regarding unresolved issues. Note, that letter disclosed our remaining data processing procedures and assumptions and details our reconciliation and final valuation data.

The purpose of this section in this report is to summarize any unresolved concerns about questionable data that are relevant and could have a significant effect on the valuation as disclosed in that letter. This summary also discusses any significant steps we have taken to improve the data due to identifying questionable data values or relationships, significant judgments, or assumptions we have applied to the data.

Active

For active members, frozen AFC amounts and frozen service as of June 30, 2014 was reported. For purposes of this valuation, we matched the June 30, 2023 actives to the active data reported for the June 30, 2014 valuation to check against AFC as of June 30, 2014. In cases where the frozen AFC as reported in the 2023 data file was less than 75% of the AFC as reported on the 2014 data file, the AFC as reported on the 2014 data file was used. This boundary was determined after an analysis of the raw AFC data showed that the AFC for several members was unreasonably low. In cases where AFC was reported in to be \$0 in both the current data file and the 2014 data file, the current salary was used in place of the AFC.

We received a separate file indicating the June 30, 2014 DWSD status of members. Any members that were indicated as being DWSD division members on that file were valued under the DWSD for this valuation, regardless of the division reported on this year's valuation data.

Data Approximations and Assumptions

Deferred Vested

Data provided for deferred vested members was incomplete. As part of the processing of deferred member data, in cases where AFC was incomplete, we used \$30,000 to estimate the AFC. Component II benefit service is not directly provided on the file. The Component II (Legacy) file includes total vesting service and the Component I (Hybrid) file includes Component I benefit service. Since Component II benefit service was frozen as of June 30, 2014 for members that terminated after June 30, 2014, Component II (Legacy) benefit service was determined by subtracting service in the Component I (Hybrid) inactive file from total vesting service in the corresponding Component II (Legacy) inactive file. Members with vesting service of less than 8 years were assumed to be non-vested and were not valued. We estimated the commencement date with the following rules:

- Age 55 if 30 or more years of service and hired before July 1986;
- Age 60 if less than 30 years of service, but more than 10 years of service and hired before 1986; and
- Age 62 for all others.

The entire amount of the deferred benefit was assumed to commence at the same time regardless of the date of hire.

Retired and Beneficiary

It is our understanding that the current pension amount provided in the retiree data includes the 4.5% reduction as mandated in the POA. However, for members that retired prior to July 1, 2015, the other pension amounts provided in the data (original pension amount, equated pension amount, and prior year's pension amount) did not reflect the 4.5% reduction and, as such, were reduced by 4.5% when valuing any related liability. Other adjustments/assumptions include:

- In cases where the benefit is identified to be a joint and survivor benefit and a beneficiary is not listed in the data, it was assumed that male spouses were 3 years older than females;
- Benefits for dependent children are assumed to cease at age 21; and
- For non-converted disabled members, converted benefits are:
 - assumed to commence at age 60; and
 - estimated, based on reported service and projected service from the date of disability to age 60.

Summary of Member Data June 30, 2023

Active Members

	General	D.O.T.	DWSD	Library	Totals [^]
Number	1,070	279	242	146	1,737
% Change in active members	(5.6)%	(8.5)%	(4.0)%	(8.2)%	(6.1)%
Average reported 2014 AFC [^]	\$48,574	\$56,054	\$46,686	\$43,581	\$49,093
Average age	55.9	56.2	55.8	56.8	56.0
Average benefit service	14.3	15.4	14.4	16.5	14.7
Average eligibility service*	22.1	23.5	22.6	23.8	22.6

* Hybrid service plus Legacy service.

[^] In cases where the 2014 AFC reported on the current file was less than 75% of the 2014 AFC as reported in 2014, the 2014 AFC as reported in 2014 was used.

Retired Members and Survivor Beneficiaries

	General	D.O.T.	DWSD	Library	Totals
Number	6,278	1,559	2,634	321	10,792
Annual benefits (\$ millions) #	\$ 118.6	\$ 30.0	\$ 58.5	\$ 6.4	\$ 213.5
Average benefits #	\$18,897	\$19,251	\$22,214	\$19,872	\$19,787
% Change in reported average benefit	(0.3)%	(0.1)%	(1.0)%	(0.9)%	(0.5)%

Includes annuities. Does not include reductions resulting from the annuity claw-backs.

Inactive Vested Members

	General	D.O.T.	DWSD	Library	Totals
Number	1,279	311	705	96	2,391
Average AFC*	\$39,576	\$44,450	\$49,048	\$32,689	\$42,726
Average years of service [^]	15.2	14.7	15.2	13.8	15.0
Annual benefits (\$ millions)	\$ 12.4	\$ 3.2	\$ 8.5	\$ 0.7	\$ 24.9
Average benefits	\$9,713	\$10,424	\$12,093	\$ 7,475	\$10,417
% Change in average years of service	(0.0)%	1.2 %	1.2 %	5.7 %	0.7 %
% Change in average AFC	(0.4)%	(0.6)%	(0.5)%	(2.5)%	(0.4)%

[^] Service provided in the data file is vesting service. Since benefit service was frozen as of June 30, 2014 for members that terminated after June 30, 2014, benefit service was determined by subtracting service in the Hybrid inactive file from service in the Legacy inactive file with service.

* If the AFC was not provided, \$30,000 was used for the AFC.



Active Members as of June 30, 2023 by Attained Age and Years of Service Retirement System Totals

Attained Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20	0							0
20-24	0	0						0
25-29	0	0	0					0
30-34	0	11	2	1				14
35-39	1	18	15	11	0			45
40-44	2	9	27	28	24	0		90
45-49	1	25	28	46	68	23	0	191
50-54	2	26	30	50	126	95	17	346
55-59	2	19	32	49	123	145	74	444
60-64	1	24	35	38	75	83	139	395
65-69	0	12	15	17	26	30	53	153
70-74	1	6	7	6	6	8	9	43
75-79	0	0	3	3	4	2	4	16
Totals	10	150	194	249	452	386	296	1,737

Group Averages:

Age: 56.0 years
Benefit Service: 14.7 years
Eligibility Service: 22.6 years

Service shown in this schedule is Legacy Benefit service plus Hybrid Benefit service.



Retirees and Beneficiaries as of June 30, 2023

Tabulated by Attained Ages

Retirement System Totals

Attained Ages	Age & Years of Service#		Disability		Death-in-Service		Totals	
	No.	Annual Allowances^	No.	Annual Allowances^	No.	Annual Allowances^	No.	Annual Allowances^
Under 20*	56	\$ 857,904	0	\$ 0	0	\$ 0	56	\$ 857,904
20-24	10	107,292					10	107,292
25-29	7	68,304					7	68,304
30-34	12	130,716	0	0			12	130,716
35-39	16	85,584	0	0			16	85,584
40-44	22	154,428	2	14,076	2	33,732	26	202,236
45-49	28	239,964	7	44,004	2	15,720	37	299,688
50-54	109	1,595,712	27	230,448	7	59,724	143	1,885,884
55-59	355	7,324,188	65	689,184	14	230,664	434	8,244,036
60-64	1,160	22,836,431	134	2,160,516	35	483,348	1,329	25,480,295
65-69	2,055	39,985,080	214	2,997,468	33	493,788	2,302	43,476,336
70-74	2,006	42,469,584	159	2,308,128	44	847,476	2,209	45,625,188
75-79	1,664	35,818,992	105	1,380,888	27	529,728	1,796	37,729,608
80-84	996	19,166,088	46	490,020	28	382,596	1,070	20,038,704
85-89	623	10,005,948	20	190,884	13	167,508	656	10,364,340
90-94	387	5,517,744	6	62,880	24	226,596	417	5,807,220
95 and Over	242	3,024,228	10	87,252	20	217,104	272	3,328,584
Totals	9,748	\$189,388,187	795	\$10,655,748	249	\$3,687,984	10,792	\$203,731,919

* May include records with defective birth dates.

Includes survivor beneficiaries of deceased retirees.

^ Excludes annuities.



Retirees and Beneficiaries as of June 30, 2023 Tabulated by Year of Retirement

Year of Retirement	No.	Annual Allowances [^]	
		Total	Average
1950 & before	3	\$ 71,172	\$23,724
1951-1955	4	67,200	16,800
1956-1960	0	0	0
1961-1965	4	16,188	4,047
1966-1970	12	67,428	5,619
1971-1975	42	298,740	7,113
1976-1980	106	889,452	8,391
1981-1985	241	2,839,212	11,781
1986-1990	441	5,514,312	12,504
1991-1995	881	12,697,608	14,413
1996-2000	1,200	21,382,356	17,819
2001-2005	1,700	37,882,595	22,284
2006-2010	1,926	42,887,268	22,268
2011-2015	2,307	47,412,996	20,552
2016	392	7,915,296	20,192
2017	250	3,981,504	15,926
2018	233	3,453,840	14,823
2019	226	3,306,732	14,632
2020	221	3,517,632	15,917
2021	264	4,276,884	16,200
2022	232	3,559,152	15,341
2023	107	1,694,352	15,835
Totals	10,792	\$203,731,919	\$18,878

[^] Excludes annuities.



SECTION D

METHODS AND ASSUMPTIONS

Summary of Assumptions and Methods Used for Actuarial Valuations Adopted by the Board of Trustees

All assumptions are estimates of future experience except as noted. The rationale for the assumptions is based on experience studies where noted.

Economic Assumptions

The investment return rate used in making the valuation was 6.75% per year, compounded annually (net after investment expenses). This assumption is prescribed by the Eighth Amended Plan for the Adjustment of Debts of the City of Detroit (POA).

Price inflation is not directly used in the valuation. For purposes of assessing the reasonability of the investment return assumptions, we assumed price inflation of 2.50% per year.

Future **administrative expenses** are assumed to be 1.01% of benefit payments and refunds.

Non-Economic Assumptions

For healthy post-retirement mortality, the PubG-2010(B) Below-Median General Retiree table was used for mortality assumptions going forward, decreased by 3% for males and increased by 26% for females.

For disabled post-retirement mortality, PubNS-2010 Non-Safety Disabled Retiree mortality table was used, increased 4% for males and decreased 2% for females.

For pre-retirement mortality rates, the PubG-2010(B) Below-Median General Employee mortality table was used for both males and females.

The tables are projected to be fully generational, based on the 2-dimensional, sex distinct mortality improvement scale MP-2021 (which was intended to be used with the Pub-2010). 75% of all deaths-in-service are assumed to be non-duty related. This table was first used as of June 30, 2021. The rationale for the mortality assumption is based on the 2015-2020 Mortality Experience Study issued February 4, 2022.

The probabilities of retirement for members eligible to retire are shown on the following pages. These probabilities were revised for the June 30, 2021 valuation. The rationale is based on the 2015-2020 Experience Study.

The probabilities of separation from service (including *death-in-service* and *disability*) are shown for sample ages on the following pages. These probabilities were revised for the June 30, 2021 valuation. The rationale is based on the 2015-2020 Experience Study.

Summary of Assumptions and Methods Used for Actuarial Valuations Adopted by the Board of Trustees (Concluded)

Funding Methods

The unit credit cost method was used in determining age & service pension liabilities, vesting liabilities, and casualty pension liabilities. Under this method, there is no normal cost since benefits are frozen and there are no future accruals and actuarial accrued liability is the present value of each individual's accrued benefit.

Unfunded Actuarial Accrued Liabilities. Actual employer contributions through June 30, 2023 are set by the POA. For contributions starting with the fiscal year ending June 30, 2024, a closed 30-year level principal period is used to amortize Unfunded Actuarial Accrued Liabilities (if any).

Employer contribution dollars were assumed to be paid at the end of the employer fiscal year.

Present assets are set equal to the Market Value.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

Single Life Retirement Values

Based on PubG-2010(B)
 97% of Male Rates/126% of Female Rates
 Using Projection Scale MP-2021

Sample Attained Ages in 2023	Future Life Expectancy (Years)	
	Men	Women
45	37.66	40.13
50	32.73	35.07
55	28.35	30.48
60	24.11	25.96
65	19.99	21.49
70	16.01	17.15
75	12.36	13.14
80	9.15	9.59

Probabilities of Age/Service Retirement for Members Eligible to Retire

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year with Unreduced Benefits		
	EMS	D.O.T.	Others
62	40%	20%	20%
63	40%	20%	20%
64	40%	20%	20%
65	40%	20%	20%
66	40%	20%	20%
67	40%	30%	20%
68	40%	30%	20%
69	40%	30%	20%
70	100%	100%	20%
71			20%
72			20%
73			20%
74			20%
75			20%
76			20%
77			20%
78			20%
79			20%
80			100%
Ref	851	3304	3305

All members are assumed to retire while eligible for Component I (Hybrid) retirement only. The rationale is based on the 2015-2020 Experience Study.

Probabilities of Early Retirement for Members Eligible for Early Retirement

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year with Reduced Benefits
55	6.5%
56	6.5%
57	6.5%
58	7.5%
59	8.5%
60	9.5%
61	9.5%
62	9.5%
Ref	3303

All members are assumed to retire while eligible for Component I (Hybrid) retirement only. The rationale is based on the 2015-2020 Experience Study.

Sample Rates of Separation from Active Employment Before Retirement

Sample Ages	Years of Service	% of Active Members Separating within Next Year	
		Withdrawal	
		EMS	Other
ALL	0	16.00%	28.00%
	1	15.00%	19.00%
	2	15.00%	15.00%
	3	11.00%	14.00%
	4	11.00%	14.00%
25	5 & Over	10.05%	13.00%
30		8.85%	11.91%
35		7.80%	9.25%
40		6.60%	7.19%
45		5.10%	5.91%
50		3.60%	5.00%
55		3.00%	5.00%
60		3.00%	5.00%
Ref		1405	1406
		1608	1609

Sample Ages	% of Active Members Becoming Disabled within Next Year			
	D.O.T.		Others	
	Ordinary	Duty	Ordinary	Duty
25	0.16%	0.24%	0.03%	0.03%
30	0.19%	0.28%	0.04%	0.04%
35	0.26%	0.39%	0.05%	0.05%
40	0.37%	0.56%	0.08%	0.08%
45	0.56%	0.84%	0.12%	0.12%
50	0.70%	1.05%	0.15%	0.15%
55	0.82%	1.23%	0.17%	0.17%
60	0.94%	1.41%	0.20%	0.20%
Ref	1238	x 1.20	1238	x 1.80
			1238	x 0.25
			1238	x 0.25

The rationale is based on the 2015-2020 Experience Study.

Miscellaneous and Technical Assumptions

Administrative Expenses	Administrative expenses are assumed to be 1.01% of benefit payments and are to be included in the employer contribution.
Annuity Savings Fund (ASF) Interest Credits	For purposes of calculating future refunds of member contributions, the ASF is assumed to earn 5.25% interest in all future years.
Average Final Compensation (AFC)	<p>Frozen AFC is reported in the data provided for the annual valuation. Longevity payments are included directly in the reported frozen AFC but Sick Leave is not. Eligibility for inclusion of Sick Leave is based upon the members Bargaining Unit. If eligible, we take the AFC provided to us, use the 75% of 2014 AFC check, and then add on an estimate for sick leave. The sick leave is estimated with the following formula:</p> $[\text{Annual pay reported in 2014 valuation}] \times [\text{Capped Sick Leave Bank hours reported in 2014 valuation}] / [8 \text{ hours/work day}] / [260 \text{ work days/year}] / [3\text{-years in average period}] \times [25\% \text{ added to AFC}]$ <p>Where [Capped Sick Leave Bank hours reported in 2014 valuation] is the smaller of:</p> $[\text{Sick Leave Bank hours reported in 2014 valuation}] \text{ OR } [\text{Frozen Service}] \times [8 \text{ hours/work day}] \times [25 \text{ days/year of service}]$ <p>We annually test the reported AFC against a sample set of retirees to determine if any additional adjustments should be made to the liability. No additional adjustment was made for this report.</p>
Benefit Service	Exact Fractional service is used to determine the amount of benefit payable.
Data Adjustments	Assumptions regarding incomplete or missing data are reviewed annually with the System and adjusted as directed by the System.
Decrement Operation	Disability and mortality decrements do not operate during the first five years of service. Disability and withdrawal do not operate during retirement eligibility.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Deferred Vested Benefit Commencement Age	Members are assumed to commence benefits at the age in which they are first eligible for unreduced benefits.
Disability Change Age	For active members that become duty disabled, the Component II (Legacy) plan is assumed to only be responsible for the frozen benefit which becomes payable starting at the earliest of when the member would have accrued 30 years of service credit (25 for EMS) or age 60.



Miscellaneous and Technical Assumptions

Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and rounded service on the date the decrement is assumed to occur.
Forfeiture Assumption	It is assumed that 0% of members will elect to forfeit their benefit.
Incidence of Contributions	Employer contributions are assumed to be received on the last day of the fiscal year.
Marriage Assumption	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Member Contributions	Member contributions to this Component II plan are assumed to have ceased with the bankruptcy.
New Entrant Assumption	No assumption is made for experience related to members rehiring/reentering active service.
Normal Form of Benefit	Straight life is the normal form of benefit. The Board adopted assumptions for Actuarial Equivalence to be an 80%/20% unisex blend of RP-2014 mortality (Male/Female) with Blue Collar Adjustment, set ahead one year for males and females, projected 11 years with MP-2014, an interest rate of 6.75%, and no COLA for optional forms of payment and early retirement reduction. Assumptions for annuitizing member contributions are the same except for using a 60%/40% unisex blend and a 5.25% assumed rate of interest. Prior to the use of these factors, actuarial equivalent factors were based on 7.5% interest and the 1984 Group Annuity Mortality table.
Pop-Up Benefits	For current retirees with a pop-up benefit, the value of the pop-up was estimated by valuing a non-pop-up option and increasing the associated liabilities by 2%.
Service Credit Accruals	Service accruals for calculating benefits end as of June 30, 2014 for Component II (Legacy) and begin as of June 30, 2014 for Component I (Hybrid). However, service in Component I (Hybrid) and Component II (Legacy) may be used to satisfy benefit eligibility requirements in both plans.

The rationale is based on the 2015-2020 Experience Study, modified as necessary for changes in data or administration.



SECTION E

PLAN PROVISIONS

Summary of Benefit Provisions Evaluated

Component II Frozen Benefits

All Component II benefits are frozen as of June 30, 2014 based on service and average final compensation accrued as of that date and the provisions of the Detroit General Retirement System as it existed on June 30, 2014. Frozen benefits are further reduced by 4.5% and all future cost-of-living adjustments (“COLAs”) were eliminated. Benefits resulting from the Annuity Savings Fund and benefits paid from the Annuity Reserve Fund were subject to a separate reduction described as a “Claw-back.” Details of the claw-back provision are complicated and can be found in the Eighth Amended Plan of Adjustment. The benefits evaluated in this report are the frozen reduced benefits after adjusting the assets for the claw-back. Component II benefits are payable after separation from service, upon meeting the eligibility conditions of the plan as it existed on June 30, 2014, regardless of whether the individual is eligible to receive a Component I benefit at that time.

Our understanding of the June 30, 2014 plan provisions is provided below for completeness. The material below does not have legal standing and is not intended to cover all potential situations that could occur. If there are discrepancies between the description below and appropriate legal documents, the latter necessarily govern.

Age and Service Pension

Eligibility - Any age (minimum age 55 for non-EMS members hired after 1995) with 30 years of service (25 for EMS members), or age 60 with 10 years of service, or age 65 with 8 years of service.

Annual Amount - EMS Members: Sum of a) a basic pension of \$12 for each of the first 10 years of service, plus b) a pension equal to 2.0% of AFC multiplied by years of service. Maximum benefit is 90% of AFC.

Other Members: Sum of a) a basic pension of \$12 for each of the first 10 years of service, plus b) a pension equal to the first 10 years of service multiplied by 1.6% of AFC, plus 1.8% of AFC for each year of service greater than 10 years up to 20 years, plus 2.0% of AFC for each year of service greater than 20 years up to 25 years, plus 2.2% of AFC for each year of service greater than 25 years. Future benefit accruals for certain active members (depending on bargaining unit) were reduced to 1.5% of final average compensation per year of service.

Type of Average Final Compensation (AFC) - Highest 3 consecutive years out of the last 10. Pension benefits will not be diminished if compensation is reduced because of a fiscal emergency. Effective July 1, 1999, in computing the AFC, a member shall have the option of adding the value of 25% of unused accrued sick leave to the earnings used in computing the AFC. Longevity is added to AFC in accordance with the following schedule: \$150 after 5 years, \$300 after 10 years, \$450 after 15 years, \$600 after 20 years, and \$750 after 25 years.

Early Retirement

Eligibility - Any age with 25 or more years of service (min. age 55 for members hired after 1995).

Annual Amount - Same as regular retirement but actuarially reduced.



Summary of Benefit Provisions Evaluated (Continued)

Deferred Retirement (Vested Benefit)

Eligibility - Hired prior to 7-1-80: Age 40 with 8 years of service. Hired on or after 7-1-80: Any age with 10 years of service.

Benefit Commencement - APTE hired prior to July 1, 1988: Benefit begins at the age the member would have become eligible for regular retirement if service had continued. **SAAA, Non-Union and lawyers hired prior to June 30, 1986:** Benefit begins at the age the member would have become eligible for regular retirement. **Others:** Benefits based on service rendered by June 30, 1986 begin at the age the member would have become eligible for regular retirement. Benefits based on service rendered after July 1, 1986 begin at age 62.

Annual Amount - Same as regular retirement but based on average final compensation and service at the time of termination.

Duty Disability Retirement

Eligibility - Service related disability before eligibility for service retirement prior to and July 1, 2014. No service requirement.

Annual Amount - An annuity which is the actuarial equivalent of the accumulated contributions at date of disability plus a pension of two-thirds of average final compensation at time of disability. The maximum annual pension is \$5,700 (\$9,000 for EMS). At the earliest of when the member would have accrued 30 years of service credit (25 for EMS) or age 60, the annuity is recomputed assuming contributions would have continued at a salary level equal to final compensation. The pension is recomputed with additional service credit granted from the date of disability to age 60 (or 30 years of service credit) or June 30, 2014, whichever is earlier. **Benefits payable prior to conversion/re-computation, if any, were assumed to be paid outside the trust.**

Non-Duty Disability Retirement

Eligibility - Disability from any cause before age 60 with 10 or more years of service prior to July 1, 2014.

Annual Amount - Computed in the same manner as a regular retirement benefit. Maximum annual pension to age 60 is \$6,000. Benefit is recomputed at age 60 with no maximum. **Benefits payable prior to age 60, if any, were assumed to be paid from outside the trust.**

Duty Death before Retirement

Eligibility - Death from service related causes. No age or service requirements.

Annual Amount - One-third of final compensation as of June 30, 2014 to the surviving spouse for life or until remarriage, plus an equal share of 1/4 of final compensation to each unmarried child under age 18. If there is no eligible spouse, eligible children each receive 1/4 of final compensation; if there are more than 2 such children, each child shares an equal part of 1/2 of final compensation. Maximum total amount for spouse and children is \$9,000 annually. If there is no eligible spouse or children, dependent parents each receive 1/6 of deceased's final compensation, to a total maximum of \$600 annually.



Summary of Benefit Provisions Evaluated (Concluded)

Non-Duty Death before Retirement

Eligibility - Death-in-service at any age with 15 years of service; or after age 60 with 10 years of service; or after age 65 with 8 years of service.

Annual Amount - To Surviving Spouse: Computed as a regular retirement benefit but reduced in accordance with a 100% joint and survivor election for members with 20 or more years of service. For members with 15 years of service but less than 20, benefit is reduced in accordance with a 50% joint and survivor election. To Dependent Children if no Surviving Spouse: \$9,000 payable to age 19 of the youngest child or for life if child is physically or mentally impaired for members with 20 or more years of service (\$6,000 if less than 20 years of service).

Post-Retirement Cost-of-Living Adjustments

Benefit is increased annually by 2.25% of the **original** pension amount at retirement. Post-retirement cost-of-living increases were eliminated on future accruals for certain active members (depending on bargaining unit).

Member Contributions

Members have the option of choosing one of four contribution amounts: (1) 0%; (2) 3.0% of compensation up to the Social Security wage base, plus 5.0% of compensation in excess of the Social Security wage base; (3) 5.0% of total compensation; or (4) 7.0% of total compensation. Member contributions can be paid as a lump sum or annuitized at retirement to provide an annuity in addition to the pension (which is not affected by the level of member contributions).

SECTION F

GLOSSARY

Glossary

<i>Accrued Service</i>	The service credited under the plan which was rendered before the date of the actuarial valuation.
<i>Actuarial Accrued Liability (AAL)</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
<i>Actuarial Cost Method</i>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.
<i>Actuarially Determined Employer Contribution</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's actuarial funding policy.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value (APV)</i>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<i>Actuarial Present Value of Future Benefits (APVFB)</i>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<i>Actuarial Valuation</i>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Funding Value of Assets, and related Actuarial Present Values for a plan.

Glossary

AFC	Average Final Compensation.
Amortization Method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase. Under the Level Principal method, the Amortization Payment is one of a stream of decreasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Principal method, the principal payment remains constant, while the interest portion is reduced over time.
Amortization Payment	That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
ARF	Average Reserve Fund.
ASF	Annuity Savings Fund of the Component II (Legacy) Plan.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc.
COLA	Cost-of-Living Adjustment.
Contribution Budgeting Liability	An expected return-based measure of pension obligation.
DIA	Detroit Institute of Arts.
D.O.T	Department of Transportation.
Duration	An approximate measure of sensitivity to changes in interest rates.
DWSD	Detroit Water and Sewerage Department.
Employer Normal Cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Glossary

<i>E.M.S.</i>	Emergency Medical Service.
<i>Equivalent Single Amortization Period</i>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<i>Experience Gain/Loss</i>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, i.e., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<i>Funded Ratio</i>	The ratio of the Funding Value of Assets to the Actuarial Accrued Liability.
<i>Funding Value of Assets (FVA)</i>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined employer contribution (ADEC).
<i>FY</i>	Fiscal Year.
<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB Statement No. 67 and GASB Statement No. 28</i>	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. GASB Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while GASB Statement No. 67 sets the rules for the systems themselves.
<i>GLWA</i>	Great Lakes Water Authority.
<i>MVA</i>	Market Value Assets.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

Glossary

<i>Open Amortization Period</i>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<i>PAF</i>	Pension Accumulation Fund.
<i>POA</i>	The 8th Amended Plan for the Adjustment of the Debt of the City of Detroit.
<i>Reserve Account</i>	An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.
<i>RSF</i>	Rate Stabilization Fund.
<i>Solvency Liability</i>	A market-based measurement of the pension obligations.
<i>Transition Cost</i>	Initial unfunded liability as described in Section E-16 of the Plan document.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Funding Value of Assets.
<i>Valuation Date</i>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.
<i>VPIF</i>	Variable Pension Improvement Factor. Discussed in Section 6.2 of the Plan Document.

SECTION G

FUNDING POLICY

I. Introduction

The purpose of this Actuarial Funding Policy is to record the funding objectives and policy set by the Board of Trustees (Board) and the Investment Committee (Investment Committee) for the General Retirement System of the City of Detroit (the GRSD). The Board and the Investment Committee establish this Actuarial Funding Policy to help ensure the systematic funding of future benefit payments for members of the Plan.

In 2014, the Combined Plan document for the GRSD was written and approved by the bankruptcy court as part of the City's Plan of Adjustment (POA). At that time, the original retirement plan was split into two retirement plans: Component I (Hybrid) and Component II (Legacy) (collectively the "Plans"). In accordance with the POA, employer contributions and certain assumptions cannot be changed until fiscal year 2024. This Policy is intended to establish a funding policy for the period beginning in fiscal year 2024, when employer contributions must be determined on an actuarial basis. Nothing in this Policy is intended to prevent the Board and the Investment Committee from altering the Policy prior to fiscal year 2024 as conditions change or additional information becomes available to the Board.

This Policy shall be regularly reviewed by the Board and the Investment Committee.

II. Definitions

"Actuarial Accrued Liability (AAL)" means the difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

"Actuarial Assumptions" means the estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

"Actuarial Cost Method" means a mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

"Actuarial Gain (Loss)" means a measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or "actuarial gain" as of the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under the policy.

“Actuary” means a person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries (MAAA). The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associateship and the designation ASA and ultimately to Fellowship with the designation FSA.

“Amortization” means paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

“Board” or “Board of Trustees” shall mean the Board of Trustees of the General Employees Retirement System of the City of Detroit.

“Committee” or “Investment Committee” shall mean the Investment Committee of the General Employees Retirement System of the City of Detroit.

“Division” shall mean the General City, DDOT, Library and/or DWSD divisions in the City of Detroit.

“Experience Study” means an actuarial investigation of demographic and economic experiences of the system during the period studied. The investigation was made for the purpose of updating the actuarial assumptions used in valuing the actuarial liabilities.

“Funding Value of Assets” means the value of current plan assets recognized for valuation purposes. Generally based on a phased-in recognition of all or a portion of market related investment return. Sometimes referred to as Actuarial Value of Assets or Smoothed value of Assets.

“GRSD” shall mean the General Employees Retirement System of the City of Detroit.

“Market Value of Assets” means the fair value of plan assets as reported in the plan’s audited financial statements.

“Normal Cost (NC)” means the annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

“Unfunded Actuarial Accrued Liability (UAAL)” means the positive difference, if any, between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

“Unit Credit Normal Actuarial Cost Method” means a funding method that calculates the Normal Cost as the present value of the change in accrued benefits for active members.

II. Funding Objectives

1. Provide benefit security to members of the GRSD:
 - A. For purposes of this policy, benefit security means having adequate liquidity to pay benefits when due.
2. Establish an appropriate employer contribution based on the following objectives:
 - A. Upon the recommendation of the GRSD Actuary and after review and consideration of the decision of Judge Thomas J. Tucker with respect to the City of Detroit’s Motion to Enforce Plan of Adjustment and Require 30-Year Amortization of the Accrued Liability in the Police and Fire Retirement System filed in the US Bankruptcy Court In re: City of Detroit, Michigan (Case No. 13-53846) (herein after the “Legacy Amortization Motion”); to fully fund the Legacy Plan liability in 30 years from June 30, 2023; and
 - B. Fully funding the Hybrid plan liability in 15 years from June 30, 2023; and
 - C. Managing employer contribution volatility.



3. Provide a reasonable margin for adverse experience to help offset risks.
4. Measure and monitor funding status, post-2024 contribution estimates and risks.
 - A. Perform annual valuations; and
 - B. Include post-2024 actuarial determined employer contributions (based on this Policy) in annual actuarial valuations performed for fiscal years before 2024.

III. Elements of the Actuarial Funding Policy

The Plans will have annual actuarial valuations each June 30. Employer contributions will be determined for the fiscal year ending two years after the valuation date. For example, the actuarially determined employer contribution for the fiscal year ending June 30, 2024 will be determined by the June 30, 2022 annual actuarial valuation.

Annual actuarial valuations may or may not also serve other purposes such as for Legacy plan restoration, Hybrid plan Section 9.5 fiscal responsibility calculations, and/or Annuity Savings Fund excess interest transfers between components. Unless otherwise stated, those purposes are not subject to this Policy.

For funding purposes, annual actuarial valuations will include the following elements of the Actuarial Funding Policy:

1. Actuarial Cost Method

- A. Hybrid Plan: The Entry Age actuarial cost method shall be used in determining the Actuarial Accrued Liability (AAL) and Normal Cost with the entry age based on the date of hire. Since this component was created in July 2014 and granted eligibility and vesting service prior to July 2014 (for members hired before that date), this plan had an unfunded actuarial accrued liability on the plan effective date, known as the transition liability.
- B. Legacy Plan: The Unit Credit Normal actuarial cost method shall be used in determining Actuarial Accrued Liability (AAL) and Normal Cost. Since this component is closed and accrued benefits are frozen as of June 30, 2014, this method results in no normal costs and an AAL that equals the Present Value of Accrued Benefits (PVAB) of each member.

2. Asset Smoothing Method

- A. For determining (or estimating) employer contributions on or after fiscal year 2024, the Funding Value of Assets will be based on a method that employs smoothing of market gains and losses over a closed period. The smoothing period for recognize market gains and losses (above or below the assumed rate of return) will be a 3-year period.
- B. The Funding Value of Assets shall not diverge from the Market Value of Assets by more than 15%.
- C. The annual valuation will calculate results on both the smoothed value of assets and the (non-smoothed) Market Value of Assets beginning with the June 30, 2022 valuation (the Funding Value of Assets will initially be set to the Market Value of Assets as of June 30, 2021 with smoothing beginning prospectively). The post-2024 contribution estimate will always be based on the smoothed value of assets. Other results (UAAL, Funded Status, etc.) will be based on the Market Value of Assets prior to 2024 and the smoothed value of assets starting in 2024.

3. Amortization Method

A. Hybrid Plan

- a) A Level Percent of Payroll amortization method shall be used to systematically eliminate (pay off) the Unfunded Actuarial Accrued Liability (UAAL) over a closed 15-year period from the later of July 1, 2023 or the applicable fiscal year after the funded status falls below 100%.



- b) If the funded status for a division is above 100%, the contribution requirements for the division's UAAL will be \$0 (thereby creating a minimum employer contribution of employer normal cost).
- c) Layered amortizations will be considered by the Board for contributions after fiscal year 2024. Considerations for layering could include
 - (i) Length of initial period remaining;
 - (ii) Source of liability being amortized (i.e., new liabilities related to benefit changes and assumptions changes may be amortized over specific shorter periods (i.e., less than 15 years)). It is the intention of the Board and IC to align the amortization period in the appropriate circumstances with the corresponding benefit payment time-period;
 - (iii) Magnitude of base that could be added in the current year;
 - (iv) The change in contribution levels from the prior year (i.e., if a previous base is falling off and the current base is going in the opposite direction, it might be better to roll it into an existing base in order to levelized contributions).
- d) Each division shall be responsible for funding its liability. Funding for any division that is at risk of depleting its divisional assets may be accelerated. Divisions shall not be permitted to have a funded status below 0% and contributions shall be accelerated as appropriate.

B. Legacy Plan

- a) The Level Principal amortization method shall be used to systematically eliminate (pay off) the Unfunded Actuarial Accrued Liability (UAAL) over a closed period of 30 years from July 1, 2023, as reflected in the Plan of Adjustment (POA) and consistent with the decision of Judge Thomas J. Tucker with respect to the City's Legacy Amortization Motion.
- b) If the funded status for a division is above 100%, the contribution requirements for the division's UAAL will be \$0 (thereby creating a minimum employer contribution of administrative expenses).
- c) Layered amortizations will be considered by the Board for contributions after fiscal year 2024. Considerations for layering could include:
 - (i) Length of initial period remaining;
 - (ii) Source of liability being amortized (i.e., new liabilities related to benefit changes and assumptions changes may be amortized over specific shorter periods (i.e., less than the UAAL amortization period adopted by the Board and IC)). It is the intention of the Board and IC to align the amortization period in the appropriate circumstances with the corresponding benefit payment time period;
 - (iii) Magnitude of base that could be added in the current year;
 - (iv) The change in contribution levels from the prior year (i.e., if a previous base is falling off and the current base is going in the opposite direction, it might be better to roll it into an existing base in order to levelized contributions); and
 - (v) The City has applied for the Protecting MI Grant Program. If approved, any new liabilities related to benefit changes for active employees or retirees in the Legacy Plan must be fully funded when granted.
- d) Each division shall be responsible for funding its liability. Funding for any division that is at risk of depleting its divisional assets may be accelerated. Divisions shall not be permitted to have a funded status below 0% and contributions shall be accelerated as appropriate.

4. Funding Target and Cash Flow Projections

- A. The targeted funded ratio shall be 100%.
- B. The Legacy annual actuarial valuation shall include projections of estimated employer contributions, expected benefit payments and estimated funded status to the later of fiscal year 2054 or 30 years after the applicable employer contribution fiscal year.
- C. Section 9.5 of the plan details the actions to be taken if the 5-year projected funded status falls below 100% (Hybrid, only).

5. Risk Management

- A. Assumption Changes
 - a) The actuarial assumptions to be used shall be those last adopted by the Board based on the most recent experience study and upon the advice and recommendation of the actuary. In accordance with the City Ordinance, the actuary shall conduct an experience study at least every five years. The results of the study shall be the basis for the actuarial assumption changes recommended to the Board;
 - b) The actuarial assumptions may be updated at any time, as advised by the actuary, if significant plan design changes or other significant events occur that would dictate such a change; and
 - c) Even though the investment rate of return may not be changed for determining employer contributions until after June 30, 2023, the Board may elect to show valuation results under an alternative reasonable assumed rate of investment return prior to 2023.
- B. Risk Measures
 - a) Risk measures will be included in the annual actuarial valuations. Below is a list of potential measures to be included. The measures may be changed over time as deemed appropriate.
 - (i) Classic measures
 - Funded ratio (assets / liability) on both a market value and funding value (if funding value is not equal to market).
 - UAAL amortization period (years required to pay down the UAAL based on current funding rates).
 - Portfolio rate of return for the year on both the market value and funding value of assets.
 - 5-year and 10-year geometric average portfolio rate of return on both the market value and funding value of assets (developed prospectively).
 - 5-year and 10-year standard deviation of return on both the market value and funding value of assets (developed prospectively).
 - (ii) Duration of the Actuarial Accrued Liability
 - Measures the sensitivity of the liability to a 1% change in assumed rate of return. A decrease in this measure indicates a decrease in assumed rate sensitivity and vice versa.
 - (iii) Total UAAL / Covered Payroll
 - Measures the risk associated with contribution rates relative to the impact on the ability to fund the UAAL. A decrease in this measure indicates a decrease in UAAL contribution risk and vice versa.
 - Consideration will be given to using total payroll or revenue source, if available.

(iv) Total Assets / Covered Payroll

- Measures the risk associated with the potential impact of asset experience on contributions. A decrease in this measure indicates a decrease in asset risk and vice versa.
- Consideration will be given to using total payroll or revenue source, if available.

(v) Total AAL / Covered Payroll

- Measures the risk associated with the potential impact of liability experience on contributions. A decrease in this measure indicates a decrease in experience risk and vice versa. This also provides a long-term measure of the asset risk where the GRSD has a target funded ratio of 100%.
- Consideration will be given to using total payroll or revenue source, if available.

(vi) Non-Investment Cash Flow / Beginning of year assets

- Measures depletion risk, sensitivity to annual investment gains and losses risk and the maturity of the plan. For a mature open plan, this may converge to the negative of the real rate of return assumption (investment return less wage inflation). A less negative number (or a positive number) indicates a less mature plan and/or a plan that is at lower risk of fund depletion and less sensitive to annual gains and losses. A more negative number indicates a more mature plan and/or a plan that is more at risk of fund depletion and more sensitive to annual gains and losses. For a super-mature closed plan such as the Legacy plan, this may become more negative over time as liquidity needs increase.

(vii) Market Value of Assets / Benefit Payments

- Measure depletion risk. A low value estimates the number of years to depletion disregarding future contributions and investment return.

(viii) Solvency Liability

- Measures the estimated cost of accrued benefits as a result of minimizing investment risk in the portfolio.

b) Risk Control: The Board shall carefully monitor the risk measures above and shall consider steps to mitigate risk, particularly as the Legacy Plan funded ratio increases. Examples of risk mitigating techniques include, but are not limited to:

- (i) Reviewing investment risk in accordance with the Board's Investment Policy;
- (ii) Adding provisions for adverse deviation in the actuarial assumptions; and
- (iii) Increasing employer contributions (through a change in methods, assumptions, or amortization period).

IV. Hybrid Plan Section 9.5 Projection Assumptions

Section 9.5 of the Combined Plan titled "*Fiscal Responsibility: Increased Funding Obligations and Benefit Reductions*", provides generally in the event the funding level of Component I of the Retirement System, projected over a five-year period, falls below specified targets, the Board is required to take established remedial actions. The stated intention of this Section is to "safeguard the long-term actuarial and financial integrity of the Retirement System." Section 9.5(3) further provides that "the actuarial accrued liability of Component I shall be calculated by the Plan's Actuary utilizing an interest rate assumption of six and three-quarters percent (6.75%) and other reasonable assumptions as directed by the Board upon the recommendation of the Investment Committee."

In December, 2016, both the Board and the Investment Committee adopted the following guidelines to be utilized by the actuary in completing the five-year projections as required in Section 9.5 of the Hybrid Plan:

1. The five-year projections should be based on the general valuation assumptions as previously adopted by the Board (e.g., inflation, mortality, retirement, withdrawal, etc.).
2. Section 9.5(1) provides that Variable Pension Improvement Factor ("VPIF") benefits will only be granted in the event the plan is projected to be over 100% funded. It is the considered opinion of the Board and the Investment Committee that the mandatory employee contributions as set forth in the plan based upon the five-year projections required by Section 9.5 are intended to fund base benefits in the normal course and not VPIF benefits. Accordingly, it is the funding policy of the Board to not include any projected future VPIF benefits in the five-year projection calculations. However, in the future and to the extent that VPIF benefits have been granted to retirees at the time of the five-year projection, that Actuary shall assume continuation of those previously granted VPIF benefits except as otherwise provided in Section 9.5(2) of the Combined Plan.
3. For purposes of completing the five-year projection in any given year, an initial projection is to be completed demonstrating the effect of an award of the VPIF benefit to qualified retirees in the following Plan Year. If the Plan continues to be funded at a level greater than 100%, the VPIF may be awarded by the Board and IC in accordance with the Plan provisions. In the event the funding level in the initial projection is less than 100%, a second projection shall be performed to verify if any of the remedial measures required under Section 9.5 are necessary.
4. Transition Costs should not include an assumption of future VPIF benefits. Since there is a separate funding source established in the Combined Plan for payment of Transition costs through 2023 [Section E-16(c)], Transition Costs should be excluded from the Section 9.5 tests until fiscal year 2024. The Transition Costs shall be determined as of July 1, 2014 (without an assumption for payment of future VPIF benefits and financing of the Transition costs shall be calculated based upon a level dollar amortization of the Initial Transition Cost over a 9-year fixed amortization period and the Retirement System's Investment Return Assumption of 6.75%.
5. Component II (Legacy Plan) ASF balances are assumed to be withdrawn as a level dollar amount over the next 10 years, however voluntary employee contributions into the Component Annuity Savings Fund shall be assumed to continue at the historical levels as previously contributed to the Component II ASF. For Transition Funding purposes, an appropriate arbitrage of the difference between the assumed rate of investment return of 6.75% and the maximum interest rate that can be credited to the ASF Accounts of 5.25% should be used for both the Hybrid Plan (Component I) and Legacy Plan (Component II) ASF Accounts. However, for asset transfers based on a lookback period, actual market returns will be used, if known.
6. The Hybrid Plan assets shall include the Rate Stabilization Fund to the extent the plan is less than 100% funded.
7. The Annual Actuarial Valuation for the fiscal year ending June 30, 2015, shall generate the first five-year projection. Upon receipt of the June 30, 2015 valuation, a determination shall be made whether any remedial action is required. In the event remedial action is required, such remedial action shall be effective July 1, 2017 [Section 9.5(1)].
8. The funding value of plan assets for purposes of Section 9.5 testing of the Hybrid Plan (Component I) funding level would otherwise be based upon a three (3) year smoothing method wherein the assumed investment income of 6.75% will be recognized fully each year and the differences between actual and

assumed investment income shall be phased in over a closed three (3) year period. The Actuary has opined that since the projection period is for a five (5) year period, the use of a three (3) year smoothing period is of no consequence and would result in an asset value that is not materially different than projecting the current market value of assets out five (5) years at the assumed rate of return of 6.75%. Accordingly, the projection shall utilize the market value of the portfolio using the 6.75% rate of return [Section 9.5(3)].

9. The forgoing assumptions shall be utilized for both the 100% projection test in Section 9.5(1) and the 80% projection test in Section 9.5(2).
10. The required actions set for in Section 9.5(2), if any, shall be reflected in the projections by the addition of each item in the order listed until the appropriate threshold is reached. Illustrated as follows:

Perform the first projection ignoring all the 9.5(2) actions. If the projected funded status was less than 80%, then the Actuary is to re-perform the projection reflecting the action in 9.5(2)(a). If the projection results in a funding level that is still below 80%, the projection is to be re-performed reflecting the action in 9.5(2)(b): and so on. Once the 80% threshold is met, such projection would reflect the required actions under Section 9.5(2) that are to be taken.



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

The June 2024 New Solicitation Pause and Workday ERP system Launch on July 1

During the month of June 2024, the GLWA Procurement Team will pause the advertisement of new solicitations in the Bonfire Procurement Portal and the issuance of new purchase orders. This temporary pause will allow Procurement to fully migrate data on existing purchase orders and contracts into GLWA's new Enterprise Resource Planning (ERP) system Workday, which will launch on July 1, 2024. The processing of new procurements and solicitations will resume after Workday officially goes live on July 1.

Read below for some Vendor FAQs about the June Pause and launch of GLWA's new Workday system.

- **What impact will the June pause have on any in-process solicitations?** Vendors can expect a slight delay in the evaluation and award of in-process purchase orders and contracts.
- **Will accounts payable still be processing invoices during the June pause?** Yes, invoices will still be processed according to GLWA's 45-day net payment terms.
- **Will the June pause alter the timelines provided in the upcoming solicitations included on pg. 2 of the Pipeline newsletter?** Vendors may expect a slight delay in the advertisement of new solicitations.
- **What impact will the new Workday system have on GLWA's procurement process when it goes live on July 1?** The implementation of Workday will enable a number of important efficiencies in GLWA's procurement process. However, Vendors will experience no changes in the process for submitting a bid or proposal response to any open GLWA opportunity.

- **Will GLWA continue to use Bonfire?** Bonfire will continue to operate as GLWA's e-procurement platform.
- **If Vendors have questions about the June pause or the new Workday system, who should they contact?** Any additional questions about the June Pause or new Workday system may be directed via email to GLWAVendorOutreach@glwater.org.

Where to Meet GLWA

GLWA welcomes you to visit us at the Michigan Public Purchasing Officers Association Reverse Trade Fair on April 26, 2024 from 10:30 a.m. to 3:30 p.m. at the Suburban Collection Showplace 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 March 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 April 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
Professional Services	O&M	Specialized Services – Task assigned	\$12,550,000
Wastewater Systems (next four to nine months)			
Construction	260510	CSO Outfall Rehabilitation Phase VI	\$10,000,000
Construction	260206	Rehabilitation of 7 Mile Sewer System	\$30,000,000
Construction	211005.2	WRRF Pump Station 2 VFD Replacements	\$12,000,000
Design	270007	CSO Facility Disinfection Improvements	\$2,000,000
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
Wastewater (next three months)			
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	Lake Huron Water Treatment Plant Sludge Removal and Disposal	\$3,300,000
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
Professional Services	O&M	Water and Wastewater Pumping Stations LED Lighting Upgrades	\$7,500,000
Professional Services	O&M	Staffing Services	\$750,000
Professional Services	O&M	Sewer Metering Analysis and Support Services	\$4,660,000

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

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