Audit Committee Meeting
Friday, March 28, 2025, at 8:00 a.m.
www.glwater.org

Join Zoom Meeting

Meeting ID: **831 4077 9194** Passcode: **052265**

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

Note: Binders 1 and 2 have been combined and PDF was renumbered

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
   A. February 17, 2025 (Page 1)
   B. March 14, 2025 (Page 7)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
7. NEW BUSINESS
   A. *Action Item*: Resolution to Adopt the Fiscal Year (FY) 2026 Clean (Page 11) Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown
   B. *Action Item*: Resolution to Adopt the Great Lakes Water Authority (Page 31) Project Plans for Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration
   C. *Action Item:* Resolution Regarding Approval of Series Ordinance (Page 54) Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01)
   D. *Action Item:* Resolution Regarding Approval of Series Ordinance (Page 87) Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02)
   E. General Retirement System Financial Report and Annual Actuarial (Page 120) Valuation for Year End June 30, 2024
   F. *Action Item:* FY 2025 Second Quarter Budget Amendments through December 31, 2024, and Proposed Budget Amendment Resolution (Page 331)

8. REPORTS
    A. CFO Report (Page 359)
    B. Monthly Financial Report for December 2024 (Page 361)
    C. Affordability and Assistance WRAP Quarterly Update (Page 362)
    D. Gifts, Grants & Other Resources Report (Page 387)
    E. Quarterly CWIP Report (Page 396)
9. COMMUNICATIONS
    A. The Procurement Pipeline for March 2025 (Page 420)
10. LOOK AHEAD
    A. Next Audit Committee Meeting: April 25, 2025, at 8:00 a.m.
11. OTHER MATTERS
12. ADJOURNMENT

Great Lakes Water Authority

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

Meeting Minutes - Draft

Audit Committee

Monday, February 17, 2025 | **8:00 AM** | **Zoom Telephonic Special Meeting**

Zoom Telephonic Special Meeting

Join Zoom Meeting:
https://glwater.zoom.us/j/81033180402?pwd=41bwzHXJ5mF2PtjlaLbsACarztsDnF.1

Join by Telephone
US Toll-Free:
877 853 5247; or 888 788 0099
Meeting ID: 810 3318 0402
Passcode: 410612

1. Call To Order

Chairperson Baker called the meeting to order at 8:01 a.m.

2. Quorum Call

Present: 2 - Chairperson Brian Baker, and Director Jaye Quadrozzi

Excused: 1 - Gary Brown

3. Approval of Agenda

Chairperson Baker requested a Motion to Approve the Agenda.

Motion By: Jaye Quadrozzi
Support By: Brian Baker
Action: Approved
The motion carried by a unanimous vote.

4. Approval of Minutes

A. 2025-016 Minutes of January 6, 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 4A January 6, 2025 Audit Committee Meeting Minutes.pdf

Chairperson Baker requested a Motion to Approve the January 6, 2025 Audit Committee Meeting Minutes.

Motion By: Jaye Quadrozzi
Support By: Brian Baker
Action: Approved
The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

6. Old Business

A. 2025-017 FY 2026 & FY 2027 Biennial Budget and Five-Year Plan and Updated Long-Term Plan and Proposed FY 2026 Charges with Supporting Materials

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 6A1 FY 2025 & 2026 Biennial Budget Discussion Draft.docx

6A2 Review and Updated of Proposed Budget and Charges 2.17.2025.pdf

6A2.1 Personnel Rollforward with Notes 2.13.2025.pdf

6A2.2 Personnel By Cost Center 11 x 17 Best Viewed on Screen.pdf

6A3 EOTF 2024 Year End Update 12.31.2024_February 2025.pdf

6A4 PFM Annual Review of Credit Metrics 2.4.2025.pdf

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

B. 2025-019 **Resolution Adopting the FY 2026 & FY 2027 Biennial Budget**

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 6B3 Budget Resolution 5.9-4.5 with support.docx
6A2 Review and Updated of Proposed Budget and Charges 2.26.2025 full.pdf

Motion By: Jaye Quadrozzi
Support By: Brian Baker
Action: Received, Filed and Referred to the Board of Directors for deliberation pending the Audit Committee Meeting on February 28, 2025
Agenda of February 26, 2025
The motion carried by a unanimous vote.

C. 2025-020 **Resolution Regarding Approval of FY 2026 Schedule of Service Charges**

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 6C3 2025-020 Resolution.Legistar-Charges 2.26.2025 1310.docx
02.1 Adopted FY 2026 Water Charge Sheet Summary Version 2.26.2025 (5.9)
03.1 Adopted FY 2026 Schedule of SEWER Service Charges_2.24.2025 1900
04.1 Adopted FY 2026 Schedule of INDUSTRIAL Service Charges_2.242025 1900
Proposed FY 2026 Schedule of Charges Public Hearing 2.26.2025rpm.pdf

Motion By: Jaye Quadrozzi
Support By: Brian Baker
Action: Received, Filed and Referred to the Board of Directors for deliberation pending the Audit Committee Meeting on February 28, 2025
Agenda of February 26, 2025
The motion carried by a unanimous vote.

7. New Business

A. 2025-047 **Scheduling of Public Hearing for the GLWA FY 2026 Clean Water State Revolving Fund (CWSRF) Program Project Plan Submittals**

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 7A1 AC Memo - Request to Schedule FY 2026 CWSRF Public Hearing.pdf
7A3 FY 2026 CWSRF Public Hearing Notice - GLWA.docx

Motion By: Jaye Quadrozzi
Support By: Brian Baker
Action: Recommended for Approval to the Board of Directors Agenda of February 26, 2025
The motion carried by a unanimous vote.

8. Reports

A. CFO Report (Verbal)

Nicolette Bateson, Chief Financial Officer/Treasurer, noted with the Biennial Budget discussion today, there is no additional information to provide for the CFO Report.

B. 2025-018 Monthly Financial Report through September 2024

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8B Sept 2024 Monthly Financial Report rev. 3.12.2025.pdf

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

C. 2025-052 Affordability & Assistance Update

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8C Affordability & Assistance Update.pdf

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

D. 2025-053 Gifts, Grants & Other Resources Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8D Grants Gifts and Other Resources Report.pdf

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

E. 2025-054 Quarterly CWIP Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8E Quarterly CWIP Report FY 2025 Q1.pdf

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

F. 2025-055 Conflict of Interest Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8F Conflict Of Interest Reporting Cover Memo.pdf
8F1 Conflict of Interest Reporting 2.17.25.pdf

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

G. 2025-056 FINAL - FY 2026 Units of Service Report -Uniform Forecast Period from October 1, 2021 - September 30, 2024 for the Water System Issued: February 13, 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8G Final - FY 2026 Units of Service Report 2.13.2025.pdf

Note: Director Quadrozzi excused herself from the remainder of the meeting at 10:29 a.m. during discussion of Item 8.G.

No Action Taken

9. Communications

A. 2025-057 The Procurement Pipeline for January 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 9A The Procurement Pipeline for January 2025.pdf

No Action Taken

10. Look Ahead

The Next Audit Committee Meeting is scheduled to be held February 28, 2025, at 8:00 a.m.

11. Other Matters

There were no other matters.

12. Adjournment

There being no further business, Chairperson Baker adjourned the meeting at 10:31 a.m.

Great Lakes Water Authority

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

Meeting Minutes - Draft

Audit Committee

Friday, March 14, 2025 | **8:00 AM** | **Zoom Telephonic Special Meeting**

Zoom Telephonic Special Meeting

Join Zoom Meeting:
https://glwater.zoom.us/j/87354600854?pwd=hKgXeuvH9jqARWe58gLDGpblyKTB2C.1

Join by Telephone
US Toll-Free:
877 853 5247; or 888 788 0099
Meeting ID: 873 5460 0854
Passcode: 792504

1. Call To Order

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

2. Quorum Call

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

3. Approval of Agenda

Chairperson Baker requested a Motion to Approve the Agenda.

Motion By: Jaye Quadrozzi
Support By: Gary Brown
Action: Approved
The motion carried by a unanimous vote.

4. Approval of Minutes

None

5. Public Comment

There were no public comments.

6. Old Business

None

7. New Business

A. 2025-065 Proposed Appointment of Underwriter Syndicate

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 7A1 Proposed Appointment of Underwriter Syndicate rev 3.13.2025.pdf
Attachment 1 Agenda Item 2025-065.pdf

7A3 REQ-0001836 - Underwriter Syndicate Procurement Board Report rev 3.13.2025.pdf

Motion By: Jaye Quadrozzi
Support By: Gary Brown
Action: Recommended for Approval to the Board of Directors Agenda of March 26, 2025.
The motion carried by a unanimous vote.

B. 2025-092 Upcoming Solicitation for External Auditor

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 7B Audit RFP Update 3.14.2025.pdf

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

8. Reports

A. 2025-093 CFO Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8A1 CFO Report February 2025.pdf

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

B. 2025-094 Gifts, Grants, & Other Resources Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8B Grants Gifts and Other Resources Report v2.pdf

Motion By: Gary Brown
Support By: Jaye Quadrozzi
Action: Received and File
The motion carried by a unanimous vote.

C. 2025-095 Quarterly Investment Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8C1 Quarterly Investment Report Cover Memo_February_2025.pdf
8C2 GLWA Quarterly Investment Report December 2024.pdf

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

D. 2025-096 Final FY 2026 Units of Service Report - Water System Issued February 13, 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8D Final - FY 2026 Units of Service Report 2.13.2025.pdf

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

E. 2025-097 FY 2026 Schedule of Charges as Adopted February 26, 2025 Report

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8E FY-2026-Schedule-of-Charges-Adopted-2.26.2025-rev-3.3.2025.pdf

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

F. 2025-098 Revised September 2024 Monthly Financial Report Binder dated March 12, 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 8F Previous 8B Sept 2024 Monthly Financial Report rev. 3.12.2025.pdf

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

9. Communications

A. 2025-099 The Procurement Pipeline for February 2025

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: 9A The Procurement Pipeline for February 2025.pdf

No Action Taken - Informational Only

10. Look Ahead

The next regular Audit Committee Meeting is scheduled for Friday, March 28, 2025 at 8:00 a.m.

11. Other Matters

There were no other matters.

12. Adjournment

Chairperson Baker requested a Motion to Adjourn.

Motion By: Gary Brown
Support: Jaye Quadrozzi
Action: Approved
The motion carried unanimously.

There being no further business, the meeting was adjourned at 8:48 a.m.

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

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

Re: Resolution to Adopt the Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown

Background & Analysis: Attached are the following materials:

1. Draft Great Lakes Water Authority (GLWA) Board letter
2. DWSD – FY 2026 CWSRF Project Plan Summary
3. DWSD – Resolution to Adopt the FY 2026 CWSRF Project Plan

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board of Directors approve the attached resolution to adopt the FY 2026 Clean Water State Revolving Fund Project Plan for the Detroit Water and Sewerage Department Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown.

DRAFT for Audit Committee Review Only

..Title

Resolution to Adopt the Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown

..Body

Agenda of: April 23, 2025
Item No.: **2025-104**

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 23, 2025

RE: **Resolution to Adopt the Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown**

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA) **approves the attached Resolution for the FY 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown;** 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 secures capital improvement financing on behalf of Detroit Water and Sewerage Department in accordance with foundational documents related to the establishment of GLWA. DWSD has identified the Sewer Main

DRAFT for Audit Committee Review Only

Rehabilitation project in the neighborhoods of Hubbard Farms and North Corktown within the city of Detroit for submittal to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for FY 2026 CWSRF funding consideration. This project includes the replacement of sewer mains, cured-in-place pipe (CIPP) rehabilitation, spot repairs, manhole lining, and manhole replacement. All work is to be performed within the existing road right-of-way and easements. The impact of the project will be improved customer satisfaction, safe, and reliable collection of wastewater from customers. The project will reduce the frequency of basement backups and cave-ins caused by sewer mains. The estimated cost of this project is $20 million.

The deadline for submitting all CWSRF project planning documents to EGLE is May 1, 2025, but prior to submitting the project plans, a public hearing must be held for the affected area. The public hearing notice and project plan were posted on the DWSD website and can be viewed at: www.detroitmi.gov/dwsd. This project plan was presented at that DWSD Public Hearing on February 19, 2025.

JUSTIFICATION

Pursuant to Section 7.2(b) of the Regional Sewage Disposal System Lease between the City of Detroit and GLWA, the Authority shall cooperate fully with the City in the implementation of this Detroit capital improvement, including financing through the Authority. Therefore, GLWA will submit the local project plan as it will be the CWSRF loan applicant. Per notification from EGLE, GLWA does not need to hold a separate public hearing on the local project, however, the GLWA Board of Directors will need to act on the included resolution adopting the project plan. The resolution must be approved and signed to ensure the final project plans, forms, and attachments are assembled and submitted to the EGLE by the May 1, 2025 deadline.

GLWA concurs with the DWSD Sewer Main Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown in the city of Detroit Project Plan adoption, and as the CWSRF applicant, is seeking low interest loan assistance from the CWSRF program. Savings are typically significant when comparing the interest rates under the CWSRF program with a similar open market revenue bond issue. Although the EGLE interest rate for FY 2026 will not be published until approximately October 2025, the current 20-year and 30-year loan interest rate for a significantly overburdened applicant under the CWSRF program, which has been applicable for DWSD projects, is 1.00 percent. Compared to an estimated market-based rate of 4.5%, potential interest savings on a 20-year loan would be approximately $8.6 million for a CWSRF loan amount of $20 million.

Another advantage of the CWSRF is that interest costs are only incurred on the amount drawn from the loan as project expenditures are incurred. This results in additional debt

DRAFT for Audit Committee Review Only

service savings early in the term of the loan compared to market-based transactions. Further, use of CWSRF funding as junior lien does not impact GLWA debt reserve requirements.

BUDGET IMPACT

GLWA will be the loan applicant on CWSRF loans issued on behalf of the DWSD, and DWSD will be the CWSRF loan recipient as determined by EGLE. All project costs financed by GLWA, on behalf of DWSD, through the CWSRF program bonds and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system. Debt service is anticipated to begin on October 1, 2026 for this project and will be included as part of the FY 2027 – FY 2028 biennial budget.

COMMITTEE REVIEW

This matter was presented to the GLWA Audit Committee at its March 28, 2025 meeting. The Audit Committee [insert action] that the Great Lakes Water Authority Board of Directors approve the attached Resolution for the FY 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown as presented.

SHARED SERVICES IMPACT

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

Great Lakes Water Authority
Resolution 2025-104

RE: Resolution to Adopt the Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Project Plan for the Detroit Water and Sewerage Department (DWSD) Sewer Main System Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown

By Board Member: _____

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

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

Whereas: The Sewer Main Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown in the city of Detroit Clean Water State Revolving Fund (CWSRF) Project Plan for the fiscal year (FY) 2026 has been prepared by DWSD; and

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

Whereas: The Project Plan was presented by DWSD at a public hearing held on February 19, 2025, at 2:00 p.m. in the DWSD Board of Water Commissioners (BOWC) hearing room, and all public comments were considered and addressed; and

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

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

Now Therefore Be It:

Resolved The GLWA Board hereby accepts and approves the FY 2026 CWSRF Project Plan for the DWSD Sewer Main Rehabilitation in the Neighborhoods

of Hubbard Farms and North Corktown in the city of Detroit as approved by the DWSD BOWC at its February 19, 2025, meeting; and Be It Further

Resolved The GLWA concurs with the CWSRF Project Plan adoption and agrees to serve as the CWSRF loan applicant on behalf of the City of Detroit, the loan recipient, for all activities required by CWSRF financing, and in accordance with local and state intergovernmental agreement; and Be It Further

Resolved The GLWA Resolution identifying Designated Representatives adopted on October 23, 2024, established the GLWA authorized representatives for all CWSRF program activities, and no updates to these designations are necessary at this time and Be It Further

Resolved That the Chief Executive Officer is authorized to transmit the final FY 2026 CWSRF Project Plan for the Sewer Main Rehabilitation in the Neighborhoods of Hubbard Farms and North Corktown in the city of Detroit to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the EGLE's CWSRF procedures so that the project can proceed expeditiously to construction.

Adopted by the Great Lakes Water Authority Board on:

Detroit Water and Sewerage Department

Certified Copy

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

Resolution, BOWC: 2025-33

File Number: 2025-33

Upon recommendation of Samuel A. Smalley, P.E., Deputy Director, the Board of Water Commissioners for the City of Detroit, Water and Sewerage Department recommends **adoption of the "A final project plan for the Detroit Water and Sewerage Department Sewer Rehabilitation and Designating an Authorized Project Representative FY 2026 Clean Water State Revolving Fund (CWSRF)".** The BOWC also authorizes the Chief Financial Officer and the Director to take such other action as may be necessary to accomplish the intent of this vote.

Agenda of February 19, 2025
Item No. 2025-33

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

FROM: Gary Brown, Director
Water and Sewerage Department

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

MOTION

Upon recommendation of Samuel A. Smalley, P.E., Deputy Director, the Board of Water Commissioners for the City of Detroit, Water and Sewerage Department **recommends adoption of the "A final project plan for the Detroit Water and Sewerage Department Sewer Rehabilitation and Designating an Authorized Project Representative FY 2026 Clean Water State Revolving Fund (CWSRF)"** and also authorizes the Chief Financial Officer and the Director to take such other action as may be necessary to accomplish the intent of this vote.

I, Marian King-Bell, certify that this is a true copy of Resolution, BOWC No. 2025-33, passed by the Board of Water Commissioners on 2/19/2025.

Attest: Marian King-Bell 2/21/2025

Date Certified

A RESOLUTION ADOPTING A FINAL PROJECT PLAN FOR THE

DETROIT WATER AND SEWERAGE DEPARTMENT FOR SEWER REHABILITATION FY26

CLEAN WATER STATE REVOLVING FUND (CWSRF) PROJECT

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

WHEREAS, DWSD has prepared a Clean Water State Revolving Fund (CWSRF) Project Plan, which recommends sewer replacement and rehabilitation in the Hubbard Farm and North Corktown neighborhoods; and

WHEREAS, said Project Plan was presented at the public meeting held on Wednesday, February 19, 2025 and all public comments have been considered and addressed; and

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

NOW THEREFORE BE IT RESOLVED, that Detroit Water and Sewerage Department formally adopts said Project Plan 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 Plan document as the first step in applying to the State of Michigan for a Clean Water State Revolving Fund Loan to assist in the implementation of the selected alternative.

Yeas (names of Members voting Yes): Chairman Michael Einheuser, Vice Chair, Mary E. Blackmon, Commissioner Lane Coleman, Commissioner John Henry Davis, Commissioner Linda D. Forte, Commissioner Jane C. Garcia, and Commissioner Jonathan C. Kinloch.

Nays (names of Members voting No):

I certify that the above Resolution was adopted by the Detroit Water and Sewerage Department on February 19, 2025.

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

Marian King-Bell
Signature

Board Secretary
Title

Date 2/21/2025

DETROIT WATER AND SEWERAGE DEPARTMENT NOTICE
PUBLIC MEETING FOR SEWER REHABILITATION
FY26 CLEAN WATER STATE REVOLVING FUND (CWSRF) PROJECT

The Detroit Water and Sewerage Department (DWSD) announces a Public Meeting regarding its Project Planning Document for proposed Sewer Main Rehabilitation in the neighborhoods of Hubbard Farms and North Corktown in the city of Detroit. DWSD seeks low-interest Clean Water State Revolving Fund (CWSRF) loan assistance for FY2026. This project is comprised of rehabilitating aging and/or compromised selected sewer mains located in the neighborhoods of Hubbard Farms and North Corktown located in Council District 6. Construction will include the replacement of sewer mains, cured-in-place pipe (CIPP) rehabilitation, spot repairs, manhole lining, and manhole replacement. All work is to be performed within the existing road right-of-way and easements. The impact of the project will be improved customer satisfaction and safe, reliable collection of wastewater from customers. This project will reduce the frequency of basement backups and cave-ins caused by sewer mains. The temporary impact of construction activities will be minimized through mitigation measures specified in the contract documents. Adverse impacts on historical, archaeological, geographic, or cultural areas are not expected. This project is necessary to ensure that DWSD can maintain the condition of its local combined sewer system. The Project Planning Document describes sewer mains in critical need of replacement or rehabilitation. The total cost of this work is $20,000,000, which is being sought through the CWSRF program.

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

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

DATE: Wednesday, February 19, 2025

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 via Zoom: https://cityofdetroit.zoom.us/j/81572635118
Use Passcode: 482262021

Information on the Project Plan will be available for review after February 1, 2025 at the following locations:

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

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

Call: Sonali Patel at 313-782-2477
Email: Sonali Patel at sonali.patel@detroitmi.gov
Mail: Sonali Patel
Detroit Water and Sewerage Department
735 Randolph, Suite 901
Detroit, MI 48226

Written comments will be accepted at the above address if received prior to 2:00 p.m. EST, Wednesday, February 19, 2025.

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

Detroit Water and Sewerage Department

FY2026 CWSRF Project

Combined Sewer Rehabilitation in Hubbard Farms and North Corktown

CITY OF DETROIT
Water & Sewerage Department



Funding Opportunity

SRF Program and Federal Grants

State Revolving Funds (SRF) Program Overview

State Loan Program

- $1.0B Funded via SRF/America Rescue Plan Act (ARPA)
- $500 Million funded via Infrastructure Investment Jobs Act

City of Detroit is well positioned to receive significant grants

- Detroit typically qualifies as a Significantly Overburdened Community

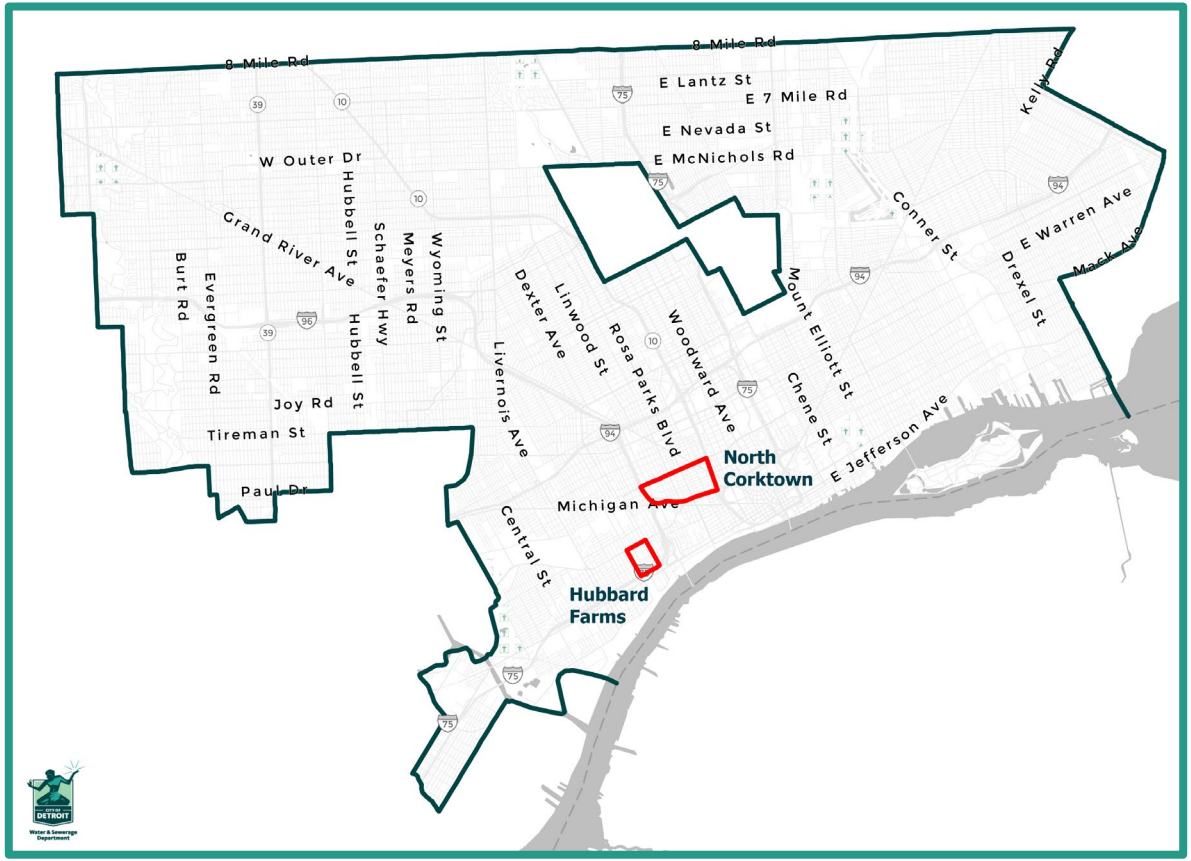
Why SRF Program?

- The State of Michigan is using the SRF Program
- SRF requirements will apply to all projects which includes:
  - Development of a Project Plan and NEPA Compliance on Federal Crosscutting Rules
  - Strict Adherence to fixed project milestones as negotiated by EGLE and DWSD
  - Compliance with Buy America, Davis Bacon Wages, DBE Participation Requirements

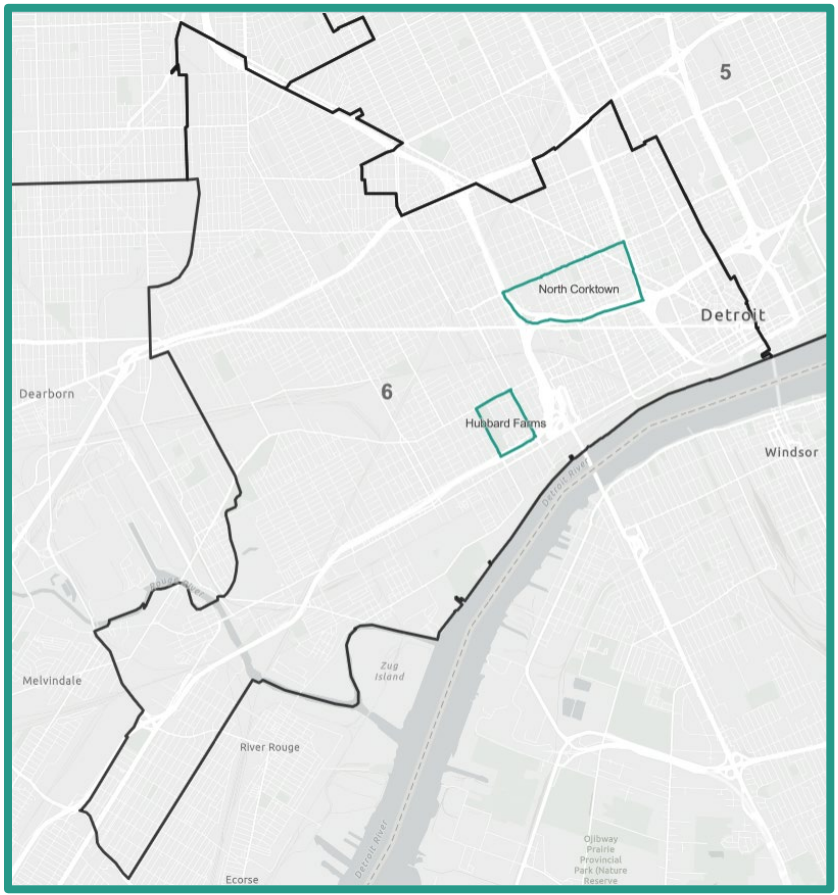
Project Locations and Scope of Work

Combined Sewer Rehabilitation in Hubbard Farms and North Corktown

Project Area



Project Area – District 6



Combined Sewer Rehabilitation

Up to $20M investment for rehabilitation of existing DWSD combined sewer assets in the neighborhoods of:

- Hubbard Farms
- North Corktown

Project Highlights

- Project includes sewer main replacement, sewer lining, manhole repairs
- DWSD Risk Assessment modeling techniques were used to identify project area
- Condition Assessment data gathered in 2023-2025 was used to develop and guide rehabilitation strategies and confirm repair locations
- Sewer segments, manholes, and catch basins included in the project plan
- **In the event that 100% grant funding is not secured, DWSD is under no obligation to move forward with construction**

Schedule

Project Plan, Design and Construction

SRF Project Plan Schedule

Preliminary Engineering
- December 2024 - February 2025

Draft Project Plan Public Meeting and Board Resolution
- February 19, 2025

GLWA Board Meeting and Board Resolution
- April 23, 2025

Final Project Plan
- May 2025

Notice of Award Status
- February 2026

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: Jacqueline Morgan, Finance Manager – State Revolving Fund (SRF) Program Team

Re: Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration

Background/Analysis: See attached draft Board Letter.

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board of Directors approves the attached Resolution to Adopt the GLWA project plans for the 1) WRRF Improvements to the Sludge Feed System for Solids Processing, 2) Hubbell Southfield CSO Facility, and 3) CSO Facilities Improvements II for FY 2026 CWSRF funding consideration at its regularly scheduled meeting on April 23, 2025, 2:00 pm.

..Title

Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration

..Body

Agenda of: April 23, 2025
Item No.: **2025-105**
Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 23, 2025

RE: **Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration**

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer//Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the attached Resolution to Adopt the GLWA 1) Water Resource Recovery Facility (WRRF) Improvements to the Sludge System for Solids Processing, 2) Hubbell Southfield Combined Sewer Overflow (CSO) Facility Improvements, and 3) CSO Facilities Improvements II Project Plans for FY 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration** and authorizes the CEO to take such action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Great Lakes Water Authority (the “GLWA”) has identified three (3) projects in the FY 2025 to FY 2029 Capital Improvement Plan (CIP) for submittal to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) FY 2026 SRF financing program. The deadline for submitting all CWSRF project plans to EGLE is May 1, 2025.

Prior to submitting the project plans, GLWA must hold a public hearing to present the project plans, which is scheduled for April 23, 2025, at 2:00 pm.

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

1) WRRF Improvements to the Sludge System for Solids Processing

2) Hubbell Southfield CSO Facility Improvements

3) CSO Facilities Improvements II

Once the public hearing is closed, a resolution to adopt the final project planning documents will be scheduled for action by the GLWA Board of Directors at its regularly scheduled meeting also on April 23, 2025.

The attached Resolution approves the project plans, directs GLWA staff to address all public comments, prepare responsiveness summaries, and publish the final Project Plans; authorizes GLWA's CEO to transmit the final FY 2026 CWSRF Project Plans to EGLE; and to secure a CWSRF loan for the projects. The resolution must be approved and signed to ensure the final project plans, forms, and attachments are assembled and submitted to the EGLE by the May 1, 2025 deadline.

The Projects:

WRRF Improvements to the Sludge Feed System for Solids Processing (CIP #213006) – This project consists of improvements to the sludge feed system at the WRRF which conveys sludge from six (6) sludge storage tanks to three (3) dewatering facilities. The improvements will replace aging pumping equipment and incorporate sludge feed conveyance loops to provide additional system flexibility, redundancy, and resiliency. The total cost of this project is estimated at $24.4 million.

Hubbell Southfield CSO Facility Improvements (CIP #273001) – This project includes upgrades to existing facility systems which includes flushing, dewatering, chemical disinfection, screening, instrumentation and controls, architectural, Heating, Ventilation, and Air Conditioning (HVAC), electrical, and site improvements, along with other miscellaneous enhancements. The project aims to bring the Hubbell-Southfield CSO Facility into compliance with current codes and standards, standardize equipment, enhance operational efficiency, improve reliability and resiliency, and strengthen safety measures. The total cost of this project is estimated at $67.5 million.

CSO Facilities Improvements II (CIP #270006) – The project consists of safety improvements and building rehabilitation at all nine (9) CSO facilities. The safety improvements include fall protection, upgraded eyewash stations, and miscellaneous improvements based on site-specific requirements. The St. Aubin Screening Disinfection Facility improvements also include disinfection, screening, electrical, HVAC systems, as well as various site improvements. The control upgrades at Baby Creek and Belle Isle CSO facilities consists of installing new flow monitoring, improvements to the gas monitoring and communications equipment. The proposed improvements will increase facility reliability, flexibility, operation, and safety, and decrease maintenance at the facilities. The total cost of this project is estimated at $26.8 million.

Note: The project cost estimates contained on the Public Hearing Notice may differ from those in this Board letter as design details and costs are continually refined as we progress towards the formal bid process. The market is ever evolving, and the project designers continuously re-examine the estimates, adjusting based on these parameters.

JUSTIFICATION

GLWA is seeking low interest loan assistance through the CWSRF program for the proposed projects. Although the interest rate for FY 2026 will not be published by EGLE until approximately October 2025, the current year's interest rate of 2.50% for a 20-year loan and 2.75% for a 30-year loan is lower than present conventional revenue bond interest rates. GLWA may also qualify as an "overburdened applicant" and if eligible, the interest rates for a 20-year loan and 30-year loan will decrease to 2.00%. The time period for financing will be aligned with the life of the asset. For example, a 25-year asset would be funded with a 20-year, not 30-year loan.

Potential savings are significant when compared to municipal bond interest rates in a market-based transaction. Comparing the current CWSRF overburdened applicant status interest rate of 2% to the estimated market-based rate of 4.5%, potential interest savings using the CWSRF loan are shown below.

- WRRF Improvements to the Sludge System for Solids Processing – CWSRF of $24.4 million
  20-year loan, potential interest savings of $7.7 million
  30-year loan, potential interest savings of $12.3 million

- Hubbell Southfield CSO Facility Improvements – CWSRF of $67.5 million
  20-year loan, potential interest savings of $21.2 million
  30-year loan, potential interest savings of $33.9 million

- CSO Facilities Improvements II – CWSRF of $26.8 million
  20-year loan, potential interest savings of $8.4 million
  30-year loan, potential interest savings of $13.5 million

A summary of this analysis is also provided as Attachment 1 to this Board Letter.

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

BUDGET IMPACT

Debt service interest payments on these projects would begin in the fall of 2027 and will be included as part of the FY 2028 financial plan.

COMMITTEE REVIEW

This matter was presented to the GLWA Audit Committee at its meeting on March 26, 2025. The Audit Committee {insert action} that the Great Lakes Water Authority Board of Director **approve the attached Resolution to Adopt project plans for 1) Water Resource Recovery Facility (WRRF) Improvements to the Sludge System for Solids Processing, 2) Hubbell Southfield Combined Sewer Overflow (CSO) Facility Improvements, and 3) CSO Facilities Improvements II for FY 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration** at its regularly scheduled meeting on April 23, 2025 at 2:00 p.m.

Attachment 1

Table 1: CWSRF Program Loan Savings Comparison to 4.5% Estimated Market Interest Rate

CIP Project #	Project	Estimated SRF Project Cost	Comparative Savings (Estimated Market-based rate of 4.5% versus CWSRF 2% Interest Rate) 20-Year Loan	30-Year Loan
213006	WRRF Improvements to the Sludge System for Solids Processing	$ 24,400,000	$ 7,672,600	$ 12,258,350
273001	Hubbell Southfield CSO Facility Improvements	67,500,000	21,222,800	33,902,500
270006	CSO Facilities Improvements II	26,800,000	8,425,500	13,458,975

Great Lakes Water Authority
Resolution 2025-105

RE: Resolution to Adopt the Great Lakes Water Authority Project Plans for Fiscal Year (FY) 2026 Clean Water State Revolving Fund (CWSRF) Funding Consideration

By Board Member: _____

Whereas: Project Plans for the Water Resource Recovery Facility (WRRF) Improvements to the Sludge System for Solids Processing, Hubbell Southfield Combined Sewer Overflow (CSO) Facility Improvements, and CSO Facilities Improvements II have been prepared by the GLWA for FY 2026 CWSRF funding consideration;

Whereas: The WRRF Improvements to the Sludge System for Solids Processing project consists of improvements to the sludge feed system at the WRRF which conveys sludge from six (6) sludge storage tanks to three (3) dewatering facilities;

Whereas: The Hubbell Southfield CSO Facility Improvements project includes upgrades to existing facility systems which includes flushing, dewatering, chemical disinfection, screening, instrumentation and controls, architectural, Heating, Ventilation, and Air Conditioning (HVAC), electrical, and site improvements, along with other miscellaneous enhancements;

Whereas: The CSO Facilities Improvements II project consists of safety improvements and building rehabilitation at all nine (9) CSO facilities;

Whereas: The FY 2026 CWSRF Project Plans have been placed on public notice and a Public Hearing was held April 23, 2025, at 2:00 p.m. where comments on the recommended project were solicited;

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

Whereas: Formal action by the GLWA Board of Directors is needed to adopt the recommended FY 2026 CWSRF Project Plans for WRRF Improvements to the Sludge System for Solids Processing, Hubbell Southfield CSO Facility Improvements, and CSO Facilities Improvements II, as a requirement in the Michigan Department of Environment, Great Lakes and Energy (EGLE) CWSRF program;

Now Therefore Be It:

Resolved That this Board hereby accepts the FY 2026 the WRRF Improvements to the Sludge System for Solids Processing, Hubbell Southfield CSO Facility Improvements, and CSO Facilities Improvements II project plans dated April 23, 2025, and as directs staff members of the GLWA to address all public comments, prepares the responsiveness summary, and publish the final Project Plans; and Be It Further

Resolved That the Chief Executive Officer (CEO) is authorized to transmit the final FY 2026 CWSRF Project Plans for WRRF Improvements to the Sludge System for Solids Processing, Hubbell Southfield CSO Facility Improvements, and CSO Facilities Improvements II to EGLE on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with CWSRF procedures so that the projects can proceed expeditiously to construction.

Adopted by the Great Lakes Water Authority Board on:



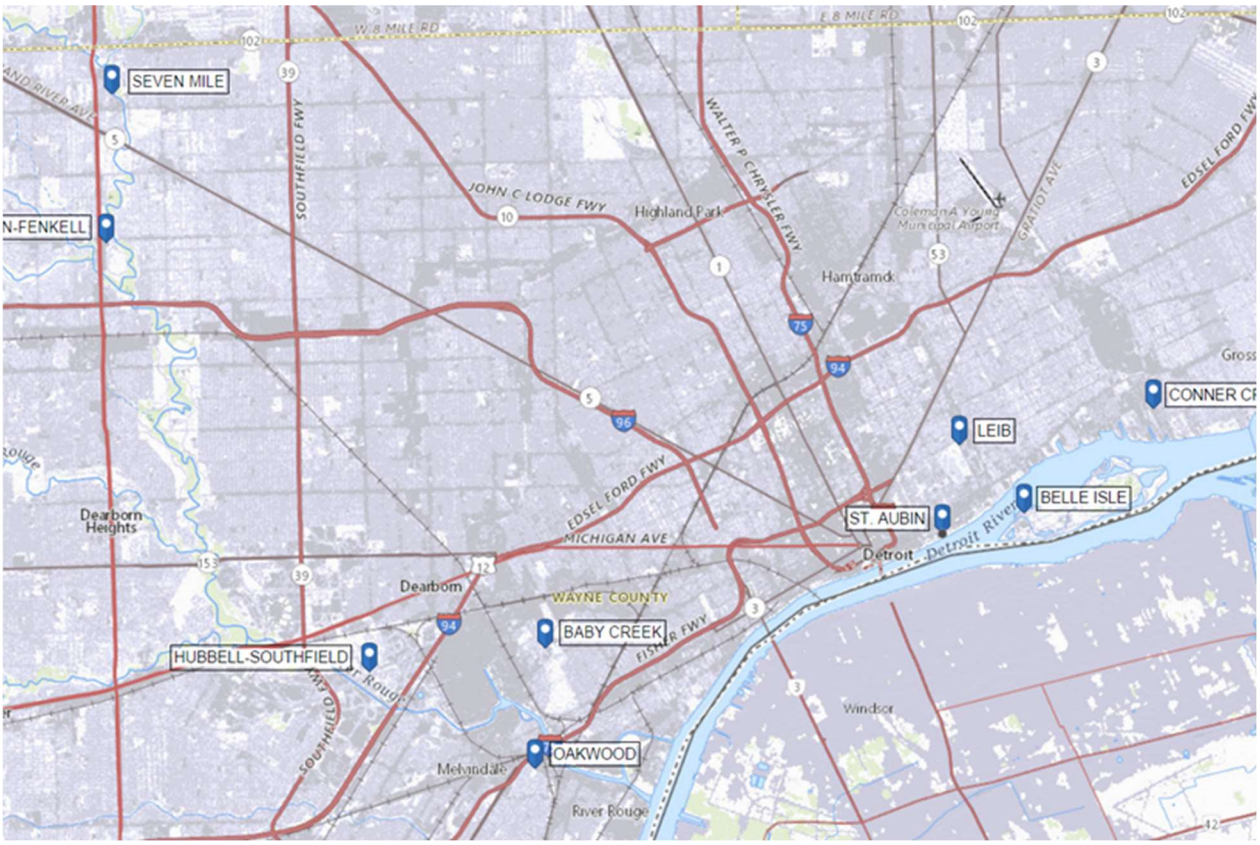
GLWA
Great Lakes Water Authority

CSO FACILITIES IMPROVEMENTS II
2026 CLEAN WATER STATE REVOLVING FUND
PROJECT PLAN SUMMARY

FEBRUARY 2025

Hazen

WADE TRIM



Proposed Improvements

The Great Lakes Water Authority (GLWA) collects and treats most of the sanitary sewage in southeast Michigan. It operates the Water Resource Recovery Facility (WRRF) located at 9300 W Jefferson Ave, Detroit, MI 48209, and nine Combined Sewer Overflow (CSO) facilities:

1. Seven Mile CSO (19272 Shiawassee Dr, Detroit, MI 48219)
2. Puritan-Fenkell CSO (23673 Fenkell Ave, Detroit, MI 48223)
3. Leib SDF (2188 Mt Elliott St, Detroit, MI 48207)
4. Conner Creek CSO (11900 Freud St, Detroit, MI 48215)
5. Belle Isle CSO (2 Pleasure Dr, Detroit, MI 48207)
6. St. Aubin SDF (2200 Atwater St, Detroit, MI 48207)
7. Baby Creek SDF (9524 Dix Ave, Dearborn, MI 48120)
8. Hubbell-Southfield CSO (16540 Rotunda Dr, Dearborn, MI 48120)
9. Oakwood CSO (12082 Pleasant St, Detroit, MI 48217)

CSO facilities are implemented to reduce pollution during wet weather events that exceed the capacity of the sanitary sewer systems. To continue to provide safe, efficient, and reliable operation of the CSO facilities, GLWA has prioritized the CSO Facilities Improvements II Project. The scope of this project has been divided into three parts:

St. Aubin SDF – Disinfection, Screening, and Misc. Improvements Project includes the following:

- Chemical feed system improvements
- Chemical storage and mixing system improvements
- Screen system improvements
- Select HVAC improvements
- Electrical power improvements
- Lighting, and building system improvements
- Instrumentation and controls (I&C) standardization improvements
- Access hatch improvements; and

- Incorporation of storage space within the Control Building

These improvements will maintain the long-term reliability of this critical SDF.

CSO Facility Safety Improvements and Building Rehabilitation Project addresses the safety and architectural deficiencies previously identified. Examples of improvements include but are not limited to extending guardrails, reorienting hatches, relocating ladders, and installing swing gates to reduce falling risk. Removing tripping hazards is also a focus of safety improvements to the facilities.

Control System Upgrades at Baby Creek and Belle Isle CSO Facilities Project implements a series of lighting and I&C system improvements needed at GLWA's Belle Isle CSO and Baby Creek CSO.

Summary of Project Needs

The CSO facilities provide treatment of overflow water and provide safer water quality levels for the public and environment. The majority of the CSO facilities began operating in the 1990's and early 2000's. Due to age, they require system upgrades, rehabilitation, and maintenance. GLWA's Capital Improvement Plan (CIP) includes several projects with the following overarching goals:

- Improve operational efficiency through standardized CSO systems and equipment by coordinating with other ongoing GLWA CSO projects.
- Incorporate RCM/RCD (Reliability Centered Maintenance/Reliability Centered Design) into the design to reduce life-cycle costs and mitigate O&M difficulties.
- Provide safer facilities through fall protection, emergency eyewash improvements, and the removal of trip hazards.
- Rehabilitate buildings to address current architectural, electrical, and HVAC/plumbing deficiencies.

Consultants reviewed and evaluated building and process components of the nine CSO facilities for deficiencies in safety, structure/architecture, and process.

Potential Alternatives

Alternatives were evaluated for St. Aubin CSO's Screening System Improvements and St. Aubin's Mixing Chamber Optimization. The alternatives were evaluated with the following goals:

- Long-term system reliability
- Simplified operations and maintenance (O&M)
- Improve operational efficiency through standardized parts and systems across all GLWA CSO facilities, where practical.

The approach considers the long-term impacts of the improvements. Improvements related to safety, architectural repairs, plumbing maintenance, and controls standardization are considered "base improvements" and need to be completed regardless of the selected alternative. Phrased differently, "base improvements" are included as part of every alternative because they are not dependent on the alternative selection, they are necessary, and they did not require alternative analysis.

No Action and Regional Alternatives

The "No Action" alternatives would not address the safety, reliability, control systems, and operations and maintenance needs experienced at the facilities. Not addressing the problems would erode the facility's reliability and ability of GLWA to meet current OSHA requirements and NPDES permit requirements. Postponing the improvements risks further degradation of the systems and potential negative environmental impacts. For the improvements discussed above, the "No Action" alternative is not considered viable, and it is not pursued further.

The Regional Alternative is not applicable because GLWA already operates a regional system, of which the CSOs are an integral part.

St. Aubin Screening System Improvement Alternatives

Five screening improvement alternatives were considered. Two of the alternatives focused on rehabilitating the screens, one with improved cross-flow characteristics. Three other alternatives evaluated the applicability of perforated plate and perforated trough technologies. The selected alternative included rehabilitating the existing Romag screens and installing an automatic water flushing system to prevent screen buildup. This alternative was the most cost-effective solution while also achieving the desired screening efficiency.

St. Aubin Mixing Chamber Optimization Alternatives

Three mixing chamber alternatives were considered:

- Alternative 1 – Improved Pre-Chlorination Mixing and Reduce Mixer Power from 7.5 HP to 5 HP Each
- Alternative 2 – Two 10 HP Mixers Per Chamber Shifted Upstream
- Alternative 3 – Single 20 HP Mixer Per Chamber Sized for Sufficient Mixing

CFD Modeling revealed that Alternative 1 achieved the desired mixing results, included redundancy, required less power, and avoided structural modifications to the basin.

Environmental Evaluation

Short-term impacts, such as equipment noise and dust, cannot be avoided during construction of these proposed projects. However, thoroughly designed and well-planned construction sequencing should minimize impacts. Equipment noise impacts to surrounding areas can be minimized by controlling hours of work. Dust and soil deposits will be controlled through frequent watering and pavement sweeping. Soil erosion control measures will also be implemented as needed to reduce unwanted soil runoff. Specific techniques will be specified in the construction contract documents for each project.

A state historic resource evaluation and an endangered species and habitat review are underway. There are no known cases of conflict with the projects. Each project will be closely monitored, and any conflict will halt the project until the correct course of action is determined and steps are taken for proper mitigation.

Estimated Project Costs and User Impact

Cost estimated values include the cost of construction, project contingencies, and engineering. The present worth assuming a funding term of 20 years and a loan interest

rate of 2.0% based on the EGLE posted loan rate, yields an equivalent annual cost of $26,835,275. According to the GLWA Master Plan and available housing data from the Southeast Michigan Council of Governments, an estimated 1,275,737 households will be impacted by these projects. The per household user cost is estimated to be $1.29 per year.

Proposed Implementation Schedule

The proposed schedule for the project is presented in the table below.

Proposed Project Schedule

Milestone	Date
Notice to Proceed	Q4 2025
Construction Begins	Q4 2025
Final Completion	Q1 2028

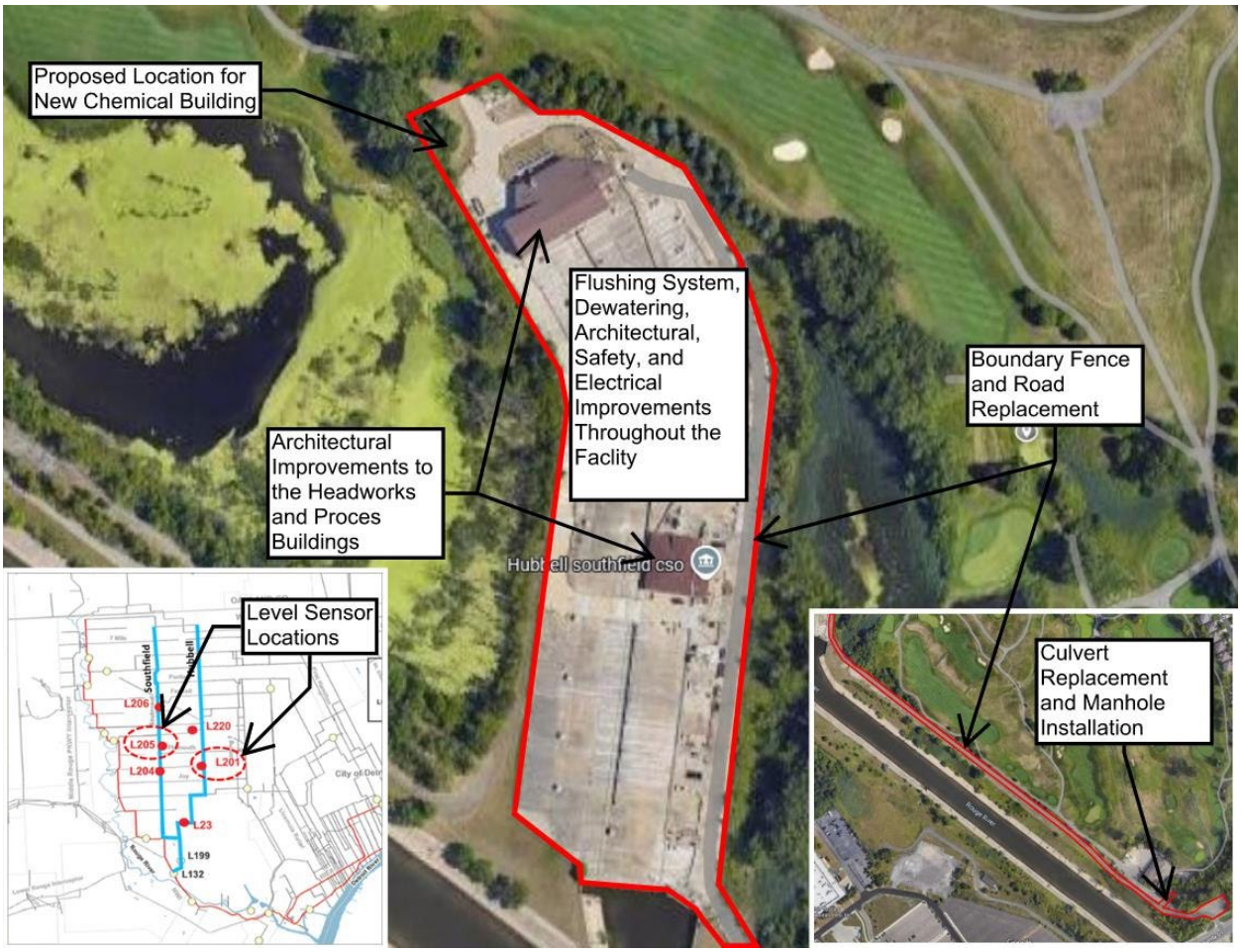


GLWA
Great Lakes Water Authority

HUBBELL-SOUTHFIELD CSO FACILITY IMPROVEMENTS
ITA: 918-0716
2026 CLEAN WATER STATE REVOLVING FUND PROJECT PLAN SUMMARY

FEBRUARY, 2025

WADE TRIM



Proposed Improvements

The Great Lakes Water Authority (GLWA) operates the Hubbell-Southfield Combined Sewer Overflow (CSO) Facility located at 16540 Rotunda Dr, Dearborn, MI 48120. CSO facilities are installed to decrease pollution during wet weather events that exceed the capacity of the sanitary sewer systems. The Hubbell-Southfield CSO is one of nine GLWA CSO treatment facilities. It has a 22-million-gallon (MG) storage capacity and a design flow capacity of 2,200 cfs. The facility began operation in 1999, and various improvements have been completed since then. The tributary area to Hubbell-Southfield CSO comprises approximately 14,400 acres in the City of Dearborn and the west side of the City of Detroit. The facility discharges to the Northwest Interceptor with overflows discharging to the Rouge River. The goals of this project are to bring the facility up to current codes/standards, standardize equipment, improve operations, strengthen operational reliability, improve safety, and ease maintenance.

To keep the Hubbell-Southfield CSO safe and functioning at a high level of effectiveness, the project includes the following improvements:

- Improvements to the facility's flushing system including the replacement of a flushing pump, piping, and a new flushing valve; a new magnetic flow meter; and structural modifications to the basin floor

that include the installation of flushing lane curbs. An existing river gate will be replaced and a screen installed to allow for use of surface water to provide for source of flushing water.

- The dewatering system improvements include four new dewatering pumps; two new ball valves; and piping upgrades.
- Chemical storage that holds disinfectant is being expanded with a new 20,000-gallon tank enclosed in a new chemical storage building. The chemical feed and transfer system used to treat the water is being upgraded with new transfer pumps and TRC analyzers along with associated piping, strainers, and instrumentation and control systems.
- The electrical system upgrades include new Motor Control Centers and new electrical wiring. A new computer control system with two new remote level sensors is also included.
- Site improvements include fencing replacement, stormwater culvert repair, and driveway paving upgrades.
- Architectural improvements include minor upgrades in the existing Headworks and Process Buildings, improvements to a walkway in the Headworks Building, and new access hatches into the basin.

Summary of Project Needs

The Hubbell-Southfield CSO Facility's primary function is to adequately treat any wet weather overflows prior to discharge to the receiving water body or return captured water to the Wastewater Resource Recovery Facility (WRRF) for further treatment. A facilities assessment identified future capital improvements to the disinfection and flushing systems, electrical and instrumentation equipment, and site features. Additional condition assessments and studies were conducted to evaluate the alternatives and confirm the project improvements.

Major goals of the Hubbell-Southfield CSO Facility Improvements Project include:

- Bring the facility up to current codes and standards, where possible
- Standardizing equipment, where possible
- Improve the operational reliability of the facility
- Improve process effectiveness and efficiency in flushing and disinfection systems
- Reduce the number of process shutdowns due to maintenance and equipment failures
- Improve worker safety

Potential Alternatives

A needs assessment grouped findings into fourteen areas which are included in this Hubbell-Southfield CSO Improvements Project. Multiple alternatives were considered to provide the best and most cost-effective solutions in each of these areas.

"No Action" and Regional Alternatives

The "No Action" alternative was determined to be unacceptable for all areas based on the existing condition of the various treatment processes and was not evaluated further. This alternative would not address the identified needs and put the ability to meet the NPDES Permit at risk, now and in the future.

A Regional Alternative in the context of this Project Plan is not applicable. GLWA operates the regional CSO treatment facilities that receive combined sewer flows from several counties in the region. The function and

capacity added to the system by the CSO facilities cannot be achieved by connecting with another system.

Optimum Performance Alternatives Approach

GLWA's approach to evaluating the Optimum Performance Alternatives and obtaining the Selected Alternative, was iterative and spanned multiple projects from 2021 to the present. Alternatives were evaluated based on the following:

1. Net Present Value (NPV) evaluation
2. Non-monetary evaluation that considered the following five benefits
   - Benefit #1 – Health and Safety
   - Benefit #2 – Water Quality and Compliance
   - Benefit #3 – Capacity Enhancement
   - Benefit #4 – Component Performance
   - Benefit #5 – O&M Ease
3. Best Value calculation based on the lowest NPV / Total Benefit ratio

With a few exceptions, the Best Value Alternative was selected. Exceptions were made to account for the importance of safety of operations and maintenance staff or due to cost considerations. The following table list the 14 areas included in the Hubbell-Southfield CSO Improvements Project.

Environmental Evaluation

Short-term impacts, such as air-born dust from heavy machinery cannot be avoided during construction of this proposed project. However, procedures to minimize dust and other air-born particles caused by construction will be required. Dust and soil deposits will be controlled through frequent watering and pavement sweeping. Soil erosion control measures will also be implemented as needed to reduce unwanted soil runoff.

Hubbell-Southfield CSO Basin Improvements Project Summary

Improvement Area	Description
HS-SCR-1	Screening Improvements
HS-DIS-1	Chemical Feed Utilizing Manifold Pump Distribution and Centrifugal Pumps
HS-DIS-2	Provide Flow-paced and TRC-paced Chemical Feed Control System
HS-DIS-3	Add a New Chemical Storage Tank
HS-FD-1	New Basin Flushing System with new surface water flushing source water gate and screen
HS-FD-2	Upgrade Basin Dewatering Pumps and Reinstall Sump Pumps and Fluidization System
HS-FD-3	Provide Equipment Access to Effluent Channel
HS-ELEC-1	Electrical Improvements
HS-I&C-1	I&C Improvements
HS-I&C-2	Control System Upgrade
HS-HVAC	Process and Headworks Building HVAC Upgrades
HS-SITE-1	Increase Flushing Water Pressure and Add Hose Bibs in Headworks Area
HS-SITE-2	Site Improvements to access drive, fence, and culvert
HS-ARCH-1	Minor upgrades in Process and Headworks Buildings

Estimated Project Costs

The project construction costs are summarized in the table below. These costs do not include project contingencies, and engineering.

Hubbell-Southfield CSO Basin Improvements Construction Cost Summary	
Improvement	Estimated Capital Cost
Civil/Site	$3,160,000
Demolition	$2,818,000
Architectural	$326,000
Structural	$6,493,000
Process	$18,179,000
HVAC/Plumbing	$635,000
Electrical	$7,440,000
I&C	$7,379,000
Subtotal	**$46,429,000**

Estimated User Cost Impact

The costs are consistent with the level of details available at the design stage and was developed in accordance with the Association for the Advancement of Cost Engineering International (AACE) criteria. It is a Class 2 estimate with an expected accuracy range of -15% to +20%. Calculating the total cost of the project includes contingency, engineering, and administrative costs. In the present worth calculation, annual operations, maintenance, and replacement costs are assumed to be zero because they will be less than or equal to the current costs.

This project is targeted for low interest loan assistance through the Clean Water State Revolving Fund (CWSRF) program. Repayment of the SRF loan through annual debt retirement payments will impact the customer rates resulting in increased user costs. This impact to customer rates is determined by dividing the project's cost across the GLWA customers. The estimated household cost of $4.11 per household per year, is summarized in the table below.

User Cost Impact for the SRF Hubbell-Southfield CSO Facility Improvements Project	
Cost Category	Value
Estimated Construction Cost	$46,429,000
Contingency	$9,635,000
Engineering and Const. Admin.	$11,418,000
Total Cost of Project	$67,482,000
Total Present Worth	$85,655,000
Annualized Cost of Project (assuming SRF discount rate of 2.0% over 20 years)	$5,238,000
Service Area Households (City of Detroit and surrounding communities)	1,275,737
Estimated Household User Cost	~ $4.11 per household per year

Proposed Implementation Schedule

The proposed schedule for the project plan and design and construction of the improvements is presented in the table below.

Proposed Implementation Schedule	
Project Activity	Project Milestone
Start Design	September 25, 2023
Project Plan Public Hearing	April 23, 2025
Submittal of Project Plan to EGLE	May 1, 2025
Complete Design	August 25, 2025
Start Construction	June 25, 2026
Complete Construction	December 24, 2029
Project Closeout	June 22, 2030

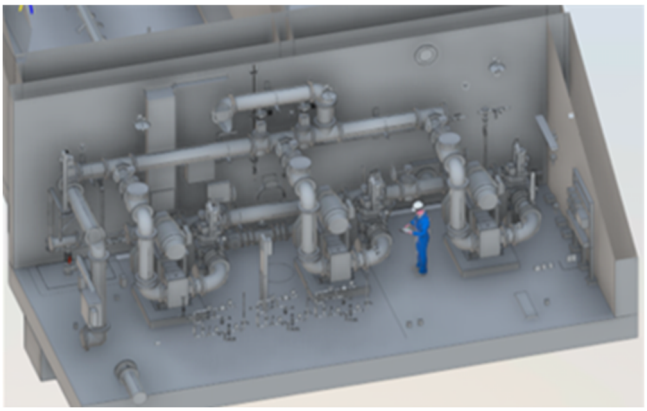
GREAT LAKES WATER AUTHORITY

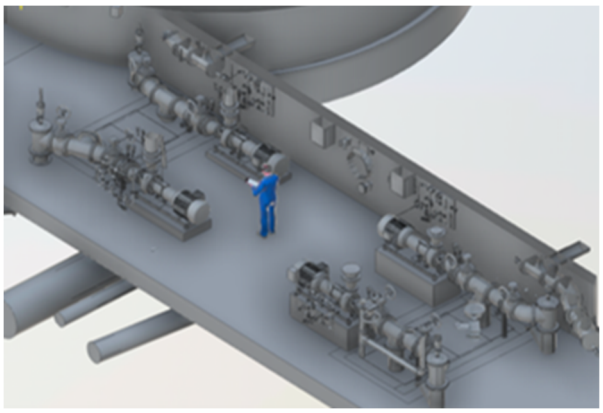
Water Resource Recovery Facility (WRRF)

Improvements to the Sludge Feed System for Solids Processing

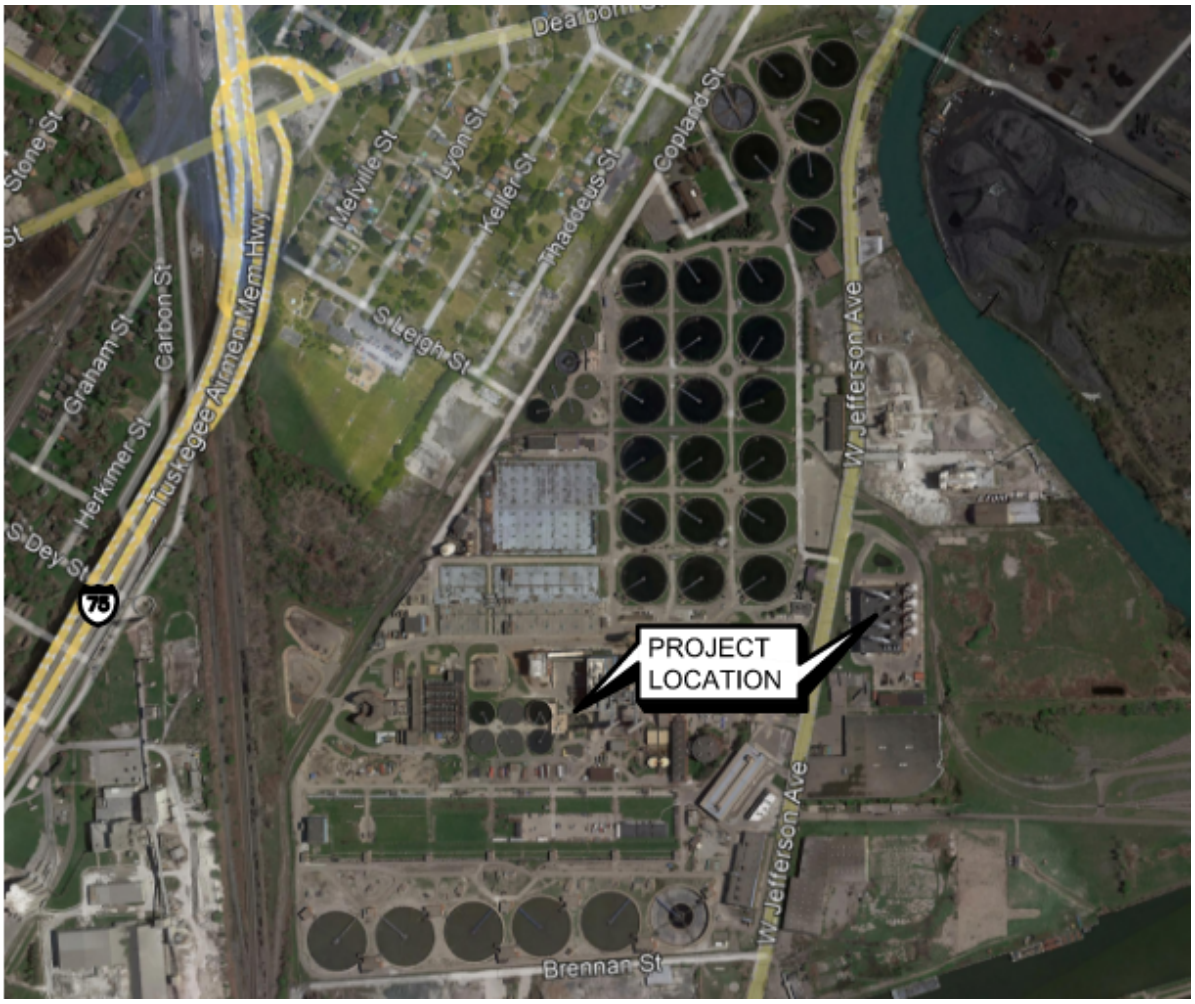
Project Plan Summary

March 5, 2025





GLWA
Great Lakes Water Authority



WRRF Aerial Map (9300 W. Jefferson Ave)

System Description

The WRRF generates solids through primary and secondary clarification. Solids handling processes include gravity thickening, blending, storage, dewatering, incineration, and drying treatment processes. Thickened primary sludge (TPS) and thickened waste activated sludge (TWAS) are blended prior to being discharged into six sludge storage tanks (SSTs). The sludge feed system is comprised of six sludge storage tanks (4 circular, 2 rectangular), six sludge feed pumps, piping, valves, instruments, and appurtenances. The system conveys sludge through pressurized sludge headers from the sludge storage tanks to flow control equipment upstream of dewatering equipment located in three dewatering facilities.

These dewatering facilities include belt filter presses (BFPs) located in Sludge Dewatering Complex I (C-I); BFPs in Sludge Dewatering Complex II (C-II); and centrifuges (CFGs) in the Biosolids Drying Facility (BDF).

The sludge feed system is a critical step in the WRRF's ability to process solids and maintain the facility's solids throughput capacity. System failure could result in excessive solids buildup which could cause inefficiencies in the WRRF's treatment processes and potentially lead to poor effluent water quality, odor issues, and permit compliance issues.

Summary of Project Needs

This project is focused on improving system reliability, flexibility, and ease of operation and maintenance. Numerous components of the sludge feed system are approaching the end of their expected useful lives. The sludge feed pumps are oversized for the feed rates required at each dewatering facility based on the current mode of operation. In addition, the sludge feed piping "dead ends" at each of the dewatering facilities, resulting in sludge header pressures that are difficult to maintain within the operating range required for the sludge flow control equipment upstream of the dewatering equipment.

Specific project issues and needs include:

- SST ultrasonic level sensors are inaccurate and difficult to access.
- System equipment is approaching the end of expected useful lives.
- SFP pump types and sizing result in inefficient operation and limits operational flexibility.
- Excessive rags in tanks can clog pumps.
- SSTs 1-4 Pipe Gallery has been prone to process flooding events.
- Limited washdown stations for process areas.
- Poor lighting in pump process areas.
- Sludge feed piping "dead ends" at each of the dewatering facilities, resulting in sludge header pressures that are difficult to maintain within the operating range requirements.
- Excessive wear/frequent replacement of the BDF sludge feed header recirculation line pinch valve that is used to maintain system pressure. Results in frequent replacements and system downtime.
- Limited and aging instruments results in challenges associated with monitoring pumping system performance and troubleshooting issues.
- Limited system flushing locations.
- Limited interconnections between feed headers to allow for sludge feed system operational flexibility.

Proposed Improvements

The proposed improvements are based on evaluation of cost and non-cost parameters to determine the appropriate improvements for implementation.

SSTs 1-4 Pipe Gallery

- Replacement of SFPs 1-4, seal water booster pumps, and associated piping and appurtenances. New equipment sized and configured to incorporate sludge conveyance loops and provide discharge location flexibility.
- New process sump and sump pumping system to mitigate gallery flooding.
- Replacement of HVAC equipment.
- Lighting upgrades.
- Additional pipe flushing and washdown station locations.
- New lifting devices and appurtenances to facility maintenance activities.
- Civil, Architectural, Structural, Plumbing, Electrical, and I&C improvements needed to support the process mechanical and HVAC improvements.

SSTs 5/6 Pump Building

- Replacement of SFPs 5 and 6 and associated piping and appurtenances. New equipment to include three rotary lobe sludge feed pumps with upstream grinders, sized and configured to incorporate sludge conveyance loops and provide discharge location flexibility.
- Replacement of building sump pumps.
- Replacement of HVAC equipment.
- Lighting upgrades.
- Additional pipe flushing and washdown station locations.
- New floor opening and lifting devices and appurtenances to facility maintenance activities.
- Civil, Architectural, Structural, Electrical, and I&C improvements needed to support the process mechanical, plumbing, and HVAC improvements.

Miscellaneous Improvements

- Sludge Dewatering Complex I, Sludge Dewatering Complex II, and Biosolids Dryer Facility: New piping and instrumentation to provide sludge conveyance loops.
- Sludge Processing Complex A: Conversion of existing room to SFP Electrical Room to house the new SFP VFDs.
- Sludge Processing Complex A: Replacement of Control and Telecom Rooms HVAC equipment.

Potential Alternatives

Alternative analyses for the WRRF Improvements to the Sludge Feed System for Solids Processing project were performed as part of the conceptual design phase and are documented in technical memorandums. Alternatives considered included no action, in-kind equipment replacement, and system enhancements to improve performance.

Environmental Evaluation

The project is located within existing facilities at the WRRF and BDF sites. Disturbance of traffic patterns outside of the fence lines are not anticipated. Short-term and long-term impacts due to construction activities such as noise, dust, and traffic disruption cannot be avoided but are expected to be limited to within the project site limits.

Where civil/site construction activities are anticipated, adverse environmental impacts will be mitigated through designed and well-planned construction sequencing. Hours of operation for noisy equipment will be specified and limited. Dust and soil deposits on WRRF access roads will be controlled though watering and frequent street sweeping. Construction area footprints will be minimized and WRRF access road traffic control measures will be implemented. Site restoration will minimize the adverse impacts of construction, and the implementation of a Soil Erosion and Sedimentation Control program will minimize the impacts due to ground disturbance, when such disturbance is found to be necessary. Specific techniques will be specified in the construction contract documents.

Estimated Project Cost

Item	Estimated Cost ($)
Design	$3,600,000
Construction Admin	$1,750,000
Construction	$ 19,000,000
Total	$ 24,350,000

Estimated User Cost Impact

The total project cost of $24,350,000 will be distributed between the entire GLWA userbase of approximately 2.8 million residents in approximately 1.12 million households. The estimated cost per household annual user is $1.07 per year.

Proposed Implementation Schedule

Item	Date
Design Notice to Proceed	March 2023
Design Complete	April 2025
Bid Opening	October 2025
Construction Notice to Proceed	March 2026
Construction Substantial Completion	November 2028
Construction Final Completion	May 2029

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: Nick Fedewa, CPA, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01)

Background & Analysis: The working group for the FY 2025 transaction has performed preliminary analysis of the scope of the upcoming bond transaction in relation to market conditions. To prepare for all reasonable scenarios, the documents presented encompass new money, refunding, and tender/refunding strategies.

See attached draft Great Lakes Water Authority ("GLWA") Board letter.

Proposed Action: Audit Committee recommends that the Great Lakes Water Authority Board of Directors approve the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01).

DRAFT for Audit Committee Review Only

..Title

Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01)

..Body

Agenda of: April 23, 2025
Item No.: **2025-106**
Amount: Not to Exceed $900,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 23, 2025

RE: **Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01)**

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer\Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 (Ordinance 2025-01) as presented,** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

DRAFT for Audit Committee Review Only

BACKGROUND

In order for the Great Lakes Water Authority ("GLWA") to proceed with the issuance of new money bonds to support regional capital plan improvements and refunding of various outstanding water supply system bonds for the purpose of achieving annual debt service savings, potentially including by effecting the tender and/or exchange of certain outstanding bonds, the GLWA Board must approve the included resolution approving the Series Ordinance.

The Series Ordinance sets forth the guidelines for the New Money and Refunding Bonds and authorizes the Chief Executive Officer of the Chief Financial Officer to execute the final terms of the Bonds, paying issuance costs and signing of the Bond Purchase Agreement, within the parameters set forth in the Series Ordinance.

JUSTIFICATION

New Money Portion: The authorized amount for the New Money Bonds is for an aggregate principal amount not to exceed $230,000,000 for the regional water system.

Refunding Portion: The authorized amount for the Refunding Bonds is presented for an aggregate principal amount of not to exceed $670,000,000. The final par amount of the Refunding Bonds will be determined at the time of pricing and is based on current bond market pricing levels, tender pricing levels and investor participation in any tender offer, issuance costs and the par amount of the bonds to be refunded or solicited for tender by GLWA as determined by the savings level achieved.

Key Provisions:

- Not to Exceed Par Amount: $900 million ($230 million for new money, $670 million for refunding)
- Maximum Coupon Rate: 6.00%
- Minimum Purchase Price: 98% of principal amount of bonds
- Maximum Underwriter Discount: 0.40% of principal amount of bonds
- Present Value Savings: Greater than 2.50% of principal amount of bonds to be refunded

BUDGET IMPACT

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

DRAFT for Audit Committee Review Only

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 28, 2025. The Audit Committee *[insert action]* the resolution for the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $900,000,000 as presented.

SHARED SERVICES IMPACT

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

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2025-01

SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF WATER SUPPLY SYSTEM REVENUE AND REVENUE REFUNDING BONDS IN A PRINCIPAL AMOUNT NOT TO EXCEED $900,000,000

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

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

WHEREAS, the Authority Board has determined that it is necessary and desirable to authorize at this time one or more Series of Revenue Bonds to pay all or part of the costs of the hereinafter described improvements, enlargements, extensions and repairs to the Regional Water System; and

WHEREAS, the Authority Board has determined that it is necessary to authorize at this time one or more Series of Revenue Refunding Bonds (the "2025 Bonds") (i) to refund a portion of Outstanding Bonds (the "Bonds To Be Refunded") and cause the Bonds To Be Refunded to be purchased, retired and/or defeased in accordance with the Ordinance, and/or (ii) to effect certain Tender/Exchange Transactions as described herein, all to secure savings for the Authority through the issuance of such Revenue Refunding Bonds; and

WHEREAS, due to market conditions, it is desirable for the Authority, provided that certain conditions are met, to invite Holders of certain Outstanding Bonds (the "Target Bonds") to offer to tender such Bonds for purchase (the "Tendered Bonds") or exchange such Bonds (the "Exchanged Bonds") for certain Revenue Refunding Bonds, pursuant to the terms of an Invitation to Tender or Exchange Water Supply System Revenue Bonds (the "Invitation to Tender or Exchange" or the "Invitation"), and based on the offers received from such Holders, to accept for purchase the Tendered Bonds, provided that funds are available therefor, and/or accept for exchange the Exchanged Bonds, and subsequently cancel all of said Bonds (collectively, the "Tender/Exchange Transactions").

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

Section 1. Authority for this Series Ordinance. This Series Ordinance (the "2025 Series Ordinance") is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2025 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings,

respectively, in this 2025 Series Ordinance as such terms are given in the Ordinance. In addition, the following terms shall have the following meanings unless the context shall clearly indicate some other meaning:

(a) "2025 Bonds" means, collectively, the 2025 New Money Bonds and the 2025 Refunding Bonds authorized by Section 3 of this 2025 Series Ordinance.

(b) "2025 New Money Bonds" means those 2025 Bonds, if any, issued for the purpose of paying, reimbursing and/or refinancing Project Costs as authorized by Section 3 of this 2025 Series Ordinance.

(c) "2025 Project" means a portion of the improvements, enlargements, extensions and repairs to the Regional Water System identified in the Capital Improvement Program, all as more fully described in the Sale Order.

(d) "2025 Refunding Bonds" means those 2025 Bonds, if any, issued for the purpose of refunding the Bonds To Be Refunded, purchasing the Tendered Bonds, issued in exchange for the Exchanged Bonds and paying Refunding Costs as authorized by Section 3 of this 2025 Series Ordinance.

(e) "2025 Reserve Requirement" means the sum of the 2025 Senior Lien Reserve Requirement and the 2025 Second Lien Reserve Requirement.

(f) "2025 Second Lien Bonds" means, collectively, the 2025 Second Lien New Money Bonds and the 2025 Second Lien Refunding Bonds.

(g) "2025 Second Lien New Money Bonds" means those 2025 New Money Bonds, if any, issued as Second Lien Bonds as provided in this 2025 Series Ordinance.

(h) "2025 Second Lien Refunding Bonds" means those 2025 Refunding Bonds, if any, issued as Second Lien Bonds as provided in this 2025 Series Ordinance.

(i) "2025 Second Lien Reserve Requirement" means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Second Lien Bond Reserve Account at least equal to the Reserve Requirement for the Second Lien Bond Reserve Account immediately upon the issuance of the 2025 Second Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2025 Second Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Second Lien Bond Reserve Account.

(j) "2025 Senior Lien Bonds" means, collectively, the 2025 Senior Lien New Money Bonds and the 2025 Senior Lien Refunding Bonds.

(k) "2025 Senior Lien New Money Bonds" means those 2025 New Money Bonds, if any, issued as Senior Lien Bonds as provided in this 2025 Series Ordinance.

(l) "2025 Senior Lien Refunding Bonds" means those 2025 Refunding Bonds, if any, issued as Senior Lien Bonds as provided in this 2025 Series Ordinance.

(m) "2025 Senior Lien Reserve Requirement" means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Senior Lien Bond Reserve Account at least equal to the Reserve Requirement for the Senior Lien Bond Reserve Account immediately upon the issuance of the 2025 Senior Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2025 Senior Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Senior Lien Bond Reserve Account.

(n) "Authorized Denomination" means any denomination as determined by an Authorized Officer in the Sale Order.

(o) "Authorized Officer" means either the Chief Executive Officer or the Chief Financial Officer.

(p) "Bonds To Be Refunded" has the meaning set forth in the recitals hereto.

(q) "Continuing Disclosure Undertaking" means the continuing disclosure undertaking or undertakings with respect to the 2025 Bonds to be entered into by the Authority pursuant to the Rule.

(r) "Dealer Manager" means, with respect to the Tender/Exchange Transactions, BofA Securities, Inc., on behalf of itself and such other firms as may be named in the Dealer Manager Agreement.

(s) "Dealer Manager Agreement" means the Agreement between the Authority and the Dealer Manager relating to the Tender/Exchange Transactions.

(t) "Escrow Agreement" shall have the meaning set forth in Section 10 of this 2025 Series Ordinance.

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

(v) "Exchanged Bonds" has the meaning set forth in the recitals hereto.

(w) "Forward Delivery Agreement" means a bond purchase agreement providing for the issuance and delivery of certain 2025 Bonds by the Authority and purchase of such 2025 Bonds by the Underwriter on a specified date in the future, for the purposes authorized by this 2025 Series Ordinance including effecting the refunding of the Bonds To Be Refunded.

(x) "Information and Tender/Exchange Agent" means the Information and Tender/Exchange Agent appointed by an Authorized Officer and as shall be confirmed in the Sale Order to act as the Authority's agent in connection with the Tender/Exchange Transactions.

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

(z) "Invitation to Tender or Exchange" has the meaning set forth in the recitals hereto.

(aa) "Maturity Date" means such dates of maturity of the 2025 Bonds as determined in the Sale Order.

(bb) "Official Statement" means the final disclosure document with respect to the 2025 Bonds.

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

(dd) "Preliminary Official Statement" means the preliminary disclosure document with respect to the 2025 Bonds.

(ee) "Project Costs" means the costs of acquiring, constructing, equipping, installing and financing the 2025 Project, including Issuance Costs relating to the 2025 New Money Bonds.

(ff) "Purchase Agreement" means any bond purchase agreement between the Authority and the Underwriter providing for the sale of any 2025 Bonds, and includes any Forward Delivery Agreement entered into in accordance with this 2025 Series Ordinance.

(gg) "Refunding Costs" means the costs of refunding the Bonds To Be Refunded and the Tender/Exchange Transactions, including, to the extent authorized in the Sale Order, the amount of the Escrow Deposit, if any, the purchase price of the Tendered Bonds, funding the 2025 Reserve Requirement, if any, and Issuance Costs relating to the 2025 Refunding Bonds, including, without limitation, any costs associated with the Tender/Exchange Transactions including those of the Dealer Manager and an Information and Tender/Exchange Agent.

(hh) "Regular Record Date" means the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

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

(jj) "Sale Order" means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2025 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2025 Bonds and to complete the other transactions contemplated herein.

(kk) "Savings Threshold" means that, as the result of the Tender/Exchange Transactions and the refunding of the Bonds To Be Refunded, the Authority will achieve an aggregate reduction in bond debt service that has a present value at the time of sale of the 2025 Refunding Bonds equal to at least two and one-half percent (2.5%) of the par value of the Bonds To Be Refunded, Tendered Bonds and Exchanged Bonds and in accordance with the Ordinance and applicable law.

(ll) "Securities Depository" means (i) The Depository Trust Company and its successors and assigns, if any, or (ii) any other securities depository which agrees to follow the

procedures required to be followed by a securities depository in connection with the 2025 Bonds and which is selected by the Authority as provided in Section 6.

(mm) "Target Bonds" has the meaning set forth in the recitals hereto.

(nn) "Taxable 2025 Bonds" means any 2025 Bonds other than Tax-Exempt 2025 Bonds.

(oo) "Tax-Exempt 2025 Bonds" means any 2025 Bonds that are Tax-Exempt Bonds.

(pp) "Tender/Exchange Transactions" has the meaning set forth in the recitals hereto.

(qq) "Tendered Bonds" has the meaning set forth in the recitals hereto.

(rr) "Underwriter" means, with respect to the 2025 Bonds, Siebert Williams Shank & Co., LLC., on behalf of itself and such underwriters as may be named in the Purchase Agreement.

Section 3. Authorization of 2025 Bonds and Tender/Exchange Transactions.

(a) Authorization of 2025 Bonds.

(1) Authorization of Borrowing. The Authority may borrow (A) an aggregate principal amount, exclusive of premium, not in excess of $670,000,000, in the case of the 2025 Refunding Bonds, and (B) an aggregate principal amount, exclusive of premium, not in excess of $230,000,000, in the case of the 2025 New Money Bonds, all as finally determined in the Sale Order, and issue 2025 Bonds at one or more times and in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2025 Senior Lien Bonds and/or 2025 Second Lien Bonds, all as finally determined in the Sale Order.

(2) Purpose of 2025 Bonds. The 2025 Bonds shall be issued as Additional Bonds for the purpose of (A) in the case of the 2025 New Money Bonds, paying, reimbursing and/or refinancing Project Costs, and (B) in the case of the 2025 Refunding Bonds, (i) refunding the Bonds To Be Refunded, (ii) financing the purchase of the Tendered Bonds pursuant to the Tender/Exchange Transactions and causing the Tendered Bonds to be deemed paid and no longer Outstanding, (iii) exchanging 2025 Bonds in place of the Exchanged Bonds and causing the Exchanged Bonds to be no longer Outstanding, and (iv) paying other Refunding Costs, including Issuance Costs relating to the 2025 Refunding Bonds, and may in each case include amounts necessary to satisfy the 2025 Reserve Requirement and paying the costs of a Credit Facility.

(3) Limitations on Issuance of 2025 Refunding Bonds. No 2025 Refunding Bonds shall be issued unless:

a) The proceeds thereof (exclusive of accrued interest), together with other moneys available to the Authority under the Ordinance, are

sufficient to provide funds for all Refunding Costs, as set forth in the Sale Order.

b) The Authority's issuance and sale of the 2025 Refunding Bonds, the refunding of the Bonds To Be Refunded and the Tender/Exchange Transactions will meet the Savings Threshold.

c) Concurrently with or prior to the delivery of the 2025 Refunding Bonds, an Authorized Officer gives notice to the Trustee to call for redemption at the applicable redemption price all of the Bonds To Be Refunded on the dates set forth in the Escrow Agreement, if any, or in the Sale Order in the absence of an Escrow Agreement. In such notice, an Authorized Officer may direct that the notice of redemption to be given by the Trustee to the Holders of the Bonds To Be Refunded pursuant to Section 303 of the Ordinance shall be given prior to the delivery of the 2025 Refunding Bonds and that such notice of redemption be conditioned upon the delivery of the 2025 Refunding Bonds and the funding of the Escrow Deposit, if any. As provided in Section 303 of the Ordinance, if such conditions in the notice of redemption are not satisfied on or before the date fixed for redemption, then the notice of redemption shall be canceled and of no further force or effect.

(4) Insufficient Proceeds. To the extent that proceeds of the 2025 New Money Bonds are insufficient to pay Project Costs, the insufficiency shall be paid from the proceeds of future Additional Bonds, if any, and/or moneys of the Regional Water System on hand and legally available therefor, as determined by the Authority Board.

(5) Priority of Lien. The 2025 Bonds shall be issued as Senior Lien Bonds and/or Second Lien Bonds, as set forth in the Sale Order.

(6) Separate Series. The 2025 Bonds are issuable at one or more times and as one or more separate Series of Bonds in such amounts as determined in the Sale Order.

(7) Taxable and Tax-Exempt 2025 Bonds. The 2025 Bonds may be issued as Taxable 2025 Bonds or Tax-Exempt 2025 Bonds, or as separate Series of both, as determined in the Sale Order.

(8) Source of Payment and Security. The 2025 Bonds shall be payable and secured as provided in Section 5.

(b) Authorization of Tender/Exchange Transactions.

(1) Approval of Invitation to Tender or Exchange; Authorization of Authorized Officer. The distribution of an Invitation to Tender or Exchange is hereby approved, the invitation to tender for purchase or exchange and subsequent

cancellation of Tendered Bonds and Exchanged Bonds as contemplated by and consistent with the terms of this 2025 Series Ordinance, is hereby authorized. An Authorized Officer is hereby authorized to (a) execute and deliver on behalf of the Authority a Dealer Manager Agreement, including the form of the Invitation to Tender or Exchange and any certificates required by the Dealer Manager to be executed on behalf of the Authority; (b) after consultation with the Authority's Financial Advisor and Bond Counsel, finalize the terms of the Invitation to Tender or Exchange consistent with this 2025 Series Ordinance; (c) take actions necessary to invite offers of Bonds to be purchased or exchanged by the Authority as outlined in the Invitation to Tender or Exchange, including, without limitation, a determination of the Target Bonds; (d) determine criteria for acceptable offers; (e) accept or reject, in whole or in part, offers received, or to delegate that authority to the Information and Tender/Exchange Agent subject to certain criteria; (f) take actions necessary to finalize conditional acceptance for the purchase of any Tendered Bonds and the exchange of any Exchanged Bonds, including providing any necessary directions to the Trustee, the Information and Tender/Exchange Agent and/or the Dealer Manager, and including determining the appropriate purchase prices of the Tendered Bonds and the exchange factors by which Exchanged Bonds will be exchanged for 2025 Refunding Bonds, as set forth in the Sale Order; and (g) execute (by manual or facsimile signature) any necessary approvals or instructions for the conditional acceptance of Tendered Bonds or Exchanged Bonds and any actions contemplated by this 2025 Series Ordinance, subject to the conditions described herein and in the Invitation.

(2) Limitations Applicable to Tender/Exchange Transactions. The following limitations and parameters shall apply to the Tender/Exchange Transactions:

a) The Tender/Exchange Transactions shall result in meeting the Savings Threshold.

b) The offers contemplated by the Invitation to Tender or Exchange shall become effective and expire according to the terms of the Invitation to Tender or Exchange.

(c) Applicability of Ordinance. Except as otherwise provided in this 2025 Series Ordinance or the Sale Order, all of the provisions of the Ordinance shall apply to the 2025 Bonds as if set forth in full in this 2025 Series Ordinance, the purpose of this 2025 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2025 Bonds and the Tender/Exchange Transactions for the purposes set forth herein.

Section 4. 2025 Bond Details.

(a) Designation.

(1) The 2025 Bonds shall bear the designations Water Supply System [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025[A/B/C/D] and shall include the Series designation and such other designations, including, without limitation, designations for multiple Series or subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2025 Series Ordinance.

(2) If any Series of 2025 Bonds are not issued in 2025, an Authorized Officer is authorized in his or her discretion to re-designate the year and Series designation of such Series of 2025 Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of such Series of 2025 Bonds. Furthermore, an Authorized Officer is authorized to establish designations within the various funds and accounts established hereunder, if necessary, in order to differentiate such funds and accounts from other similarly named funds and accounts related to other Bonds.

(b) Numbering. 2025 Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. 2025 Bonds shall be issued in the form of Serial Bonds or Term Bonds, or any combination of Serial Bonds and Term Bonds, in any Authorized Denomination, and the principal thereof shall mature on July 1, or such other date as set forth in a Sale Order, in such years and amounts, and shall be or not be subject to redemption prior to maturity, all as shall be determined in the Sale Order subject to the limitations applicable to Taxable 2025 Bonds in Section 4(j) hereof and the following limitations:

(1) No 2025 Bonds shall mature later than 40 years after the date of issuance thereof.

(2) 2025 Bonds shall only be issued with principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2025 Bonds or portions thereof shall bear interest at such fixed rate or rates as determined in the Sale Order not in excess of the maximum rate permitted by law. Interest on 2025 Bonds shall be payable on each Interest Payment Date.

(e) Payment of Principal and Interest. The principal of, premium, if any, and interest on the 2025 Bonds shall be payable in lawful money of the United States. The principal of and premium, if any, on the 2025 Bonds are payable upon the surrender thereof at the corporate trust office of the Trustee and the interest is payable by check or draft drawn on the Trustee and mailed to the registered owners as of the immediately preceding Regular Record Date at their address shown on the registration books of the Authority maintained by the Trustee.

(f) Dating. The 2025 Bonds shall be dated such date or dates as determined in the Sale Order.

(g) Reserve Requirement. The 2025 Reserve Requirement, if any, with respect to each Series of the 2025 Bonds shall be satisfied by a deposit into the appropriate Bond Reserve Account of cash, a portion of the proceeds of such Series of 2025 Bonds, funds already on deposit in the appropriate Bond Reserve Account or the provision of a Credit Facility in the same amount and with a credit rating at the time of issuance of such Series of 2025 Bonds not less than the credit rating of such Series of 2025 Bonds, or any combination of the foregoing. The amounts, if any, required to be deposited in the Senior Lien Bond Reserve Account and the Second Lien Bond Reserve Account to cause the amounts on deposit therein to be at least equal to the Reserve Requirement for the Senior Lien Bonds and the Reserve Requirement for the Second Lien Bonds, respectively, shall be set forth in the Sale Order.

(h) Exchange. The registered owner of any 2025 Bond may exchange such 2025 Bond for a new 2025 Bond or Bonds of the same Series, interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2025 Bond to be exchanged at the designated office of the Trustee together with an assignment duly executed by the registered owner thereof or his attorney or legal representative in such form as shall be satisfactory to the Trustee. As provided in Section 206 of the Ordinance, the Trustee shall be responsible for the registration, transfer and exchange of 2025 Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2025 Bonds.

(i) Execution and Delivery of 2025 Bonds. The 2025 Bonds shall be executed in the name of the Authority by manual or facsimile signature of the Chief Executive Officer of the Authority and countersigned by the manual or facsimile signature of the Secretary of the Authority Board, and shall have the Authority's seal, or facsimile thereof, affixed or printed thereon. The Chief Financial Officer is authorized to deliver the 2025 Bonds to the Underwriter upon receiving the purchase price therefor in lawful money of the United States. The Chief Financial Officer is further authorized to make the necessary arrangements with the Holders of the Exchanged Bonds to establish the date, location, procedure and conditions for the delivery of 2025 Bonds exchanged in place of the Exchanged Bonds in accordance with the Invitation.

(j) Selection of Taxable 2025 Bonds for Redemption. Pursuant to Section 303 of the Ordinance, when Taxable 2025 Bonds are to be redeemed in part, an Authorized Officer shall specify to the Trustee the Series designation and maturity of the Taxable 2025 Bonds from which 2025 Bonds or portions of 2025 Bonds to be redeemed shall be selected. Subject to the Authorized Officer's specification, the particular Taxable 2025 Bonds or portions of Taxable 2025 Bonds to be redeemed will be selected by the Trustee by lot; provided, however, that the Trustee shall select Taxable 2025 Bonds to be redeemed on the basis of a pro rata pass-through distribution of principal in accordance with DTC procedures and provided that, so long as the Taxable 2025 Bonds are held in book-entry form the selection for redemption of such Taxable 2025 Bonds will be made in accordance with the operational arrangements of DTC then in effect and, if the DTC operational arrangements do not allow for redemption on the basis of a pro-rata pass-through distribution of principal, the Taxable 2025 Bonds will be selected for redemption, in accordance with DTC procedures, by lot. The portion of any Taxable 2025 Bonds to be redeemed in part shall be in the principal amount of $5,000 or any integral multiple thereof

(k) Form of 2025 Bonds. The 2025 Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by an Authorized Officer within the parameters of this 2025 Series Ordinance:

R-__

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

WATER SUPPLY SYSTEM [REVENUE][REVENUE REFUNDING]
[SENIOR LIEN][SECOND LIEN] BOND, SERIES 2025__

REGISTERED OWNER:

PRINCIPAL AMOUNT: $_____

INTEREST RATE: _____%

ORIGINAL ISSUE DATE:

The Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan (the "Issuer"), upon authorization from the Board of Directors of the Issuer (the "Board"), has issued this Bond. The Issuer, for value received, promises to pay, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above in lawful money of the United States of America. Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate per annum set forth above, and shall be payable on _____ 1, 20__ and semiannually on each July 1 and January 1 thereafter (each an "Interest Payment Date") in lawful money of the United States of America.

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

Interest on this Bond is payable to the registered owner of record as of the close of business on the 15th day of the month immediately preceding any Interest Payment Date as shown on the registration books kept by the Trustee by check or draft mailed by the Trustee to the registered owner at the registered address. Interest on this Bond shall be computed on the basis of a 360-day year comprised of twelve 30-day months.

This Bond is one of a series of bonds designated "Water Supply System [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025__" and is issued pursuant to the provisions of (i) Act 233, Public Acts of Michigan, 1955, as amended ("Act 233"), and Act 94, Public Acts of Michigan, 1933, as amended ("Act 94"), (ii) Master Bond Ordinance No. 2015-01 adopted by the Board on October 7, 2015, as amended (the "Bond Ordinance"), (iii)

the Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount not to Exceed $900,000,000, adopted by the Board on _____, 2025 (the "Series Ordinance"), and (vi) a Sale Order of an Authorized Officer of the Issuer dated _____, 2025 (the "Sale Order," and, collectively with the Bond Ordinance and the Series Ordinance, the "Ordinance"). This Bond is issued for the purposes set forth in the Series Ordinance and the Sale Order.

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

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

This Bond is subject to redemption prior to maturity to the extent, and as provided in, the Sale Order.

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

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

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

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

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

[Remainder of Page Intentionally Left Blank]

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

GREAT LAKES WATER AUTHORITY

By:_____
Chief Executive Officer

Countersigned:

By:_____
Secretary, Board of Directors

[Seal]

CERTIFICATE OF AUTHENTICATION

This Bond is authenticated as one of the bonds designated by the Issuer as "Water Supply System [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025__".

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

By:_____

Date of Authentication: _____, 2025

ASSIGNMENT

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

Dated:_____ _____

Signature

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

END OF BOND FORM

Section 5. Payment of 2025 Bonds; Confirmation of Statutory Lien.

(a) The 2025 Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2025 Bonds, the statutory lien upon the whole of the Pledged Assets established by Act 94 and the pledge created in Section 501 of the Ordinance is hereby confirmed in favor of the 2025 Bonds as follows:

(1) Such lien in favor of the 2025 Senior Lien Bonds shall be a first lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Senior Lien Bonds.

(2) Such lien in favor of the 2025 Second Lien Bonds shall be a second lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Second Lien Bonds.

Section 6. Concerning the Securities Depository.

(a) As used herein:

"Beneficial Owner" means any Person who indirectly owns 2025 Bonds pursuant to the indirect ownership system maintained by the Securities Depository and its Participants, commonly known as the "Book-Entry Only System."

"Participant" means any Person whose ownership of 2025 Bonds is shown on books of the Securities Depository.

(b) Initially, one fully-registered bond for each maturity of each Series of 2025 Bonds, in the aggregate principal amount of such maturity, shall be issued in the name of Cede & Co., as nominee of the Securities Depository, for the benefit of the Participants in the Book-Entry Only System. While the 2025 Bonds are registered in the name of a Securities Depository or its nominee, neither the Authority nor the Trustee shall have any responsibility or obligation to any Participant or to any Beneficial Owner with respect to any matter, including the following:

(1) the accuracy of the records of the Securities Depository, its nominee or any Participant with respect to any ownership interest in 2025 Bonds,

(2) the delivery to any Participant, Beneficial Owner or any other Person other than the Securities Depository of any notice with respect to any 2025 Bonds, including any notice of redemption, or

(3) the payment to any Participant, Beneficial Owner or any other Person, other than the Securities Depository of any amount with respect to the principal (and premium, if any) of or interest on any 2025 Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2025 Bonds only to or upon the order of the Securities Depository, and all such payments shall be valid

and effective fully to satisfy and discharge the Authority's obligations with respect to the principal (and premium, if any) of, and interest on such 2025 Bonds to the extent of the sum or sums so paid.

(d) If (1) the Authority receives a written notice from the Securities Depository to the effect the Securities Depository is unable or unwilling to discharge its responsibilities or (2) the Authority determines that it is in the best interests of the Beneficial Owners of 2025 Bonds that they be able to obtain 2025 Bonds in certificated form, then, in either event, the Authority shall notify the Trustee and, in the case of clause, (2), the Securities Depository.

(e) Upon discontinuance of the use of the Book-Entry Only System maintained by the Securities Depository pursuant to subsection (d) above and upon receipt of notice from the Securities Depository containing sufficient information, the Authority shall execute and the Trustee shall authenticate and deliver 2025 Bonds in certificated form to Beneficial Owners in exchange for the beneficial interests of such Beneficial Owners in corresponding principal amounts and in any Authorized Denominations.

(f) Notwithstanding any other provision of this 2025 Series Ordinance to the contrary, so long as any 2025 Bond is registered in the name of the Securities Depository or its nominee:

(1) all payments with respect to the principal, premium, if any, and interest on such 2025 Bond and all notices of redemption, tender and otherwise with respect to such 2025 Bond shall be made and given, respectively, to the Securities Depository as provided in the blanket issuer letter of representations between the Authority and the Securities Depository;

(2) if less than all of the 2025 Bonds of the same type of any maturity are to be redeemed, then the particular 2025 Bonds or portions of 2025 Bonds of such type and maturity to be redeemed shall be selected by the Securities Depository in any such manner as the Securities Depository may determine;

(3) all payments with respect to principal of the 2025 Bonds and premium, if any and interest on the 2025 Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and

(4) if a 2025 Bond is redeemed or tendered in part, then all amounts payable in respect of such redemption or tender shall be paid without presentation and surrender of such 2025 Bond pursuant to the procedures of the Securities Depository.

Section 7. Credit Facility.

(a) An Authorized Officer is authorized to negotiate and obtain a Credit Facility with respect to the 2025 Bonds, if the Authorized Officer determines that it is in the best interest of the Authority. An Authorized Officer is further authorized to renegotiate the terms of any outstanding Credit Facility, if the Authorized Officer determines that it is in the best interest of the Authority.

(b) An Authorized Officer is authorized to pay the cost of any such Credit Facility from the proceeds of the 2025 Bonds or any other funds legally available therefor.

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

Section 8. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2025 Series Ordinance, all of the provisions relative to funds and accounts, their maintenance, the flow of funds and other details relative thereto, shall remain as specifically set forth in the Ordinance.

Section 9. Disposition of Proceeds.

(a) 2025 Senior Lien New Money Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Senior Lien New Money Bonds there shall be immediately deposited in the Senior Lien Debt Service Account, an amount equal to any accrued interest received on the delivery of the 2025 Senior Lien New Money Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Senior Lien New Money Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Senior Lien New Money Bonds.

(2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Senior Lien New Money Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account, if any, at least equal to the 2025 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Senior Lien New Money Bonds or any other funds legally available therefor.

(3) Construction Fund. The balance of the proceeds of the 2025 Senior Lien New Money Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 10.

(b) 2025 Second Lien New Money Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Second Lien New Money Bonds there shall be immediately deposited in the Second Lien Debt Service Account, and amount equal to any accrued interest received on the delivery of the 2025 Second Lien New Money Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Second Lien New Money Bonds,

and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Second Lien New Money Bonds.

(2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Second Lien New Money Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account, if any, at least equal to the 2025 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Second Lien New Money Bonds or any other funds legally available therefor.

(3) Construction Fund. The balance of the proceeds of the 2025 Second Lien New Money Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 10.

(c) 2025 Senior Lien Refunding Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest . From the proceeds of the sale of the 2025 Senior Lien Refunding Bonds there shall be immediately deposited in the Senior Lien Debt Service Account an amount equal to any accrued interest received on the delivery of the 2025 Senior Lien Refunding Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Senior Lien Refunding Bonds.

(2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Senior Lien Refunding Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account at least equal to the 2025 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Senior Lien Refunding Bonds or any other funds legally available therefor.

(3) Issuance Costs. As provided in the Sale Order, a portion of the proceeds from the sale of the 2025 Senior Lien Refunding Bonds shall be applied to the payment of Issuance Costs relating to the 2025 Refunding Bonds upon submission of proper documentation to an Authorized Officer.

(4) Additional Refunding Costs; Escrow Deposit. As provided in the Sale Order, the balance of the proceeds from the sale of the 2025 Senior Lien Refunding Bonds shall be used to provide the purchase price paid to any seller of Tendered Bonds, to fund the Escrow Deposit for any Bonds To Be

Refunded and to pay any additional Refunding Costs. Such proceeds may be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit, if any, to be held in an Escrow Fund. Additional proceeds remaining after payments and deposits made pursuant to this section, if any, shall be applied in accordance with the Ordinance.

(d) 2025 Second Lien Refunding Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Second Lien Refunding Bonds there shall be immediately deposited in the Second Lien Debt Service Account, and amount equal to any accrued interest received on the delivery of the 2025 Second Lien Refunding Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Second Lien Refunding Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Second Lien Refunding Bonds.

(2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Second Lien Refunding Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account at least equal to the 2025 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Second Lien Refunding Bonds or any other funds legally available therefor.

(3) Issuance Costs. As provided in the Sale Order, a portion of the proceeds from the sale of the 2025 Second Lien Refunding Bonds shall be applied to the payment of Issuance Costs relating to the 2025 Refunding Bonds upon submission of proper documentation to an Authorized Officer.

(4) Additional Refunding Costs; Escrow Deposit. As provided in the Sale Order, the balance of the proceeds from the sale of the 2025 Second Lien Refunding Bonds shall be used to provide the purchase price paid to any seller of Tendered Bonds, to fund the Escrow Deposit for any Bonds To Be Refunded and to pay any additional Refunding Costs. Such proceeds may be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit, if any, to be held in an Escrow Fund. Additional proceeds remaining after payments and deposits made pursuant to this section, if any, shall be applied in accordance with the Ordinance.

Section 10. Construction Fund. A subaccount of the Authority Regional Construction Account of the Construction Fund established by the Ordinance shall be established for the 2025

New Money Bonds and designated the "Construction Fund, Series 2025," and shall be established and maintained as a separate depository account with a Custodian as designated by the Chief Financial Officer. Moneys in the Construction Fund, Series 2025 shall be applied solely to payment of Project Costs (or to the reimbursement of Project Costs paid by the Authority from other funds prior to the issuance of the 2025 New Money Bonds), except as otherwise provided in this Section 10.

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

(b) Payments or reimbursements for Project Costs consisting of Issuance Costs relating to the 2025 New Money Bonds and engineering, legal and financial costs shall be made upon submission of appropriate documentation to an Authorized Officer.

(c) Pursuant to Section 512(a) of the Ordinance, the Chief Financial Officer is hereby authorized to designate separate accounts in the Construction Fund for the 2025 New Money Bonds, if determined necessary and desirable, for administrative purposes and to better able the Authority to comply with tax covenants, including rebate covenants, relating to the 2025 New Money Bonds in connection with maintaining the exclusion, if any, from gross income for federal income tax purposes of interest on the 2025 New Money Bonds. The Authority Board acknowledges, further, in accordance with Section 514 of the Ordinance, the establishment of a Rebate Fund, under Section 502 of the Ordinance, which shall be maintained by the Trustee as a separate depository account, for the sole purpose of paying to the United States of America the amounts required to be rebated pursuant to the Code. In accordance with Section 514 of the Ordinance, the Authorized Officer is authorized to direct the Trustee to transfer to the Rebate Fund, an amount sufficient to make the amount on deposit in the Rebate Fund equal to 100% of the amount certified by the Authority as the amount required to be rebated to the United Sates pursuant to the Code as of the close of the bond year (as defined in the Code) for a related Series of Bonds. Such amount shall be certified by an Authorized Officer to the Trustee.

Section 11. Escrow Fund; Escrow Agreement.

(a) Establishment of Escrow Fund. The Escrow Deposit, if any, shall be held in or credited to an account designated as the "Great Lakes Water Authority Water Supply System Revenue Bonds Series 2025 Refunding Bonds Escrow Fund" (the "Escrow Fund") pursuant to an escrow agreement (the "Escrow Agreement").

(b) Escrow Agreement.

(1) An Authorized Officer is authorized to enter into an Escrow Agreement on behalf of the Authority with U.S. Bank Trust Company, National Association as "Escrow Trustee."

(2) The Escrow Agreement, if any:

a) shall be in the form and substance customary for refunding escrow agreements;

b) may permit any balance after paying the principal (and premium, if any) and interest on the Bonds To Be Refunded to be applied to any lawful purpose of the Water System if such use will not, in the opinion of Bond Counsel, impair the exclusion of interest on the 2025 Refunding Bonds that are Tax-Exempt 2025 Bonds from gross income for federal income tax purposes; and

c) shall otherwise be in the best interests of the Authority as determined by an Authorized Officer, as conclusively established by his or her execution of the Escrow Agreement.

Section 12. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2025 Bonds that so long as any of the Tax-Exempt 2025 Bonds remain outstanding and unpaid as to either principal or interest, the Authority shall, to the extent permitted by law, take all actions within its control to maintain and will refrain from taking any action which would impair the exclusion of the interest on the Tax-Exempt 2025 Bonds from gross income for federal income tax purposes under the Code.

(b) The actions referred to in subsection (a) above include, but are not limited to, actions relating to any required rebate of arbitrage earnings and the expenditure and investment of proceeds of Tax-Exempt 2025 Bonds and moneys deemed to be proceeds of Tax-Exempt 2025 Bonds, and to prevent the Tax-Exempt 2025 Bonds from being or becoming "private activity bonds" as that term is used in the Code.

Section 13. Preliminary and Final Official Statements.

(a) An Authorized Officer shall assist in the preparation of the Preliminary Official Statement and is authorized to deem the portions of Preliminary Official Statement relating to the 2025 Bonds and the Authority "final" for purposes of the Rule.

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

(c) Such final Preliminary Official Statement and final Official Statement and other offering materials satisfactory to an Authorized Officer are authorized to be distributed by the Underwriter in conjunction with the offering and sale of the 2025 Bonds.

Section 14. Continuing Disclosure. Unless otherwise set forth in the Sale Order because of an exemption from the Rule, the 2025 Bonds shall be subject to the Rule, and an Authorized Officer is authorized to execute and deliver the Continuing Disclosure Undertaking in form and substance customary for continuing disclosure undertakings entered into pursuant to the Rule.

Section 15. Sale of 2025 Bonds; Purchase Agreement.

(a) The 2025 Bonds shall be sold by negotiated sale to the Underwriter pursuant to a Purchase Agreement or Agreements in customary form with such changes thereto as an Authorized Officer shall determine are in the best interests of the Authority, within the parameters established by this 2025 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer's execution of the Purchase Agreement or Agreements.

(b) The Authority Board hereby determines that the sale of the 2025 Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2025 Bonds to be sold in the most efficient manner so as to result in the lowest possible borrowing costs to the Authority.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the Underwriter to purchase the 2025 Bonds subject to the following limitations:

(1) The interest rate coupon with respect to the 2025 Bonds shall not exceed 6%.

(2) The purchase price of the 2025 Bonds shall not be less than 98% of the principal amount thereof.

(3) The Underwriter's discount with respect to the 2025 Bonds or the compensation to be paid to the Underwriter shall not exceed 0.40% of the principal amount of the 2025 Bonds.

(4) The Authority's issuance and sale of the 2025 Refunding Bonds, together with any other legally available funds to finance the purchase of the Tendered Bonds, to refund the Bonds To Be Refunded and to exchange any Exchanged Bonds for 2025 Refunding Bonds, will meet the Savings Threshold.

(d) An Authorized Officer is authorized to determine if the Purchase Agreement shall provide for liquidated damages and if so, the amount thereof, and if the purchaser of any Series of the 2025 Bonds is required to provide a good faith check and if so, the amount thereof.

(e) An Authorized Officer shall confirm in the Sale Order that there was no petition meeting the requirements of Section 33 of Act 94 that was filed with the Secretary of the Authority

Board within 45 days of the date of publication of the notice of intent to issue bonds with respect to the 2025 New Money Bonds as required by Section 33 of Act 94.

Section 16. Delegation of Authority to and Authorization of Actions of Authorized Officers.

(a) An Authorized Officer shall make all determinations herein provided to be made in the Sale Order and shall make all such determinations in accordance with the best interests of the Authority within the parameters of this 2025 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2025 Series Ordinance, an Authorized Officer shall determine the Target Bonds (from the Outstanding Bonds), the Bonds To Be Refunded, if any, and aggregate principal amount of 2025 Refunding Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2025 Series Ordinance. An Authorized Officer shall also determine and establish, in accordance with this 2025 Series Ordinance, the maturities of the 2025 Refunding Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities, and the redemption provisions for the 2025 Refunding Bonds.

(c) In addition to determinations authorized elsewhere in this 2025 Series Ordinance, an Authorized Officer shall determine the aggregate principal amount of 2025 New Money Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2025 Series Ordinance, on the basis of his or her evaluation of the maximum amount of 2025 New Money Bonds which can be sold, given anticipated interest rates and the revenue coverage requirements with respect to the 2025 New Money Bonds and for any other reasons the Authorized Officer deems appropriate.

(1) Such determination shall also include the type or types of 2025 New Money Bonds to be issued, whether to issue the 2025 New Money Bonds as Senior Lien Bonds or Second Lien Bonds and if in one or more Series, and the redemption provisions for the 2025 New Money Bonds.

(2) An Authorized Officer shall also determine and establish, in accordance with this 2025 Series Ordinance, the maturities of the 2025 New Money Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities.

(d) An Authorized Officer is authorized, if necessary, to file applications and to pay the related fees, if any, to the Michigan Department of Treasury at his or her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2025 Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2025 Bonds as authorized herein, and as required by the Michigan Department of Treasury or Act 34.

(e) An Authorized Officer shall determine in the Sale Order that the requirements set forth in Section 207 of the Ordinance with respect to the issuance of the 2025 Bonds as Additional Bonds have been satisfied.

(f) An Authorized Officer is hereby authorized and directed to do and perform any and all other acts and things with respect to the 2025 Bonds and the Tender/Exchange Transactions which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2025 Series Ordinance, the authorizations therein and herein contained including without limitation the securing of ratings by bond rating agencies, and the incurring of reasonable fees costs and expenses incidental to the foregoing, for and on behalf of the Authority.

Section 17. [Reserved.]

Section 18. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2025 Bonds as permitted or required by the Ordinance or law are hereby ratified, confirmed and approved.

Section 19. Additional Authorization. The Chief Executive Officer, the Chief Financial Officer, the Chief Administrative and Compliance Officer and the General Counsel of the Authority, any such officials acting in an interim or acting capacity to such officers, their deputies and staff, or any of them, are hereby authorized to execute and deliver such certificates, letters of representation, documents, instruments, agreements, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2025 Bonds and otherwise give effect to the transactions contemplated by this 2025 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 20. 2025 Series Ordinance a Contract. The provisions of this 2025 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2025 Bond.

Section 21. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2025 Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2025 Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2025 Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2025 Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2025 Bonds or other available funds.

(d) An Authorized Officer is authorized to engage other consultants, including, without limitation, verification agents or other parties as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2025 Bonds and to pay the fees and expenses thereof from the proceeds of the 2025 Bonds or other available funds.

Section 22. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2025 Series Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the other provisions of this 2025 Series

Ordinance. The section and paragraph headings in this 2025 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2025 Series Ordinance.

Section 23. Publication and Recordation. This 2025 Series Ordinance shall be published in full in the Detroit Legal News, a newspaper of general circulation within the geographic boundaries of the Authority qualified under State law to publish legal notices, promptly after its adoption, and shall be maintained in the official records of the Authority and such recording authenticated by the signatures of the Chairperson and Secretary of the Authority Board.

Section 24. Repeal. All ordinances, resolutions, indentures or orders, or parts thereof, in conflict with the provisions of this 2025 Series Ordinance are, to the extent of such conflict, repealed.

[Remainder of page intentionally left blank]

Section 25. Effective Date. This 2025 Series Ordinance shall be effective upon adoption.

Adopted and signed on the ____ day of _____, 2025.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

Great Lakes Water Authority
Resolution 2025-106
RE: Approval of Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in a Principal Amount not to Exceed $900,000,000
Ordinance 2025-01

By Board Member: _____

Whereas There has been presented to the Board of Directors of the Great Lakes Water Authority (the "Authority") an ordinance entitled "Series Ordinance Authorizing Issuance and Sale of Water Supply System Revenue and Revenue Refunding Bonds in an Amount not to Exceed $900,000,000" (the "2025 Water Series Ordinance"), which ordinance is a Series Ordinance as defined and described in Master Bond Ordinance No. 2015-01 adopted by the Board of Directors on October 7, 2015, as amended on December 9, 2015, January 27, 2016, August 10, 2016 and February 12, 2020 (as amended, the "Master Water Bond Ordinance").

Whereas The Articles of Incorporation of the Authority provide that at least 5 of the 6 members of the Authority Board must vote to approve the 2025 Water Series Ordinance.

Now, Therefore Be It:

Resolved That the 2025 Water Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2025 Water Series Ordinance in the form approved; **And Be it Further**

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

Adopted by the Great Lakes Water Authority Board on: _____, 2025

4906-8692-5356 v1 [63818-59]

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: Nick Fedewa, CPA, Public Finance Manager

Re: Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02)

Background & Analysis: The working group for the FY 2025 transaction has performed preliminary analysis of the scope of the upcoming bond transaction in relation to market conditions. To prepare for all reasonable scenarios, the documents presented encompass new money, refunding, and tender/refunding strategies. See attached draft Great Lakes Water Authority ("GLWA") Board letter.

Proposed Action: Audit Committee recommends that the Great Lakes Water Authority Board of Directors approve the resolution for the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02).

DRAFT for Audit Committee Review Only

..Title

Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02)

..Body

Agenda of: April 23, 2025
Item No.: **2025-107**
Amount: Not to Exceed $685,000,000

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 23, 2025

RE: **Resolution Regarding Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02)**

MOTION

Upon recommendation of Nicolette N. Bateson, Chief Financial Officer\Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), **approves the resolution for the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 (Ordinance 2025-02) as presented,** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

DRAFT for Audit Committee Review Only

BACKGROUND

In order for the Great Lakes Water Authority ("GLWA") to proceed with the issuance of new money bonds to support regional capital plan improvements and refunding of various outstanding sewage disposal system bonds for the purpose of achieving annual debt service savings, potentially including by effecting the tender and/or exchange of certain outstanding bonds, the GLWA Board must approve the included resolution approving the Series Ordinance.

The Series Ordinance sets forth the guidelines for the New Money and Refunding Bonds and authorizes the Chief Executive Officer of the Chief Financial Officer to execute the final terms of the Bonds, paying issuance costs and signing of the Bond Purchase Agreement, within the parameters set forth in the Series Ordinance.

JUSTIFICATION

New Money Portion: The authorized amount for the New Money Bonds is for an aggregate principal amount not to exceed $50,000,000 for the regional sewer system.

Refunding Portion: The authorized amount for the Refunding Bonds is for an aggregate principal amount of not to exceed $635,000,000. The final par amount of the Refunding Bonds will be determined at the time of pricing and is based on current bond market pricing levels, tender pricing levels and investor participation in any tender offer, issuance costs and the par amount of the bonds to be refunded or solicited for tender by GLWA as determined by the savings level achieved.

Key Provisions:

- Not to Exceed Par Amount: $685 million ($50 million for new money, $635 million for refunding)
- Maximum Coupon Rate: 6.00%
- Minimum Purchase Price: 98% of principal amount of bonds
- Maximum Underwriter Discount: 0.40% of principal amount of bonds
- Present Value Savings: Greater than 2.50% of principal amount of bonds to be refunded

BUDGET IMPACT

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

DRAFT for Audit Committee Review Only

COMMITTEE REVIEW

This matter was reviewed by the GLWA Audit Committee at its meeting on March 28, 2025. The Audit Committee *[insert action]* the resolution for the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount Not to Exceed $685,000,000 as presented.

SHARED SERVICES IMPACT

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

GREAT LAKES WATER AUTHORITY
ORDINANCE NO. 2025-02

SERIES ORDINANCE AUTHORIZING ISSUANCE AND SALE OF SEWAGE DISPOSAL SYSTEM REVENUE AND REVENUE REFUNDING BONDS IN A PRINCIPAL AMOUNT NOT TO EXCEED $685,000,000

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

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

WHEREAS, the Authority Board has determined that it is necessary and desirable to authorize at this time one or more Series of Revenue Bonds to pay all or part of the costs of the hereinafter described improvements, enlargements, extensions and repairs to the Regional Sewer System; and

WHEREAS, the Authority Board has determined, further, that it is necessary and desirable to authorize at this time one or more Series of Revenue Refunding Bonds (i) to refund a portion of Outstanding Bonds (the "Bonds To Be Refunded") and cause the Bonds To Be Refunded to be purchased, retired and/or defeased in accordance with the Ordinance, and/or (ii) to effect certain Tender/Exchange Transactions as described herein, all to secure savings for the Authority through the issuance of such Revenue Refunding Bonds; and

WHEREAS, due to market conditions, it is desirable for the Authority, provided that certain conditions are met, to invite Holders of certain Outstanding Bonds (the "Target Bonds") to offer to tender such Bonds for purchase (the "Tendered Bonds") or exchange such Bonds (the "Exchanged Bonds") for certain Revenue Refunding Bonds, pursuant to the terms of an Invitation to Tender or Exchange Sewage Disposal System Revenue Bonds (the "Invitation to Tender or Exchange" or the "Invitation"), and based on the offers received from such Holders, to accept for purchase the Tendered Bonds, provided that funds are available therefor, and/or accept for exchange the Exchanged Bonds, and subsequently cancel all of said Bonds (collectively, the "Tender/Exchange Transactions").

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

Section 1. Authority for this Series Ordinance. This Series Ordinance (the "2025 Series Ordinance") is adopted pursuant to Section 1102(1) of the Ordinance.

Section 2. Definitions. Except as otherwise provided in this 2025 Series Ordinance, all terms which are defined in Section 101 of the Ordinance shall have the same meanings,

respectively, in this 2025 Series Ordinance as such terms are given in the Ordinance. In addition, the following terms shall have the following meanings unless the context shall clearly indicate some other meaning:

(a) "2025 Bonds" means, collectively, the 2025 New Money Bonds and the 2025 Refunding Bonds authorized by Section 3 of this 2025 Series Ordinance.

(b) "2025 New Money Bonds" means those 2025 Bonds, if any, issued for the purpose of paying, reimbursing and/or refinancing Project Costs as authorized by Section 3 of this 2025 Series Ordinance.

(c) "2025 Project" means a portion of the improvements, enlargements, extensions and repairs to the Regional Sewer System identified in the Capital Improvement Program, all as more fully described in the Sale Order.

(d) "2025 Refunding Bonds" means those 2025 Bonds, if any, issued for the purpose of refunding the Bonds To Be Refunded, purchasing the Tendered Bonds, issued in exchange for the Exchanged Bonds and paying Refunding Costs as authorized by Section 3 of this 2025 Series Ordinance.

(e) "2025 Reserve Requirement" means the sum of the 2025 Senior Lien Reserve Requirement and the 2025 Second Lien Reserve Requirement.

(f) "2025 Second Lien Bonds" means, collectively, the 2025 Second Lien New Money Bonds and the 2025 Second Lien Refunding Bonds.

(g) "2025 Second Lien New Money Bonds" means those 2025 New Money Bonds, if any, issued as Second Lien Bonds as provided in this 2025 Series Ordinance.

(h) "2025 Second Lien Refunding Bonds" means those 2025 Refunding Bonds, if any, issued as Second Lien Bonds as provided in this 2025 Series Ordinance.

(i) "2025 Second Lien Reserve Requirement" means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Second Lien Bond Reserve Account at least equal to the Reserve Requirement for the Second Lien Bond Reserve Account immediately upon the issuance of the 2025 Second Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2025 Second Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Second Lien Bond Reserve Account.

(j) "2025 Senior Lien Bonds" means, collectively, the 2025 Senior Lien New Money Bonds and the 2025 Senior Lien Refunding Bonds.

(k) "2025 Senior Lien New Money Bonds" means those 2025 New Money Bonds, if any, issued as Senior Lien Bonds as provided in this 2025 Series Ordinance.

(l) "2025 Senior Lien Refunding Bonds" means those 2025 Refunding Bonds, if any, issued as Senior Lien Bonds as provided in this 2025 Series Ordinance.

(m) "2025 Senior Lien Reserve Requirement" means such amount, if any, as is determined in the Sale Order to be the amount necessary to make the amount on deposit in the Senior Lien Bond Reserve Account at least equal to the Reserve Requirement for the Senior Lien Bond Reserve Account immediately upon the issuance of the 2025 Senior Lien Bonds after taking into consideration such provision as is made for the Reserve Requirement from proceeds of the 2025 Senior Lien Bonds and other funds and Credit Facilities on deposit or to be deposited in the Senior Lien Bond Reserve Account.

(n) "Authorized Denomination" means any denomination as determined by an Authorized Officer in the Sale Order.

(o) "Authorized Officer" means either the Chief Executive Officer or the Chief Financial Officer.

(p) "Bonds To Be Refunded" has the meaning set forth in the recitals hereto.

(q) "Continuing Disclosure Undertaking" means the continuing disclosure undertaking or undertakings with respect to the 2025 Bonds to be entered into by the Authority pursuant to the Rule.

(r) "Dealer Manager" means, with respect to the Tender/Exchange Transactions, BofA Securities, Inc., on behalf of itself and such other firms as may be named in the Dealer Manager Agreement.

(s) "Dealer Manager Agreement" means the Agreement between the Authority and the Dealer Manager relating to the Tender/Exchange Transactions.

(t) "Escrow Agreement" shall have the meaning set forth in Section 10 of this 2025 Series Ordinance.

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

(v) "Exchanged Bonds" has the meaning set forth in the recitals hereto.

(w) "Forward Delivery Agreement" means a bond purchase agreement providing for the issuance and delivery of certain 2025 Bonds by the Authority and purchase of such 2025 Bonds by the Underwriter on a specified date in the future, for the purposes authorized by this 2025 Series Ordinance including effecting the refunding of the Bonds To Be Refunded.

(x) "Information and Tender/Exchange Agent" means the Information and Tender/Exchange Agent appointed by an Authorized Officer and as shall be approved and confirmed in the Sale Order to act as the Authority's agent in connection with the Tender/Exchange Transactions.

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

(z) "Invitation to Tender or Exchange" or "Invitation" has the meaning set forth in the recitals hereto.

(aa) "Maturity Date" means such dates of maturity of the 2025 Bonds as determined in the Sale Order.

(bb) "Official Statement" means the final disclosure document with respect to the 2025 Bonds.

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

(dd) "Preliminary Official Statement" means the preliminary disclosure document with respect to the 2025 Bonds.

(ee) "Project Costs" means the costs of acquiring, constructing, equipping, installing and financing the 2025 Project, including Issuance Costs relating to the 2025 New Money Bonds.

(ff) "Purchase Agreement" means any bond purchase agreement between the Authority and the Underwriter providing for the sale of any 2025 Bonds, and includes any Forward Delivery Agreement entered into in accordance with this 2025 Series Ordinance.

(gg) "Refunding Costs" means the costs of refunding the Bonds To Be Refunded and the Tender/Exchange Transactions, including, to the extent authorized in the Sale Order, the amount of the Escrow Deposit, if any, the purchase price of the Tendered Bonds, funding the 2025 Reserve Requirement, if any, and Issuance Costs relating to the 2025 Refunding Bonds, including, without limitation, any costs associated with the Tender/Exchange Transactions including those of the Dealer Manager and an Information and Tender/Exchange Agent.

(hh) "Regular Record Date" means the fifteenth day of the calendar month immediately preceding an Interest Payment Date.

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

(jj) "Sale Order" means any one or more Sale Orders of an Authorized Officer authorizing acts consistent with the Ordinance and this 2025 Series Ordinance necessary and appropriate to complete the sale, execution and delivery of the 2025 Bonds and to complete the other transactions contemplated herein.

(kk) "Savings Threshold" means that, as the result of the Tender/Exchange Transactions and the refunding of the Bonds To Be Refunded, the Authority will achieve an aggregate reduction in bond debt service that has a present value at the time of sale of the 2025 Refunding Bonds equal to at least two and one-half percent (2.5%) of the par value of the Bonds To Be Refunded, Tendered Bonds and Exchanged Bonds and in accordance with the Ordinance and applicable law.

(ll) "Securities Depository" means (i) The Depository Trust Company and its successors and assigns, if any, or (ii) any other securities depository which agrees to follow the procedures required to be followed by a securities depository in connection with the 2025 Bonds and which is selected by the Authority as provided in Section 6.

(mm) "Target Bonds" has the meaning set forth in the recitals hereto.

(nn) "Taxable 2025 Bonds" means any 2025 Bonds other than Tax-Exempt 2025 Bonds.

(oo) "Tax-Exempt 2025 Bonds" means any 2025 Bonds that are Tax-Exempt Bonds.

(pp) "Tender/Exchange Transactions" has the meaning set forth in the recitals hereto.

(qq) "Tendered Bonds" has the meaning set forth in the recitals hereto.

(rr) "Underwriter" means, with respect to the 2025 Bonds, Siebert Williams Shank & Co., LLC., on behalf of itself and such underwriters as may be named in the Purchase Agreement.

Section 3. Authorization of 2025 Bonds and Tender/Exchange Transactions.

(a) Authorization of 2025 Bonds.

(1) Authorization of Borrowing. The Authority may borrow (A) an aggregate principal amount, exclusive of premium, not in excess of $635,000,000, in the case of the 2025 Refunding Bonds, and (B) an aggregate principal amount, exclusive of premium, not in excess of $50,000,000, in the case of the 2025 New Money Bonds, all as finally determined in the Sale Order, and issue 2025 Bonds at one or more times and in one or more Series, all to evidence such borrowing pursuant to Act 233, Act 94 and the Ordinance, as 2025 Senior Lien Bonds and/or 2025 Second Lien Bonds, all as finally determined in the Sale Order.

(2) Purpose of 2025 Bonds. The 2025 Bonds shall be issued as Additional Bonds for the purpose of (A) in the case of the 2025 New Money Bonds, paying, reimbursing and/or refinancing Project Costs, and (B) in the case of the 2025 Refunding Bonds, (i) refunding the Bonds To Be Refunded, (ii) financing the purchase of the Tendered Bonds pursuant to the Tender/Exchange Transactions and causing the Tendered Bonds to be deemed paid and no longer Outstanding, (iii) exchanging 2025 Bonds in place of the Exchanged Bonds and causing the Exchanged Bonds to be no longer Outstanding, and (iv) paying other Refunding Costs, including Issuance Costs relating to the 2025 Refunding Bonds, and may in each case include amounts necessary to satisfy the 2025 Reserve Requirement and paying the costs of a Credit Facility.

(3) Limitations on Issuance of 2025 Refunding Bonds. No 2025 Refunding Bonds shall be issued unless:

a) The proceeds thereof (exclusive of accrued interest), together with other moneys available to the Authority under the Ordinance, are sufficient to provide funds for all Refunding Costs, as set forth in the Sale Order.

b) The Authority's issuance and sale of the 2025 Refunding Bonds, the refunding of the Bonds To Be Refunded and the Tender/Exchange Transactions will meet the Savings Threshold.

c) Concurrently with or prior to the delivery of the 2025 Refunding Bonds, an Authorized Officer gives notice to the Trustee to call for redemption at the applicable redemption price all of the Bonds To Be Refunded on the dates set forth in the Escrow Agreement, if any, or in the Sale Order in the absence of an Escrow Agreement. In such notice, an Authorized Officer may direct that the notice of redemption to be given by the Trustee to the Holders of the Bonds To Be Refunded pursuant to Section 303 of the Ordinance shall be given prior to the delivery of the 2025 Refunding Bonds and that such notice of redemption be conditioned upon the delivery of the 2025 Refunding Bonds and the funding of the Escrow Deposit, if any. As provided in Section 303 of the Ordinance, if such conditions in the notice of redemption are not satisfied on or before the date fixed for redemption, then the notice of redemption shall be canceled and of no further force or effect.

(4) Insufficient Proceeds. To the extent that proceeds of the 2025 New Money Bonds are insufficient to pay Project Costs, the insufficiency shall be paid from the proceeds of future Additional Bonds, if any, and/or moneys of the Regional Sewer System on hand and legally available therefor, as determined by the Authority Board.

(5) Priority of Lien. The 2025 Bonds shall be issued as Senior Lien Bonds and/or Second Lien Bonds, as set forth in the Sale Order.

(6) Separate Series. The 2025 Bonds are issuable at one or more times and as one or more separate Series of Bonds in such amounts as determined in the Sale Order.

(7) Taxable and Tax-Exempt 2025 Bonds. The 2025 Bonds may be issued as Taxable 2025 Bonds or Tax-Exempt 2025 Bonds, or as separate Series of both, as determined in the Sale Order.

(8) Source of Payment and Security. The 2025 Bonds shall be payable and secured as provided in Section 5.

(b) Authorization of Tender/Exchange Transactions.

(1) Approval of Invitation to Tender or Exchange; Authorization of Authorized Officer. The distribution of an Invitation to Tender or Exchange is hereby approved, the invitation to tender for purchase or exchange and subsequent cancellation of Tendered Bonds and Exchanged Bonds as contemplated by and consistent with the terms of this 2025 Series Ordinance, is hereby authorized. An Authorized Officer is hereby authorized to (a) execute and deliver on behalf of the Authority a Dealer Manager Agreement, including the form of the Invitation to Tender or Exchange and any certificates required by the Dealer Manager to be executed on behalf of the Authority; (b) after consultation with the Authority's Financial Advisor and Bond Counsel, finalize the terms of the Invitation to Tender or Exchange consistent with this 2025 Series Ordinance; (c) take actions necessary to invite offers of Bonds to be purchased or exchanged by the Authority as outlined in the Invitation to Tender or Exchange, including, without limitation, a determination of the Target Bonds; (d) determine criteria for acceptable offers; (e) accept or reject, in whole or in part, offers received, or to delegate that authority to the Information and Tender/Exchange Agent subject to certain criteria; (f) take actions necessary to finalize conditional acceptance for the purchase of any Tendered Bonds and the exchange of any Exchanged Bonds, including providing any necessary directions to the Trustee, the Information and Tender/Exchange Agent and/or the Dealer Manager, and including determining the appropriate purchase prices of the Tendered Bonds and the exchange factors by which Exchanged Bonds will be exchanged for 2025 Refunding Bonds, as set forth in the Sale Order; and (g) to execute (by manual or facsimile signature) any necessary approvals or instructions for the conditional acceptance of Tendered Bonds or Exchanged Bonds and any actions contemplated by this 2025 Series Ordinance, subject to the conditions described herein and in the Invitation.

(2) Limitations Applicable to Tender/Exchange Transactions. The following limitations and parameters shall apply to the Tender/Exchange Transactions:

a) The Tender/Exchange Transactions shall result in meeting the Savings Threshold.

b) The offers contemplated by the Invitation to Tender or Exchange shall become effective and expire according to the terms of the Invitation to Tender or Exchange.

(c) Applicability of Ordinance. Except as otherwise provided in this 2025 Series Ordinance or the Sale Order, all of the provisions of the Ordinance shall apply to the 2025 Bonds as if set forth in full in this 2025 Series Ordinance, the purpose of this 2025 Series Ordinance being to supplement the Ordinance to authorize the issuance of 2025 Bonds and the Tender/Exchange Transactions for the purposes set forth herein.

Section 4. 2025 Bond Details.

(a) Designation.

(1) The 2025 Bonds shall bear the designations Sewage Disposal System [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025[A/B/C/D] and shall include the Series designation and such other designations, including, without limitation, designations for multiple Series or subseries, as determined by an Authorized Officer as shall be set forth in the Sale Order and not inconsistent with the Ordinance or this 2025 Series Ordinance.

(2) If any Series of 2025 Bonds are not issued in 2025, an Authorized Officer is authorized in his or her discretion to re-designate the year and Series designation of such Series of 2025 Bonds and the various funds and accounts established hereunder to correspond with the year of issuance of such Series of 2025 Bonds. Furthermore, an Authorized Officer is authorized to establish designations within the various funds and accounts established hereunder, if necessary, in order to differentiate such funds and accounts from other similarly named funds and accounts related to other Bonds.

(b) Numbering. 2025 Bonds shall be numbered in such manner as shall be determined in the Sale Order.

(c) Principal. 2025 Bonds shall be issued in the form of Serial Bonds or Term Bonds, or any combination of Serial Bonds and Term Bonds, in any Authorized Denomination, and the principal thereof shall mature on July 1, or such other date as set forth in a Sale Order, in such years and amounts, and shall be or not be subject to redemption prior to maturity, all as shall be determined in the Sale Order subject to the limitations applicable to Taxable 2025 Bonds in Section 4(j) hereof and the following limitations:

(1) No 2025 Bonds shall mature later than 40 years after the date of issuance thereof.

(2) 2025 Bonds shall only be issued with principal and interest installments permitted by the Ordinance, including Section 207 thereof.

(d) Interest. 2025 Bonds or portions thereof shall bear interest at such fixed rate or rates as determined in the Sale Order not in excess of the maximum rate permitted by law. Interest on 2025 Bonds shall be payable on each Interest Payment Date.

(e) Payment of Principal and Interest. The principal of, premium, if any, and interest on the 2025 Bonds shall be payable in lawful money of the United States. The principal of and premium, if any, on the 2025 Bonds are payable upon the surrender thereof at the corporate trust office of the Trustee and the interest is payable by check or draft drawn on the Trustee and mailed to the registered owners as of the immediately preceding Regular Record Date at their address shown on the registration books of the Authority maintained by the Trustee.

(f) Dating. The 2025 Bonds shall be dated such date or dates as determined in the Sale Order.

(g) Reserve Requirement. The 2025 Reserve Requirement, if any, with respect to each Series of the 2025 Bonds shall be satisfied by a deposit into the appropriate Bond Reserve Account of cash, a portion of the proceeds of such Series of 2025 Bonds, funds already on deposit in the appropriate Bond Reserve Account or the provision of a Credit Facility in the same amount and with a credit rating at the time of issuance of such Series of 2025 Bonds not less than the credit rating of such Series of 2025 Bonds, or any combination of the foregoing. The amounts, if any, required to be deposited in the Senior Lien Bond Reserve Account and the Second Lien Bond Reserve Account to cause the amounts on deposit therein to be at least equal to the Reserve Requirement for the Senior Lien Bonds and the Reserve Requirement for the Second Lien Bonds, respectively, shall be set forth in the Sale Order.

(h) Exchange. The registered owner of any 2025 Bond may exchange such 2025 Bond for a new 2025 Bond or Bonds of the same Series, interest rate, maturity and Priority of Lien in an equal aggregate principal amount in one or more of the Authorized Denominations by surrendering such 2025 Bond to be exchanged at the designated office of the Trustee together with an assignment duly executed by the registered owner thereof or his attorney or legal representative in such form as shall be satisfactory to the Trustee. As provided in Section 206 of the Ordinance, the Trustee shall be responsible for the registration, transfer and exchange of 2025 Bonds and shall indicate its acceptance of such duties by a document filed with an Authorized Officer concurrently with the delivery of the 2025 Bonds.

(i) Execution and Delivery of 2025 Bonds. The 2025 Bonds shall be executed in the name of the Authority by manual or facsimile signature of the Chief Executive Officer of the Authority and countersigned by the manual or facsimile signature of the Secretary of the Authority Board, and shall have the Authority's seal, or facsimile thereof, affixed or printed thereon. The Chief Financial Officer is authorized to deliver the 2025 Bonds to the Underwriter upon receiving the purchase price therefor in lawful money of the United States. The Chief Financial Officer is further authorized to make the necessary arrangements with the Holders of the Exchanged Bonds to establish the date, location, procedure and conditions for the delivery of 2025 Bonds exchanged in place of the Exchanged Bonds in accordance with the Invitation.

(j) Selection of Taxable 2025 Bonds for Redemption. Pursuant to Section 303 of the Ordinance, when Taxable 2025 Bonds are to be redeemed in part, an Authorized Officer shall specify to the Trustee the Series designation and maturity of the Taxable 2025 Bonds from which 2025 Bonds or portions of 2025 Bonds to be redeemed shall be selected. Subject to the Authorized Officer's specification, the particular Taxable 2025 Bonds or portions of Taxable 2025 Bonds to be redeemed will be selected by the Trustee by lot; provided, however, that the Trustee shall select Taxable 2025 Bonds to be redeemed on the basis of a pro rata pass-through distribution of principal in accordance with DTC procedures and provided that, so long as the Taxable 2025 Bonds are held in book-entry form the selection for redemption of such Taxable 2025 Bonds will be made in accordance with the operational arrangements of DTC then in effect and, if the DTC operational arrangements do not allow for redemption on the basis of a pro-rata pass-through distribution of principal, the Taxable 2025 Bonds will be selected for redemption, in accordance with DTC

procedures, by lot. The portion of any Taxable 2025 Bonds to be redeemed in part shall be in the principal amount of $5,000 or any integral multiple thereof

(k) Form of 2025 Bonds. The 2025 Bonds shall be in substantially the following form, subject to such changes, additions or deletions as determined by an Authorized Officer within the parameters of this 2025 Series Ordinance:

R-__

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

SEWAGE DISPOSAL SYSTEM [REVENUE][REVENUE REFUNDING]
[SENIOR LIEN][SECOND LIEN] BOND, SERIES 2025__

REGISTERED OWNER:

PRINCIPAL AMOUNT: $_____

INTEREST RATE: _____%

ORIGINAL ISSUE DATE:

The Great Lakes Water Authority, Counties of Macomb, Oakland and Wayne, State of Michigan (the "Issuer"), upon authorization from the Board of Directors of the Issuer (the "Board"), has issued this Bond. The Issuer, for value received, promises to pay, but only from the Pledged Assets (as defined below), to the Registered Owner named above, or registered assigns, the Principal Amount stated above in lawful money of the United States of America. Interest on this Bond shall accrue from the Original Issue Date set forth above at the Interest Rate per annum set forth above, and shall be payable on _____ 1, 20__ and semiannually on each July 1 and January 1 thereafter (each an "Interest Payment Date") in lawful money of the United States of America.

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

Interest on this Bond is payable to the registered owner of record as of the close of business on the 15th day of the month immediately preceding any Interest Payment Date as shown on the registration books kept by the Trustee by check or draft mailed by the Trustee to the registered owner at the registered address. Interest on this Bond shall be computed on the basis of a 360-day year comprised of twelve 30-day months.

This Bond is one of a series of bonds designated "Sewage Disposal System Revenue [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025__" and is issued pursuant to the provisions of (i) Act 233, Public Acts of Michigan, 1955, as amended ("Act 233"), and Act 94, Public Acts of Michigan, 1933, as amended ("Act 94"), (ii) Master Bond Ordinance No. 2015-02 adopted by the Board on October 7, 2015, as amended (the "Bond Ordinance"), (iii)

the Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount not to Exceed $685,000,000, adopted by the Board on _____, 2025 (the "Series Ordinance"), and (vi) a Sale Order of an Authorized Officer of the Issuer dated _____, 2025 (the "Sale Order," and, collectively with the Bond Ordinance and the Series Ordinance, the "Ordinance"). This Bond is issued for the purposes set forth in the Series Ordinance and the Sale Order.

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

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

This Bond is subject to redemption prior to maturity to the extent, and as provided in, the Sale Order.

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

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

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

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

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

[Remainder of Page Intentionally Left Blank]

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

GREAT LAKES WATER AUTHORITY

By:_____
Chief Executive Officer

Countersigned:

By:_____
Secretary, Board of Directors

[Seal]

CERTIFICATE OF AUTHENTICATION

This Bond is authenticated as one of the bonds designated by the Issuer as "Sewage Disposal System [Revenue][Revenue Refunding] [Senior Lien][Second Lien] Bonds, Series 2025__".

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

By:_____

Date of Authentication: _____, 2025

ASSIGNMENT

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

Dated:_____ _____

Signature

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

END OF BOND FORM

Section 5. Payment of 2025 Bonds; Confirmation of Statutory Lien.

(a) The 2025 Bonds and the interest thereon shall be payable solely from the Pledged Assets.

(b) To secure payment of the 2025 Bonds, the statutory lien upon the whole of the Pledged Assets established by Act 94 and the pledge created in Section 501 of the Ordinance is hereby confirmed in favor of the 2025 Bonds as follows:

(1) Such lien in favor of the 2025 Senior Lien Bonds shall be a first lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Senior Lien Bonds.

(2) Such lien in favor of the 2025 Second Lien Bonds shall be a second lien of equal standing and Priority of Lien with all issued, to be issued and outstanding Second Lien Bonds.

Section 6. Concerning the Securities Depository.

(a) As used herein:

"Beneficial Owner" means any Person who indirectly owns 2025 Bonds pursuant to the indirect ownership system maintained by the Securities Depository and its Participants, commonly known as the "Book-Entry Only System."

"Participant" means any Person whose ownership of 2025 Bonds is shown on books of the Securities Depository.

(b) Initially, one fully-registered bond for each maturity of each Series of 2025 Bonds, in the aggregate principal amount of such maturity, shall be issued in the name of Cede & Co., as nominee of the Securities Depository, for the benefit of the Participants in the Book-Entry Only System. While the 2025 Bonds are registered in the name of a Securities Depository or its nominee, neither the Authority nor the Trustee shall have any responsibility or obligation to any Participant or to any Beneficial Owner with respect to any matter, including the following:

(1) the accuracy of the records of the Securities Depository, its nominee or any Participant with respect to any ownership interest in 2025 Bonds,

(2) the delivery to any Participant, Beneficial Owner or any other Person other than the Securities Depository of any notice with respect to any 2025 Bonds, including any notice of redemption, or

(3) the payment to any Participant, Beneficial Owner or any other Person, other than the Securities Depository of any amount with respect to the principal (and premium, if any) of or interest on any 2025 Bonds.

(c) The Trustee shall pay all principal (and premium, if any) of and interest on the 2025 Bonds only to or upon the order of the Securities Depository, and all such payments shall be valid

and effective fully to satisfy and discharge the Authority's obligations with respect to the principal (and premium, if any) of, and interest on such 2025 Bonds to the extent of the sum or sums so paid.

(d) If (1) the Authority receives a written notice from the Securities Depository to the effect the Securities Depository is unable or unwilling to discharge its responsibilities or (2) the Authority determines that it is in the best interests of the Beneficial Owners of 2025 Bonds that they be able to obtain 2025 Bonds in certificated form, then, in either event, the Authority shall notify the Trustee and, in the case of clause, (2), the Securities Depository.

(e) Upon discontinuance of the use of the Book-Entry Only System maintained by the Securities Depository pursuant to subsection (d) above and upon receipt of notice from the Securities Depository containing sufficient information, the Authority shall execute and the Trustee shall authenticate and deliver 2025 Bonds in certificated form to Beneficial Owners in exchange for the beneficial interests of such Beneficial Owners in corresponding principal amounts and in any Authorized Denominations.

(f) Notwithstanding any other provision of this 2025 Series Ordinance to the contrary, so long as any 2025 Bond is registered in the name of the Securities Depository or its nominee:

(1) all payments with respect to the principal, premium, if any, and interest on such 2025 Bond and all notices of redemption, tender and otherwise with respect to such 2025 Bond shall be made and given, respectively, to the Securities Depository as provided in the blanket issuer letter of representations between the Authority and the Securities Depository;

(2) if less than all of the 2025 Bonds of the same type of any maturity are to be redeemed, then the particular 2025 Bonds or portions of 2025 Bonds of such type and maturity to be redeemed shall be selected by the Securities Depository in any such manner as the Securities Depository may determine;

(3) all payments with respect to principal of the 2025 Bonds and premium, if any and interest on the 2025 Bonds shall be made in such manner as shall be prescribed by the Securities Depository; and

(4) if a 2025 Bond is redeemed or tendered in part, then all amounts payable in respect of such redemption or tender shall be paid without presentation and surrender of such 2025 Bond pursuant to the procedures of the Securities Depository.

Section 7. Credit Facility.

(a) An Authorized Officer is authorized to negotiate and obtain a Credit Facility with respect to the 2025 Bonds, if the Authorized Officer determines that it is in the best interest of the Authority. An Authorized Officer is further authorized to renegotiate the terms of any outstanding Credit Facility, if the Authorized Officer determines that it is in the best interest of the Authority.

(b) An Authorized Officer is authorized to pay the cost of any such Credit Facility from the proceeds of the 2025 Bonds or any other funds legally available therefor.

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

Section 8. Funds and Accounts; Flow of Funds. Except as otherwise provided in this 2025 Series Ordinance, all of the provisions relative to funds and accounts, their maintenance, the flow of funds and other details relative thereto, shall remain as specifically set forth in the Ordinance.

Section 9. Disposition of Proceeds.

(a) 2025 Senior Lien New Money Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Senior Lien New Money Bonds there shall be immediately deposited in the Senior Lien Debt Service Account, an amount equal to any accrued interest received on the delivery of the 2025 Senior Lien New Money Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Senior Lien New Money Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Senior Lien New Money Bonds.

(2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Senior Lien New Money Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account, if any, at least equal to the 2025 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Senior Lien New Money Bonds or any other funds legally available therefor.

(3) Construction Fund. The balance of the proceeds of the 2025 Senior Lien New Money Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 10.

(b) 2025 Second Lien New Money Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Second Lien New Money Bonds there shall be immediately deposited in the Second Lien Debt Service Account, and amount equal to any accrued interest received on the delivery of the 2025 Second Lien New Money Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Second Lien New Money Bonds,

and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Second Lien New Money Bonds.

(2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Second Lien New Money Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account, if any, at least equal to the 2025 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Second Lien New Money Bonds or any other funds legally available therefor.

(3) Construction Fund. The balance of the proceeds of the 2025 Second Lien New Money Bonds shall be deposited in the Construction Fund and used to pay Project Costs as provided in Section 10.

(c) 2025 Senior Lien Refunding Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest . From the proceeds of the sale of the 2025 Senior Lien Refunding Bonds there shall be immediately deposited in the Senior Lien Debt Service Account an amount equal to any accrued interest received on the delivery of the 2025 Senior Lien Refunding Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Senior Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Senior Lien Refunding Bonds.

(2) Senior Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Senior Lien Refunding Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Senior Lien Bond Reserve Account at least equal to the 2025 Senior Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Senior Lien Refunding Bonds or any other funds legally available therefor.

(3) Issuance Costs. As provided in the Sale Order, a portion of the proceeds from the sale of the 2025 Senior Lien Refunding Bonds shall be applied to the payment of Issuance Costs relating to the 2025 Refunding Bonds upon submission of proper documentation to an Authorized Officer.

(4) Additional Refunding Costs; Escrow Deposit. As provided in the Sale Order, the balance of the proceeds from the sale of the 2025 Senior Lien Refunding Bonds shall be used to provide the purchase price paid to any seller of Tendered Bonds, to fund the Escrow Deposit for any Bonds To Be

Refunded and to pay any additional Refunding Costs. Such proceeds may be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit, if any, to be held in an Escrow Fund. Additional proceeds remaining after payments and deposits made pursuant to this section, if any, shall be applied in accordance with the Ordinance.

(d) 2025 Second Lien Refunding Bonds.

(1) Disposition of Accrued Interest and Capitalized Interest. From the proceeds of the sale of the 2025 Second Lien Refunding Bonds there shall be immediately deposited in the Second Lien Debt Service Account, and amount equal to any accrued interest received on the delivery of the 2025 Second Lien Refunding Bonds and, to the extent provided in the Sale Order, any capitalized interest on the 2025 Second Lien Refunding Bonds, and the Authority may take credit for the amount so deposited against the amount required to be deposited in the Second Lien Debt Service Account for payment of the next maturing interest payment on the 2025 Second Lien Refunding Bonds.

(2) Second Lien Bond Reserve Account Deposit. If required as provided in Section 4(g) of this 2025 Series Ordinance, from the proceeds of the 2025 Second Lien Refunding Bonds, there shall next be applied an amount as set forth in the Sale Order to be deposited to the Second Lien Bond Reserve Account at least equal to the 2025 Second Lien Reserve Requirement after taking into account any Credit Facility or Credit Facilities to be acquired with the proceeds of the 2025 Second Lien Refunding Bonds or any other funds legally available therefor.

(3) Issuance Costs. As provided in the Sale Order, a portion of the proceeds from the sale of the 2025 Second Lien Refunding Bonds shall be applied to the payment of Issuance Costs relating to the 2025 Refunding Bonds upon submission of proper documentation to an Authorized Officer.

(4) Additional Refunding Costs; Escrow Deposit. As provided in the Sale Order, the balance of the proceeds from the sale of the 2025 Second Lien Refunding Bonds shall be used to provide the purchase price paid to any seller of Tendered Bonds, to fund the Escrow Deposit for any Bonds To Be Refunded and to pay any additional Refunding Costs. Such proceeds may be used to acquire Government Obligations, which together with any remaining balance of such proceeds in the form of cash, shall constitute all or part of the Escrow Deposit, if any, to be held in an Escrow Fund. Additional proceeds remaining after payments and deposits made pursuant to this section, if any, shall be applied in accordance with the Ordinance.

Section 10. Construction Fund. A subaccount of the Authority Regional Construction Account of the Construction Fund established by the Ordinance shall be established for the 2025

New Money Bonds and designated the "Construction Fund, Series 2025," and shall be established and maintained as a separate depository account with a Custodian as designated by the Chief Financial Officer. Moneys in the Construction Fund, Series 2025 shall be applied solely to payment of Project Costs (or to the reimbursement of Project Costs paid by the Authority from other funds prior to the issuance of the 2025 New Money Bonds), except as otherwise provided in this Section 10.

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

(b) Payments or reimbursements for Project Costs consisting of Issuance Costs relating to the 2025 New Money Bonds and engineering, legal and financial costs shall be made upon submission of appropriate documentation to an Authorized Officer.

(c) Pursuant to Section 512(a) of the Ordinance, the Chief Financial Officer is hereby authorized to designate separate accounts in the Construction Fund for the 2025 New Money Bonds, if determined necessary and desirable, for administrative purposes and to better able the Authority to comply with tax covenants, including rebate covenants, relating to the 2025 New Money Bonds in connection with maintaining the exclusion, if any, from gross income for federal income tax purposes of interest on the 2025 New Money Bonds. The Authority Board acknowledges, further, in accordance with Section 514 of the Ordinance, the establishment of a Rebate Fund, under Section 502 of the Ordinance, which shall be maintained by the Trustee as a separate depository account, for the sole purpose of paying to the United States of America the amounts required to be rebated pursuant to the Code. In accordance with Section 514 of the Ordinance, the Authorized Officer is authorized to direct the Trustee to transfer to the Rebate Fund, an amount sufficient to make the amount on deposit in the Rebate Fund equal to 100% of the amount certified by the Authority as the amount required to be rebated to the United Sates pursuant to the Code as of the close of the bond year (as defined in the Code) for a related Series of Bonds. Such amount shall be certified by an Authorized Officer to the Trustee.

Section 11. Escrow Fund; Escrow Agreement.

(a) Establishment of Escrow Fund. The Escrow Deposit, if any, shall be held in or credited to an account designated as the "Great Lakes Water Authority Sewage Disposal System Revenue Bonds Series 2025 Refunding Bonds Escrow Fund" (the "Escrow Fund") pursuant to an escrow agreement (the "Escrow Agreement").

(b) Escrow Agreement.

(1) An Authorized Officer is authorized to enter into an Escrow Agreement on behalf of the Authority with U.S. Bank Trust Company, National Association as "Escrow Trustee."

(2) The Escrow Agreement, if any:

a) shall be in the form and substance customary for refunding escrow agreements;

b) may permit any balance after paying the principal (and premium, if any) and interest on the Bonds To Be Refunded to be applied to any lawful purpose of the Sewer System if such use will not, in the opinion of Bond Counsel, impair the exclusion of interest on the 2025 Refunding Bonds that are Tax-Exempt 2025 Bonds from gross income for federal income tax purposes; and

c) shall otherwise be in the best interests of the Authority as determined by an Authorized Officer, as conclusively established by his or her execution of the Escrow Agreement.

Section 12. Tax Covenant.

(a) The Authority hereby covenants and represents with the registered owners of the Tax-Exempt 2025 Bonds that so long as any of the Tax-Exempt 2025 Bonds remain outstanding and unpaid as to either principal or interest, the Authority shall, to the extent permitted by law, take all actions within its control to maintain and will refrain from taking any action which would impair the exclusion of the interest on the Tax-Exempt 2025 Bonds from gross income for federal income tax purposes under the Code.

(b) The actions referred to in subsection (a) above include, but are not limited to, actions relating to any required rebate of arbitrage earnings and the expenditure and investment of proceeds of Tax-Exempt 2025 Bonds and moneys deemed to be proceeds of Tax-Exempt 2025 Bonds, and to prevent the Tax-Exempt 2025 Bonds from being or becoming "private activity bonds" as that term is used in the Code.

Section 13. Preliminary and Final Official Statements.

(a) An Authorized Officer shall assist in the preparation of the Preliminary Official Statement and is authorized to deem the portions of Preliminary Official Statement relating to the 2025 Bonds and the Authority "final" for purposes of the Rule.

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

(c) Such final Preliminary Official Statement and final Official Statement and other offering materials satisfactory to an Authorized Officer are authorized to be distributed by the Underwriter in conjunction with the offering and sale of the 2025 Bonds.

Section 14. Continuing Disclosure. Unless otherwise set forth in the Sale Order because of an exemption from the Rule, the 2025 Bonds shall be subject to the Rule, and an Authorized Officer is authorized to execute and deliver the Continuing Disclosure Undertaking in form and substance customary for continuing disclosure undertakings entered into pursuant to the Rule.

Section 15. Sale of 2025 Bonds; Purchase Agreement.

(a) The 2025 Bonds shall be sold by negotiated sale to the Underwriter pursuant to a Purchase Agreement or Agreements in customary form with such changes thereto as an Authorized Officer shall determine are in the best interests of the Authority, within the parameters established by this 2025 Series Ordinance. Such determination shall be conclusively established by the Authorized Officer's execution of the Purchase Agreement or Agreements.

(b) The Authority Board hereby determines that the sale of the 2025 Bonds by negotiated sale as described in subsection (a) is in the best interests of the Authority and will allow the 2025 Bonds to be sold in the most efficient manner so as to result in the lowest possible borrowing costs to the Authority.

(c) An Authorized Officer is authorized to accept, on behalf of the Authority, an offer from the Underwriter to purchase the 2025 Bonds subject to the following limitations:

(1) The interest rate coupon with respect to the 2025 Bonds shall not exceed 6%.

(2) The purchase price of the 2025 Bonds shall not be less than 98% of the principal amount thereof.

(3) The Underwriter's discount with respect to the 2025 Bonds or the compensation to be paid to the Underwriter shall not exceed 0.40% of the principal amount of the 2025 Bonds.

(4) The Authority's issuance and sale of the 2025 Refunding Bonds, together with any other legally available funds to finance the purchase of the Tendered Bonds, to refund the Bonds To Be Refunded and to exchange any Exchanged Bonds for 2025 Refunding Bonds, will meet the Savings Threshold.

(d) An Authorized Officer is authorized to determine if the Purchase Agreement shall provide for liquidated damages and if so, the amount thereof, and if the purchaser of any Series of the 2025 Bonds is required to provide a good faith check and if so, the amount thereof.

(e) An Authorized Officer shall confirm in the Sale Order that there was no petition meeting the requirements of Section 33 of Act 94 that was filed with the Secretary of the Authority

Board within 45 days of the date of publication of the notice of intent to issue bonds with respect to the 2025 New Money Bonds as required by Section 33 of Act 94.

Section 16. Delegation of Authority to and Authorization of Actions of Authorized Officers.

(a) An Authorized Officer shall make all determinations herein provided to be made in the Sale Order and shall make all such determinations in accordance with the best interests of the Authority within the parameters of this 2025 Series Ordinance.

(b) In addition to determinations authorized elsewhere in this 2025 Series Ordinance, an Authorized Officer shall determine the Target Bonds (from the Outstanding Bonds), the Bonds To Be Refunded, if any, and aggregate principal amount of 2025 Refunding Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2025 Series Ordinance. An Authorized Officer shall also determine and establish, in accordance with this 2025 Series Ordinance, the maturities of the 2025 Refunding Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities, and the redemption provisions for the 2025 Refunding Bonds.

(c) In addition to determinations authorized elsewhere in this 2025 Series Ordinance, an Authorized Officer shall determine the aggregate principal amount of 2025 New Money Bonds to be issued, but not in excess of the aggregate principal amount authorized by this 2025 Series Ordinance, on the basis of his or her evaluation of the maximum amount of 2025 New Money Bonds which can be sold, given anticipated interest rates and the revenue coverage requirements with respect to the 2025 New Money Bonds and for any other reasons the Authorized Officer deems appropriate.

(1) Such determination shall also include the type or types of 2025 New Money Bonds to be issued, whether to issue the 2025 New Money Bonds as Senior Lien Bonds or Second Lien Bonds and if in one or more Series, and the redemption provisions for the 2025 New Money Bonds.

(2) An Authorized Officer shall also determine and establish, in accordance with this 2025 Series Ordinance, the maturities of the 2025 New Money Bonds, whether such maturities shall be serial or term maturities and the Mandatory Redemption Requirements for any term maturities.

(d) An Authorized Officer is authorized, if necessary, to file applications and to pay the related fees, if any, to the Michigan Department of Treasury at his or her discretion under Act 34 for one or more orders of approval to issue all or a portion of the 2025 Bonds, and such waivers or other Treasury approvals as necessary to implement the sale, delivery and security for the 2025 Bonds as authorized herein, and as required by the Michigan Department of Treasury or Act 34.

(e) An Authorized Officer shall determine in the Sale Order that the requirements set forth in Section 207 of the Ordinance with respect to the issuance of the 2025 Bonds as Additional Bonds have been satisfied.

(f) An Authorized Officer is hereby authorized and directed to do and perform any and all other acts and things with respect to the 2025 Bonds and the Tender/Exchange Transactions which are necessary or appropriate to carry into effect, consistent with the Ordinance and this 2025 Series Ordinance, the authorizations therein and herein contained including without limitation the securing of ratings by bond rating agencies, and the incurring of reasonable fees costs and expenses incidental to the foregoing, for and on behalf of the Authority.

Section 17. [Reserved.]

Section 18. Ratification. All determinations and decisions of an Authorized Officer heretofore taken with respect to the issuance and sale of the 2025 Bonds as permitted or required by the Ordinance or law are hereby ratified, confirmed and approved.

Section 19. Additional Authorization. The Chief Executive Officer, the Chief Financial Officer, the Chief Administrative and Compliance Officer and the General Counsel of the Authority, any such officials acting in an interim or acting capacity to such officers, their deputies and staff, or any of them, are hereby authorized to execute and deliver such certificates, letters of representation, documents, instruments, agreements, opinions and other papers as may be deemed necessary or appropriate to complete the sale, execution and delivery of the 2025 Bonds and otherwise give effect to the transactions contemplated by this 2025 Series Ordinance, as determined by such officials executing and delivering the foregoing items.

Section 20. 2025 Series Ordinance a Contract. The provisions of this 2025 Series Ordinance shall constitute a contract between the Authority and each registered owner of an outstanding 2025 Bond.

Section 21. Professional Services.

(a) Dickinson Wright PLLC is hereby appointed as Bond Counsel for the 2025 Bonds, notwithstanding the periodic representation by Dickinson Wright PLLC in unrelated matters of other parties and potential parties to the issuance of the 2025 Bonds.

(b) PFM Financial Advisors LLC is hereby appointed as Financial Advisor for the 2025 Bonds, notwithstanding the periodic representation by PFM Financial Advisors LLC in unrelated matters of other parties and potential parties to the issuance of the 2025 Bonds.

(c) The fees and expenses of Dickinson Wright PLLC and PFM Financial Advisors LLC shall be payable as an Issuance Cost from the proceeds of the 2025 Bonds or other available funds.

(d) An Authorized Officer is authorized to engage other consultants, including, without limitation, verification agents or other parties as she deems necessary or appropriate in connection with the sale, issuance and delivery of the 2025 Bonds and to pay the fees and expenses thereof from the proceeds of the 2025 Bonds or other available funds.

Section 22. Severability; Headings; and Conflict. If any section, paragraph, clause or provision of this 2025 Series Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the other provisions of this 2025 Series

Ordinance. The section and paragraph headings in this 2025 Series Ordinance are furnished for convenience of reference only and shall not be considered to be part of this 2025 Series Ordinance.

Section 23. Publication and Recordation. This 2025 Series Ordinance shall be published in full in the Detroit Legal News, a newspaper of general circulation within the geographic boundaries of the Authority qualified under State law to publish legal notices, promptly after its adoption, and shall be maintained in the official records of the Authority and such recording authenticated by the signatures of the Chairperson and Secretary of the Authority Board.

Section 24. Repeal. All ordinances, resolutions, indentures or orders, or parts thereof, in conflict with the provisions of this 2025 Series Ordinance are, to the extent of such conflict, repealed.

Section 25. Effective Date. This 2025 Series Ordinance shall be effective upon adoption.

[Remainder of page intentionally left blank]

Adopted and signed on the ____ day of _____, 2025.

GREAT LAKES WATER AUTHORITY

Signed _____
Chairperson

Signed _____
Secretary

Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds (2025)

4906-7113-1180 v3 [63818-58]

Great Lakes Water Authority
Resolution 2025-107
RE: Approval of Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in a Principal Amount not to Exceed $685,000,000
Ordinance 2025-02

By Board Member: _____

Whereas There has been presented to the Board of Directors of the Great Lakes Water Authority (the "Authority") an ordinance entitled "Series Ordinance Authorizing Issuance and Sale of Sewage Disposal System Revenue and Revenue Refunding Bonds in an Amount not to Exceed $685,000,000" (the "2025 Sewer Series Ordinance"), which ordinance is a Series Ordinance as defined and described in Master Bond Ordinance No. 2015-02 adopted by the Board of Directors on October 7, 2015, as amended on December 9, 2015, January 27, 2016, August 10, 2016 and February 12, 2020 (as amended, the "Master Sewer Bond Ordinance").

Whereas The Articles of Incorporation of the Authority provide that at least 5 of the 6 members of the Authority Board must vote to approve the 2025 Sewer Series Ordinance.

Now, Therefore Be It:

Resolved That the 2025 Sewer Series Ordinance, in the form presented to this meeting, is approved and adopted, and the Chairperson and the Secretary are authorized to authenticate the 2025 Sewer Series Ordinance in the form approved; **And Be it Further**

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

Adopted by the Great Lakes Water Authority Board on: _____, 2025

4896-6528-4652 v1 [63818-58]

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

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, 2024 (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, 2024
2. Audited Financial Report for the General Retirement System of the City of Detroit (dated December 19, 2024)
3. GASB Statement No. 67 and 68 Accounting and Financial Reporting of Financial Plans of Component II June 30, 2024 (dated October 11, 2024)
4. Annual Actuarial Valuation as of June 30, 2024 (dated February 6, 2025)

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, 2024. 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 2025. Finally, we will address the most recent June 30, 2024 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 Update on Prepaid Administrative Expense: Per the Annual Actuarial Valuation of Component II, June 30, 2024 (dated February 6, 2025), the $13 million GLWA and DWSD prepaid in accordance with the 2015 Memorandum of Understanding is to be transferred from the General City to the DWSD during the 2025 fiscal year.

Source: Annual Actuarial Valuation of Component II, June 30, 2024 (dated February 6, 2025), p 13.

Comments and Recommendations

DWSD (Water/Sewer) Contributions

We understand that the City, System and GLWA have a Memorandum of Understanding dated December 1, 2015 for assessing contributions, if any, to GLWA.

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 future separate contribution agreement with GLWA beyond those described herein.

Per the General Retirement System's June 30, 2024 Notes to Financial Statements (Note 14):

> During the fiscal year beginning on July 1, 2023, the parties to the pension reporting agreement were 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. Pending a formalized agreement, the parties verbally agreed to have the City make the DWSD-R/GLWA annual required contribution until such time that the aggregate excess of approximately $13 million is exhausted.

It is further our understanding that the approximately $13 million is to be transferred from the General City to division to the DWSD division during the 2025 fiscal year and it is both parties' intention for the DWSD to begin making annual required contribution payments beginning with the 2026 fiscal year.

Per Section 2.2 from the Memorandum of Understanding dated December 1, 2015:

> (b) 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 determine 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%. If the Authority Pension Pool is fully funded at 100% or more, no contributions for the current Fiscal Year will be required of the Authority. 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. Except for the additional payments required by this subsection (b), if any, the Authority shall have no further liability whatsoever to the City or the GRS in connection with any other shortfalls that that may occur with respect to the GRS Plan.
>
> (c) The UAAL calculations required to be furnished pursuant to this Agreement shall be calculated by the GRS Actuary using actuarial standards of the actuary industry.

This report does not reflect any potential additional contribution requirements per Section 2.2 from the MOU. We will assist the Retirement System in determining whether contributions are required of the Authority Pension Pool for the 2025 and 2026 Fiscal Years in a separate report.

Recommendation

In order to minimize the risk of insolvency, it is important that timely employer contributions in an amount equal to or greater than the actuarially calculated amount are received, in accordance with the funding policy.

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 measurement date June 30, 2024 Component II Net Pension Liability is $844 million based on the roll forward of the June 30, 2023 valuation date. This is a decrease of approximately 8.6% from the prior year liability of $923 million. The combined DWSD/GLWA unit makes up approximately $42 million or 5% of that total and is discussed further in the next section.

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

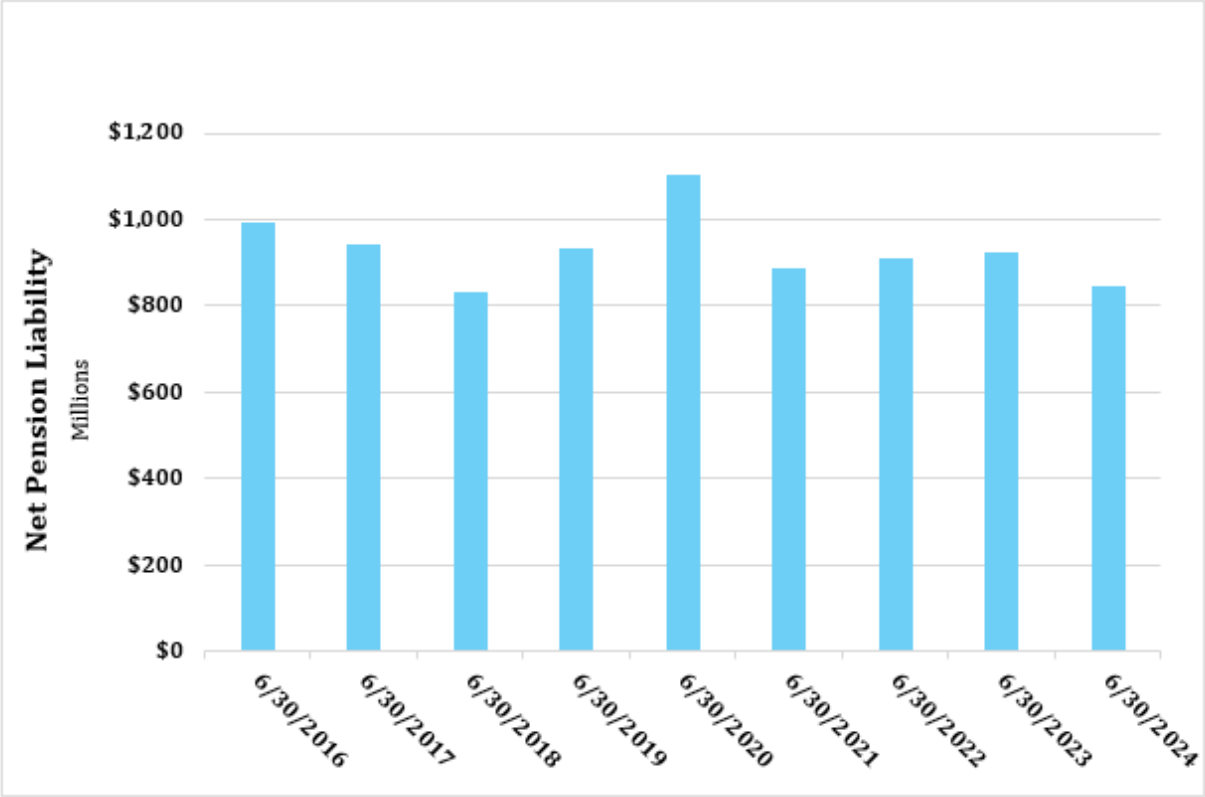
Executive Summary as of June 30, 2024

Actuarial Valuation Date	June 30, 2023
Measurement Date of the Net Pension Liability	June 30, 2024
Employer's Fiscal Year Ending Date (GASB No. 68 Reporting Date)	June 30, 2025
Membership	
Number of	
- Retirees and Beneficiaries	10,792
- Inactive, Nonretired Members	2,391
- Active Members	1,737
- Total	14,920
Covered Payroll^	$ 78,649,527
Net Pension Liability	
Total Pension Liability	$ 2,246,596,545
Plan Fiduciary Net Position	1,402,602,998
Net Pension Liability	$ 843,993,547
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.43%
Net Pension Liability as a Percentage of Covered Payroll	1,073.11%
Development of the Single Discount Rate	
Single Discount Rate	6.75%
Long-Term Expected Rate of Investment Return	6.75%
Long-Term Municipal Bond Rate*	3.97%
Last year ending June 30 in the 2025 to 2124 projection period for which projected benefit payments are fully funded	2124
Total Pension Expense	$ 58,878,042

Source: GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pension Plans of Component II, June 30, 2024 (dated October 11, 2024), p 1.

The June 30, 2024 actual net pension liability decrease for GRS as a whole is attributed to an increase in employer contributions of $57.4 million (which includes $23 million from a Michigan Pension Grant) and an increase in net investment income as compared to June 30, 2023. 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, 2024, the DWSD Net Pension Liability is $42 million. This is a decrease of 20% from $52.7 million DWSD Net Pension Liability as of June 30, 2023, in contrast to the overall system decrease of 8.6%. This decrease in the net pension liability is a result of actual net investment return 9.06% exceeding the previous year 4.94% (DWSD contribution in FY23 were $700,000 versus $42.9 million in FY24).

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, 2024*

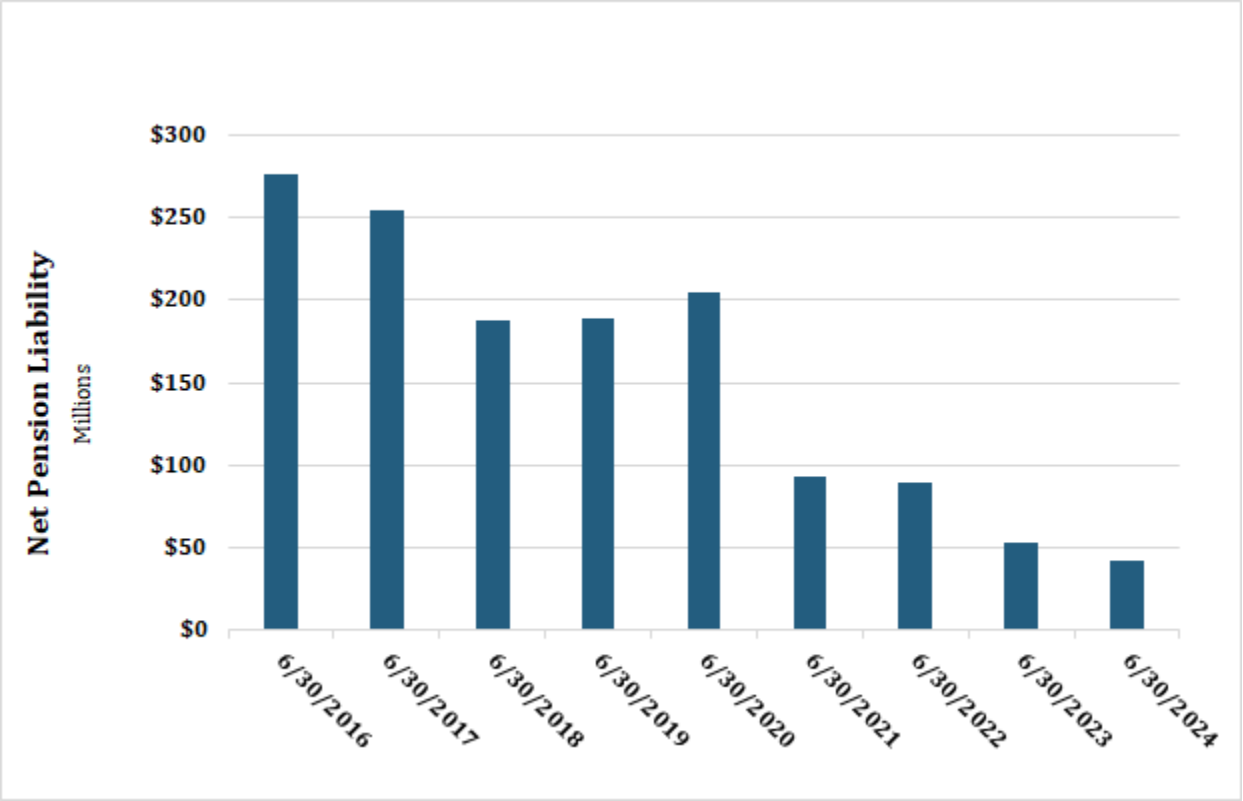
	General	DOT	DWSD	Library	Total
A. Total Pension Liability					
1. Service Cost	$ -	$ -	$ -	$ -	$ -
2. Interest on the Total Pension Liability	81,058,461	23,441,104	41,291,172	4,952,267	150,743,004
3. Changes of benefit terms	-	-	-	-	-
4. Difference between expected and actual experience of the Total Pension Liability	(7,647,380)	(8,768,999)	(6,234,300)	(1,452,359)	(24,103,038)
5. Changes of assumptions	890,534	266,200	469,499	51,731	1,677,964
6. Benefit payments, including refunds of employee contributions	(125,498,298)	(31,321,674)	(59,416,166)	(7,058,812)	(223,294,950)
7. Net change in Total Pension Liability	$ (51,196,683)	$ (16,383,369)	$ (23,889,795)	$ (3,507,173)	$ (94,977,020)
8. Total Pension Liability – Beginning	1,261,838,810	362,422,731	640,524,230	76,787,794	2,341,573,565
9. Total Pension Liability – Ending	**$ 1,210,642,127**	**$ 346,039,362**	**$ 616,634,435**	**$ 73,280,621**	**$ 2,246,596,545**
B. Plan Fiduciary Net Position					
1. Contributions – employer^	$ 67,455,909	$ 37,429,233	$ 700,000	$ 100,000	$ 105,685,142
2. Contributions – employee	-	-	-	-	-
3. Net investment income	54,836,310	4,134,243	49,128,301	6,162,226	114,261,080
4. Benefit payments, including refunds of employee contributions	(125,498,298)	(31,321,674)	(59,416,166)	(7,058,812)	(223,294,950)
5. Pension Plan Administrative Expense	(1,373,976)	(130,411)	(1,176,329)	(158,131)	(2,838,847)
6. Other	(5,172,463)	(1,992,430)	(2,444,389)	(209,425)	(9,818,707)
7. Net change in Plan Fiduciary Net Position	$ (9,752,518)	$ 8,118,961	$ (13,208,583)	$ (1,164,142)	$ (16,006,282)
8. Plan Fiduciary Net Position – Beginning	686,593,617	65,168,252	587,827,141	79,020,270	1,418,609,280
9. Plan Fiduciary Net Position – Ending	**$ 676,841,099**	**$ 73,287,213**	**$ 574,618,558**	**$ 77,856,128**	**$ 1,402,602,998**
C. Net Pension Liability	**$ 533,801,028**	**$ 272,752,149**	**$ 42,015,877**	**$ (4,575,507)**	**$ 843,993,547**
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	**55.91%**	**21.18%**	**93.19%**	**106.24%**	**62.43%**
E. Covered-employee payroll	**$ 51,528,192**	**$ 10,970,076**	**$ 10,092,380**	**$ 6,058,879**	**$ 78,649,527**
F. Net Pension Liability as a percentage of covered-employee payroll	**1035.94%**	**2486.33%**	**416.31%**	**-75.52%**	**1073.11%**

** Totals may not add due to rounding.*
^ Includes additional funding the System received from the MI Pension Grant Program ($23,185,142).

Source: GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pension Plans of Component II, June 30, 2024 (dated October 11, 2024), 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 local operations. 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, 2024 liability.

Table 3: Liability Allocation Between GLWA and DWSD as of June 30, 2024

Entity	Percent	Liability Allocation
DWSD - Water	17.80%	$ 7,478,826
DWSD - Sewer	11.90%	4,999,889
GLWA - Water	25.20%	10,588,001
GLWA - Sewer	45.10%	18,949,161
	100.00%	**$ 42,015,877**

Administrative Expenses

Through June 30, 2023, as part of the City of Detroit bankruptcy plan of adjustment (POA), GLWA and DWSD contributed $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.

The fiscal year 2024 employer contribution was computed in the June 30, 2022 actuarial valuation. GLWA and DWSD contributed $700,000 towards administrative expenses for the fiscal year 2024.

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

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, 2024

	DWSD Subdivisions		General Retirement System - Divisions				
	GLWA	DWSD-R	DWSD - Division Total (all DWSD Subdivisions)	General Division	DOT	Library	Total - General Retirement System (all Divisions)
Beginning Net Position - July 1, 2023	413,242,476	174,584,665	587,827,141	686,593,617	65,168,252	79,020,270	1,418,609,280
Additions:							
Investment income (loss):							
Interest, dividends, and other income	13,295,586	5,617,054	18,912,640	21,110,020	1,591,536	2,372,237	43,986,433
Net increase in fair value of investments	24,144,041	10,200,257	34,344,298	38,334,616	2,890,140	4,307,849	79,876,903
Net unrealized loss on collateralized securities	(254,701)	(107,605)	(362,306)	(404,401)	(30,489)	(45,444)	(842,640)
Investment related expenses	(2,647,731)	(1,118,601)	(3,766,332)	(4,203,926)	(316,944)	(472,416)	(8,759,618)
Net investment income	34,537,195	14,591,105	49,128,300	54,836,309	4,134,243	6,162,226	114,261,078
Contributions:							
Employer contributions	492,100	207,900	700,000	51,425,000	29,900,000	100,000	82,125,000
Foundation for Detroit's Future	-	-	-	265,012	109,988	-	375,000
State of Michigan Pension Grant	-	-	-	15,765,896	7,419,246	-	23,185,142
Total contributions	492,100	207,900	700,000	67,455,908	37,429,234	100,000	105,685,142
ASF recoupment interest	1,018,581	430,325	1,448,906	2,705,946	964,007	111,815	5,230,674
Other income	263,464	111,307	374,771	467,418	53,658	55,017	950,864
Total additions - net	36,311,340	15,340,637	51,651,977	125,465,581	42,581,142	6,429,058	226,127,758
Deductions:							
Member refunds and withdrawals	771,567	325,968	1,097,535	5,684,188	1,242,290	494,135	8,518,148
Retirees' pension and annuity benefits	40,997,998	17,320,633	58,318,631	119,814,110	30,079,384	6,564,676	214,776,801
General and administrative expenses	826,959	349,370	1,176,329	1,373,975	130,411	158,131	2,838,846
ASF Recoupment Write-off	3,000,446	1,267,619	4,268,065	8,345,826	3,010,096	376,258	16,000,245
Total deductions	45,596,970	19,263,590	64,860,560	135,218,099	34,462,181	7,593,200	242,134,040
Net increase (Decrease) in Net Position	(9,285,630)	(3,922,953)	(13,208,583)	(9,752,518)	8,118,961	(1,164,142)	(15,006,282)
End of Year Net Position Restricted for Pensions - June 30, 2024	**403,956,846**	**170,661,712**	**574,618,558**	**676,841,099**	**73,287,213**	**77,856,128**	**1,402,602,998**

Source: Audited Financial Report for the General Retirement System of the City of Detroit (dated December 19, 2024), p 52.

As of June 30, 2024, the aggregate excess of administrative expenses paid by GLWA and DWSD are approximately $13 million as shown in Table 5 below. Per the audited General Retirement System of the City of Detroit audit report (page 54):

> "In accordance with Section 2.3 of the pension reporting agreement, DWSD and GLWA's collective allocable share of administrative expenses through fiscal year 2023 had been allocated to the general division. Correspondingly, the expenses transferred to the general division were offset by a $2.5 million contribution made by DWSD and GLWA, collectively, for administrative expenses, which was credited to the general division. This occurred until 2023, at which point the City and GLWA were to mutually determine and resolve whether any aggregate over-or underpayment will impact the obligation of DWSD and GLWA to make payments to GRS under the pension reporting agreement. As of June 30, 2023, the aggregate excess of administrative expenses paid by DWSD and GLWA were $12,961,567. As of June 30, 2024, the City and GLWA have not formally agreed to a resolution of this excess."

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

General Retirement System of the City of Detroit

Schedule of DWSD/GLWA Excess of Contributions Paid Toward Administrative Expenses

For the Year Ended June 30, 2024

	DWSD Division Total	
	GLWA	DWSD-R
Amount Paid in Excess of Administrative Expenses Otherwise Allocable - June 30, 2023	$ 9,111,980	$ 3,849,587
City payments against excess	-	-
Cumulative Amount Paid in Excess of Administrative Expenses Otherwise Allocable - June 30, 2024	**$ 9,111,980**	**$ 3,849,587**

Source: Audited Financial Report for the General Retirement System of the City of Detroit (dated December 19, 2024), p 53.

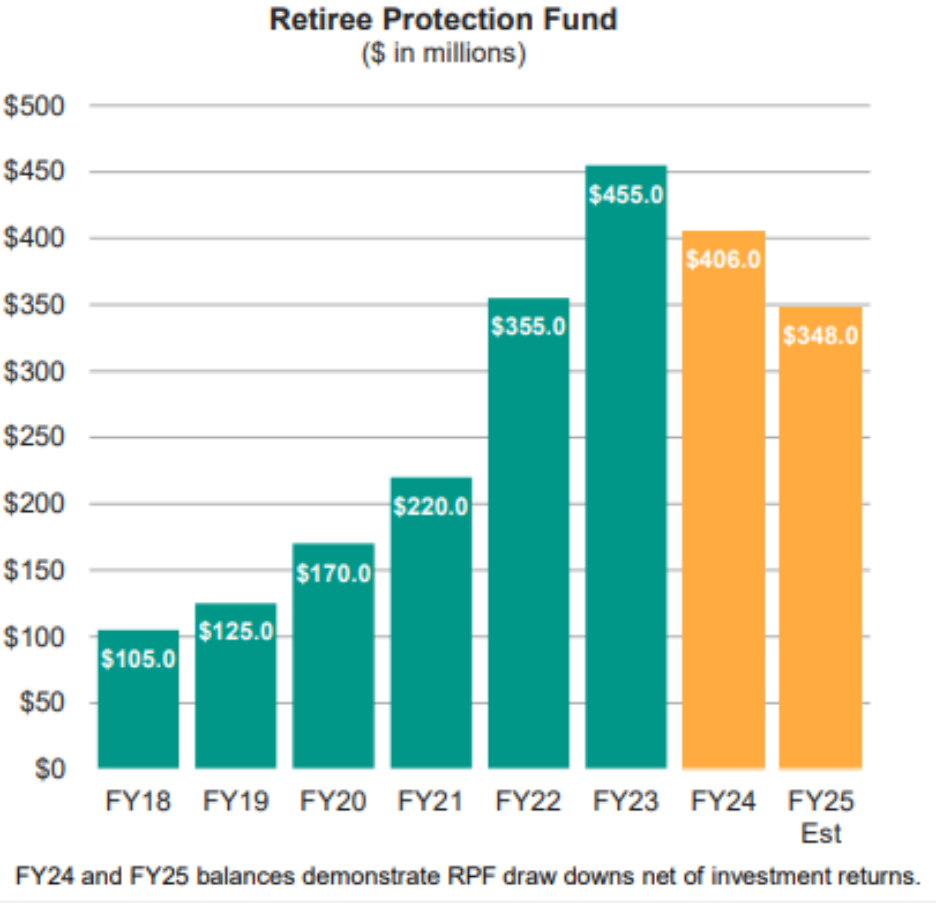
Planning for the Tail Liability (UAAL)

Under the POA, GLWA and DWSD made combined, Component II annual pension payments of $45.4 million, of which $2.5 million was specific to administrative expenses discussed above. Those fixed payments were reduced after June 30, 2023 based upon the terms of a pension agreement that addresses the tail liability. Starting in fiscal 2024, the GRS Component II Annual Pension Report presented to the GLWA Audit Committee by GLWA staff included the actuarial report and reflects the 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, 2024 Actuarial Report estimates the total Component II projected unfunded actuarial accrued liability (UAAL) for the GRS as a whole to be $846 million as of June 30, 2025. The DWSD-GLWA share of the projected UAAL amount is $37.6 million with an estimated actuarial determined employer contribution of $3.8 million plus $0.6 million administrative expense contribution, total $4.4 million for FY 2026.

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 2025-2026 City of Detroit proposed budget presented by the Financial Review Commission and presents the current value of that fund as of February 28, 2025. As noted in the City presentation, “To protect retirees, the Mayor and City Council deposited $455 million in the RPF through FY24”.

Chart 3: City of Detroit Retiree Protection Fund



Source: Mayor's Proposed Budget (detroitmi.gov)

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, 2024 is 62.4% (as shown in Table 1 on page 3 of this memo) up from 60.6% the prior year with best practice benchmarks being a 75% minimum and 100% maximum funded ratio. As stated previously, this increase is largely attributed to the increase in the City contributions and the actual net investment return.

As noted above, the POA established a funding policy for GLWA and DWSD. Starting from fiscal year 2024 (post-bankruptcy) the City is required to make ADEC payments annually in accordance with the plan document. The June 30, 2024 valuation computes the employer contribution as a forecast for the 2026 fiscal year. Table 6 below summarizes this ADEC by unit and provides a range for annual contribution requirements beginning in FY 2026.

Table 6: Projected Actuarially Determined Employer Contributions & UAAL/Tail Liability

Valuation Results

Determination of FY 2026 Actuarially Determined Employer Contribution

Beginning with the 2024 fiscal year, a closed 30-year level principal amortization has been used for determining the contribution dollar amount. Beginning with the 2025 fiscal year, the dollar amount is to be contributed in quarterly installments paid on the last day of each quarter to the Retirement System.

Development of FY 2026 Contributions

	General City	D.O.T.	DWSD	Library	System Total
As of June 30, 2024:					
Actuarial Accrued Liability	$ 1,226,232,248	$ 341,969,749	$ 617,106,660	$ 72,603,205	$ **2,257,911,862**
Funding Value of Assets (FVA)	670,844,372	72,637,899	569,527,510	77,166,334	**1,390,176,114**
Unfunded Actuarial Accrued Liability (UAAL)	$ 555,387,876	$ 269,331,850	$ 47,579,150	$ (4,563,129)	$ **867,735,748**
During Fiscal Year 2025:					
Assumed Contribution[1]	(53,500,000)	(27,100,000)	-	(100,000)	**(80,700,000)**
Assumed Transfer for Excess Admin Expenses[2]	12,961,567	-	(12,961,567)	-	**-**
Assumed Administrative Expenses	1,279,864	332,401	616,753	75,891	**2,304,909**
Interest at 6.75%	37,070,286	17,514,301	2,357,162	(307,988)	**56,633,761**
Projected UAAL as of June 30, 2025	$ 553,199,593	$ 260,078,552	$ 37,591,498	$ (4,895,226)	$ **845,974,417**
Remaining Amortization Years *(Closed 30-Year Level Principal Amortization)*	28	28	28	28	**28**
UAAL Contribution	$ 55,707,199	$ 26,189,911	$ 3,785,464	$ (492,949)	$ **85,189,625**
$0 Minimum UAAL Contribution	55,707,199	26,189,911	3,785,464	-	**85,682,574**
Administrative Expense Contribution[3]	1,264,666	332,787	613,584	75,886	**2,286,923**
Actuarially Determined Employer Contribution[4]	**$ 56,971,865**	**$ 26,522,698**	**$ 4,399,048**	**$ 75,886**	$ **87,969,497**

[1] *Contributions are assumed to be made in equal quarterly installments on the last day of each quarter of the fiscal year. The General City contribution includes the computed DWSD contribution for the 2025 fiscal year of $2.2M (see page 13 for more information).*

[2] *Transfer from General to DWSD for aggregate excess administrative expenses paid by the DWSD pension pool (see page 13 for more information).*

[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.*

If the City is unable to make the quarterly contribution in any given quarter, we recommend a catch-up contribution equal to 25% of the full end of year amount (see Comments and Recommendations for more information).

Totals may not add due to rounding.

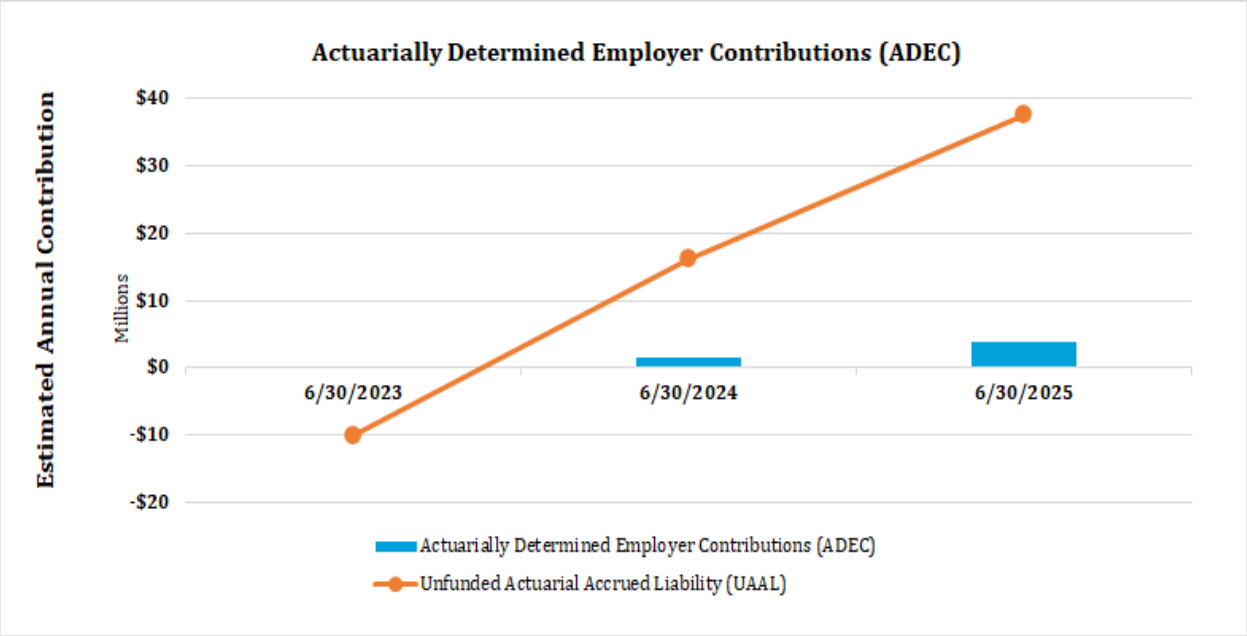
Source: Annual Actuarial Valuation of Component II, June 30, 2024 (dated February 6, 2025), p 3.

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.

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 below 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.

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

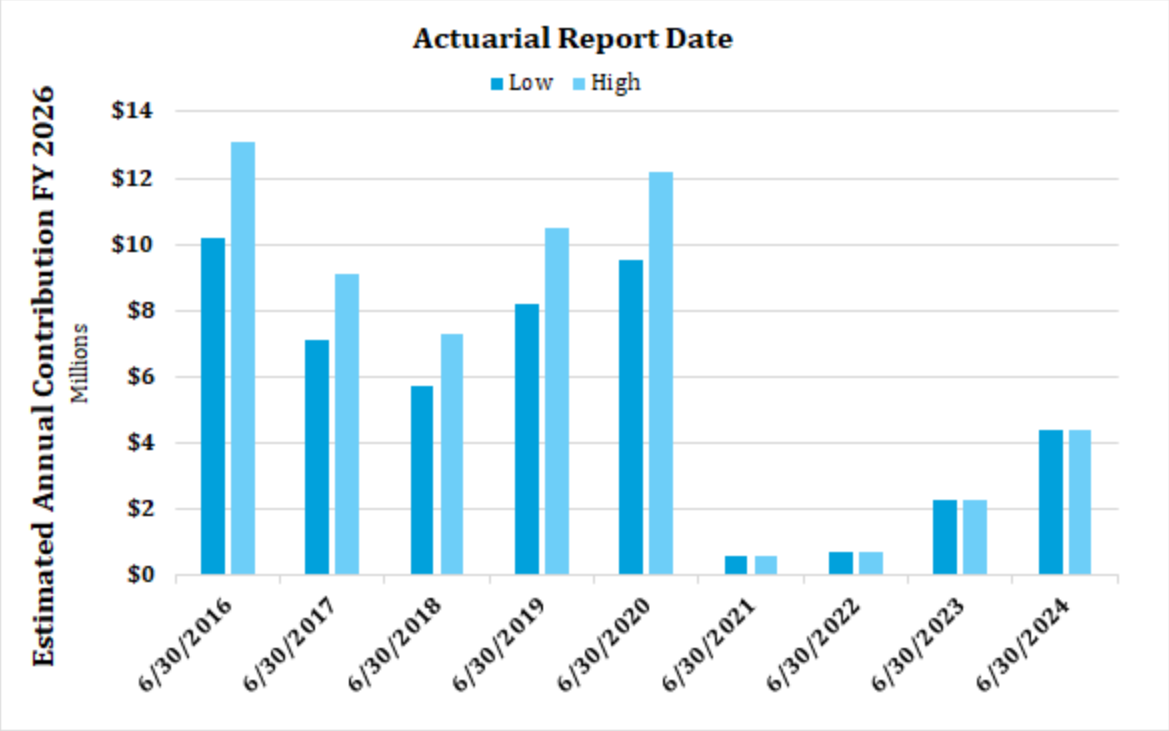


Source: Annual Actuarial Valuation of Component II.

Impact on GLWA Financial Forecast

Based on the funding policy currently proposed to the City of Detroit for FY 2026, the annual contribution for GLWA and DWSD is $0.6 million for administrative expense contribution, and $3.8 million for the ADEC contribution. The prior year actuarial placed that range as $2.3 million for FY 2025. 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 2026



Source: Annual Actuarial Valuation of Component II, June 30, 2024 (dated February 6, 2025), 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.

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, 2024



800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

October 11, 2024

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 these Statements. 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 2024 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, 2023. The total pension liability was rolled-forward from the valuation date to the plan year ending June 30, 2024 using generally accepted actuarial principles. The asset information as of June 30, 2024 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.

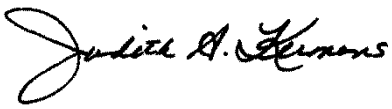
To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the System on the measurement date for purposes of GASB Statement Nos. 67 and 68 reporting. All calculations have been made in conformity with generally accepted actuarial 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.

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



Judith A. Kermans, EA, FCA, MAAA
Senior Consultant and President



James R. Sparks, ASA, FCA, MAAA
Consultant

JAK/JRS:rmn

Table of Contents

Page

Section A Executive Summary

Executive Summary 1
Discussion 2

Section B Financial Statements

Statement of Fiduciary Net Position 7
Statement of Changes in Fiduciary Net Position 8
Statement of Pension Expense under GASB Statement No. 68 9
Statement of Outflows and Inflows Arising from Current Reporting Period 10
Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods 11
Schedule of Proportionate Employer Share 20

Section C Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Current Period 22
Schedule of Changes in Net Pension Liability and Related Ratios Multiyear 23
Schedule of the Net Pension Liability Multiyear 24
Schedule of Contributions Multiyear 25
Notes to Schedule of Contributions 26
Schedule of Investment Returns 26

Section D Notes to Financial Statements

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption 27
Summary of Population Statistics and Additional Note 28

Section E Summary of Benefits 29

Section F Actuarial Cost Method and Actuarial Assumptions

Summary of Assumptions and Methods 32
Miscellaneous and Technical Assumptions 37

Section G Calculation of the Single Discount Rate

Calculation of the Single Discount Rate at End of Year 38
Projection of Contributions 39
Projection of Plan Fiduciary Net Position 40
Present Values of Projected Benefits 42
Projection of Plan Net Position and Benefit Payments 44

Section H Glossary of Terms 45

Appendix Michigan Public Act 202 49

SECTION A

EXECUTIVE SUMMARY

Executive Summary
as of June 30, 2024

Actuarial Valuation Date	June 30, 2023
Measurement Date of the Net Pension Liability	June 30, 2024
Employer's Fiscal Year Ending Date (GASB No. 68 Reporting Date)	June 30, 2025

Membership

Number of	
- Retirees and Beneficiaries	10,792
- Inactive, Nonretired Members	2,391
- Active Members	1,737
- Total	14,920
Covered Payroll^	$ 78,649,527

Net Pension Liability

Total Pension Liability	$ 2,246,596,545
Plan Fiduciary Net Position	1,402,602,998
Net Pension Liability	$ 843,993,547
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.43%
Net Pension Liability as a Percentage of Covered Payroll	1,073.11%

Development of the Single Discount Rate

Single Discount Rate	6.75%
Long-Term Expected Rate of Investment Return	6.75%
Long-Term Municipal Bond Rate*	3.97%
Last year ending June 30 in the 2025 to 2124 projection period for which projected benefit payments are fully funded	2124

Total Pension Expense $ 58,878,042

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	95,790,819	78,698,260
Total	$ 95,790,819	$ 78,698,260

**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 28, 2024. 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.*

^Based on the June 30, June 30, 2023 census data. Covered employee payroll for employer's disclosure may differ.

Discussion

Changes Compared to Funding Valuation

All actuarial assumptions were the same as those used in the June 30, 2023 actuarial valuation (the funding valuation).

Changes Compared to Prior Year's GASB Report

The only change in actuarial assumptions compared to the June 30, 2023 GASB Statement No. 68 reporting was:

- The long-term expected rate of investment return, and therefore the resulting single discount rate, was reduced from 6.76% to 6.75%.

This change increased the TPL by $1.7 million resulting in a new deferred outflow 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, 2023 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, 2024.

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, 2023, rolled forward to the plan year end of June 30, 2024.

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 6.75%; the municipal bond rate is 3.97% (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 6.75%.

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 (62.43% as of June 30, 2024). 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.

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, 2024

Assets		
Cash and Cash Equivalents	$	51,617,194
Receivables		82,356,876
Investments at Fair Value		1,315,594,294
Cash and Investments held as collateral for securities lending		33,021,506
Capital Assets - Net		3,968,571
Total Assets	$	1,486,558,441
Liabilities		
Accounts Payable	$	83,955,443
Total Liabilities	$	83,955,443
Net Position Restricted for Pensions	$	1,402,602,998
ASF Reserve	$	72,490,304
Other Reserves		1,330,112,694
Plan Fiduciary Net Position	$	1,402,602,998

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2024

Additions		
Contributions		
Employer	$	82,125,000
Employee		-
MI Pension Grant Program*		23,185,142
Foundation Contribution		375,000
Total Contributions	$	105,685,142
Investment Income		
Investment Income	$	114,261,080
Net Investment Income	$	114,261,080
Other Income (Including ASF Interest)^	$	6,181,538
Total Additions	$	226,127,760
Deductions		
Benefit Payments, including Refunds of Employee Contributions	$	223,294,950
Pension Plan Administrative Expense		2,838,847
Other (including ASF write-offs and transfers to Comp I)		16,000,245
Total Deductions	$	242,134,042
Net Increase in Net Position	$	(16,006,282)
Net Position Restricted for Pensions		
Beginning of Year	$	1,418,609,280
End of Year	$	1,402,602,998

* *During the 2024 fiscal year, the System received additional funding from the MI Pension Grant Program ($23,185,142). This additional funding was not considered a "special funding situation" per GASB 68, paragraph 33(d) and is therefore recognized as revenue.*

^ *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, 2024*

A. Expense	General	DOT	DWSD	Library	Total
1. Service Cost	$ -	$ -	$ -	$ -	$ -
2. Interest on the Total Pension Liability	81,058,461	23,441,104	41,291,172	4,952,267	150,743,004
3. Current-Period Benefit Changes	-	-	-	-	-
4. Employee Contributions (made negative for addition here)	-	-	-	-	-
5. Projected Earnings on Plan Investments (made negative for addition here)	(44,230,626)	(4,540,057)	(37,630,128)	(5,094,139)	(91,494,950)
6. Pension Plan Administrative Expense	1,373,976	130,411	1,176,329	158,131	2,838,847
7. Other Changes in Plan Fiduciary Net Position	5,172,463	1,992,430	2,444,389	209,425	9,818,707
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	(6,756,846)	(8,502,799)	(5,764,801)	(1,400,628)	(22,425,074)
9. Recognition of Outflow (Inflow) of Resources due to Assets	4,390,840	863,684	3,488,090	654,894	9,397,508
10. Total Pension Expense	**$ 41,008,268**	**$ 13,384,773**	**$ 5,005,051**	**$ (520,050)**	**$ 58,878,042**

** Totals may not add due to rounding.*

Statement of Outflows and Inflows Arising from Current Reporting Period
Fiscal Year Ended June 30, 2024*

A. Outflows (Inflows) of Resources due to Liabilities	General	DOT	DWSD	Library	Total
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	$ (7,647,380)	$ (8,768,999)	$ (6,234,300)	$ (1,452,359)	$ (24,103,038)
2. Assumption Changes (gains) or losses	$ 890,534	$ 266,200	$ 469,499	$ 51,731	$ 1,677,964
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	$ (7,647,380)	$ (8,768,999)	$ (6,234,300)	$ (1,452,359)	$ (24,103,038)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	$ 890,534	$ 266,200	$ 469,499	$ 51,731	$ 1,677,964
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	$ (6,756,846)	$ (8,502,799)	$ (5,764,801)	$ (1,400,628)	$ (22,425,074)
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	$ (10,605,684)	$ 405,814	$ (11,498,173)	$ (1,068,087)	$ (22,766,130)
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	$ (2,121,137)	$ 81,163	$ (2,299,635)	$ (213,617)	$ (4,553,226)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	$ (8,484,547)	$ 324,651	$ (9,198,538)	$ (854,470)	$ (18,212,904)

**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	$ 890,534	$ 7,647,380	$ (6,756,846)
2. Due to Assets	39,257,101	34,866,261	4,390,840
3. Total	$ 40,147,635	$ 42,513,641	$ (2,366,006)

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	$ -	$ 7,647,380	$ (7,647,380)
2. Assumption Changes	890,534	-	890,534
3. Net Difference between projected and actual earnings on pension plan investments	39,257,101	34,866,261	4,390,840
4. Total	$ 40,147,635	$ 42,513,641	$ (2,366,006)

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	49,055,502	41,229,673	7,825,829
4. Total	$ 49,055,502	$ 41,229,673	$ 7,825,829

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
2025	$ (11,043,453)
2026	21,701,671
2027	(711,253)
2028	(2,121,136)
2029	-
Thereafter	-
Total	$ 7,825,829

Recognition of Deferred Outflows and Inflows of Resources
Fiscal Year Ended June 30, 2024
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					
2024	$ (7,647,380)	1.0000	$ (7,647,380)	$ -	0.0000
Total			**$ (7,647,380)**	**$ -**	
Deferred Outflow (Inflow) due to Assumption Changes					
2024	$ 890,534	1.0000	$ 890,534	$ -	0.0000
Total			**$ 890,534**	**$ -**	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2020	$ 77,171,447	5.0000	$ 15,434,291	$ -	0.0000
2021	(163,725,622)	5.0000	(32,745,124)	(32,745,126)	1.0000
2022	112,064,628	5.0000	22,412,926	44,825,850	2.0000
2023	7,049,420	5.0000	1,409,884	4,229,652	3.0000
2024	(10,605,684)	5.0000	(2,121,137)	(8,484,547)	4.0000
Total			**$ 4,390,840**	**$ 7,825,829**	

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	$ 266,200	$ 8,768,999	$ (8,502,799)
2. Due to Assets	5,462,417	4,598,733	863,684
3. Total	$ 5,728,617	$ 13,367,732	$ (7,639,115)

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	$ -	$ 8,768,999	$ (8,768,999)
2. Assumption Changes	266,200	-	266,200
3. Net Difference between projected and actual earnings on pension plan investments	5,462,417	4,598,733	863,684
4. Total	$ 5,728,617	$ 13,367,732	$ (7,639,115)

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	6,396,018	4,598,733	1,797,285
4. Total	$ 6,396,018	$ 4,598,733	$ 1,797,285

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
2025	$ (1,524,498)
2026	3,074,235
2027	166,386
2028	81,162
2029	-
Thereafter	-
Total	$ 1,797,285

Recognition of Deferred Outflows and Inflows of Resources
Fiscal Year Ended June 30, 2024
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					
2024	$ (8,768,999)	1.0000	$ (8,768,999)	$ -	0.0000
Total			**$ (8,768,999)**	**$ -**	
Deferred Outflow (Inflow) due to Assumption Changes					
2024	$ 266,200	1.0000	$ 266,200	$ -	0.0000
Total			**$ 266,200**	**$ -**	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2020	$ 11,940,910	5.0000	$ 2,388,182	$ -	0.0000
2021	(22,993,665)	5.0000	(4,598,733)	(4,598,733)	1.0000
2022	14,539,245	5.0000	2,907,849	5,815,698	2.0000
2023	426,115	5.0000	85,223	255,669	3.0000
2024	405,814	5.0000	81,163	324,651	4.0000
Total			**$ 863,684**	**$ 1,797,285**	

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	$ 469,499	$ 6,234,300	$ (5,764,801)
2. Due to Assets	25,915,698	22,427,608	3,488,090
3. Total	$ 26,385,197	$ 28,661,908	$ (2,276,711)

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	$ -	$ 6,234,300	$ (6,234,300)
2. Assumption Changes	469,499	-	469,499
3. Net Difference between projected and actual earnings on pension plan investments	25,915,698	22,427,608	3,488,090
4. Total	$ 26,385,197	$ 28,661,908	$ (2,276,711)

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	35,523,709	29,326,513	6,197,196
4. Total	$ 35,523,709	$ 29,326,513	$ 6,197,196

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
2025	$ (5,401,221)
2026	14,726,753
2027	(828,703)
2028	(2,299,633)
2029	-
Thereafter	-
Total	$ 6,197,196

Recognition of Deferred Outflows and Inflows of Resources
Fiscal Year Ended June 30, 2024
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					
2024	$ (6,234,300)	1.0000	$ (6,234,300)	$ -	0.0000
Total			**$ (6,234,300)**	**$ -**	
Deferred Outflow (Inflow) due to Assumption Changes					
2024	$ 469,499	1.0000	$ 469,499	$ -	0.0000
Total			**$ 469,499**	**$ -**	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2020	$ 44,446,541	5.0000	$ 8,889,309	$ -	0.0000
2021	(100,639,867)	5.0000	(20,127,973)	(20,127,975)	1.0000
2022	77,777,294	5.0000	15,555,459	31,110,917	2.0000
2023	7,354,652	5.0000	1,470,930	4,412,792	3.0000
2024	(11,498,173)	5.0000	(2,299,635)	(9,198,538)	4.0000
Total			**$ 3,488,090**	**$ 6,197,196**	

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	$ 51,731	$ 1,452,359	$ (1,400,628)
2. Due to Assets	3,557,384	2,902,490	654,894
3. Total	$ 3,609,115	$ 4,354,849	$ (745,734)

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	$ -	$ 1,452,359	$ (1,452,359)
2. Assumption Changes	51,731	-	51,731
3. Net Difference between projected and actual earnings on pension plan investments	3,557,384	2,902,490	654,894
4. Total	$ 3,609,115	$ 4,354,849	$ (745,734)

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	4,815,590	3,543,341	1,272,249
4. Total	$ 4,815,590	$ 3,543,341	$ 1,272,249

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
2025	$ (592,248)
2026	2,096,624
2027	(18,508)
2028	(213,619)
2029	-
Thereafter	-
Total	$ 1,272,249

Recognition of Deferred Outflows and Inflows of Resources
Fiscal Year Ended June 30, 2024
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					
2024	$ (1,452,359)	1.0000	$ (1,452,359)	$ -	0.0000
Total			**$ (1,452,359)**	**$ -**	
Deferred Outflow (Inflow) due to Assumption Changes					
2024	$ 51,731	1.0000	$ 51,731	$ -	0.0000
Total			**$ 51,731**	**$ -**	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2020	$ 6,235,716	5.0000	$ 1,247,144	$ -	0.0000
2021	(13,444,363)	5.0000	(2,688,873)	(2,688,871)	1.0000
2022	10,575,646	5.0000	2,115,129	4,230,259	2.0000
2023	975,553	5.0000	195,111	585,331	3.0000
2024	(1,068,087)	5.0000	(213,617)	(854,470)	4.0000
Total			**$ 654,894**	**$ 1,272,249**	

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	$ 1,677,964	$ 24,103,038	$ (22,425,074)
2. Due to Assets	74,192,600	64,795,092	9,397,508
3. Total	$ 75,870,564	$ 88,898,130	$ (13,027,566)

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	$ -	$ 24,103,038	$ (24,103,038)
2. Assumption Changes	1,677,964	-	1,677,964
3. Net Difference between projected and actual earnings on pension plan investments	74,192,600	64,795,092	9,397,508
4. Total	$ 75,870,564	$ 88,898,130	$ (13,027,566)

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	95,790,819	78,698,260	17,092,559
4. Total	$ 95,790,819	$ 78,698,260	$ 17,092,559

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
2025	$ (18,561,420)
2026	41,599,283
2027	(1,392,078)
2028	(4,553,226)
2029	-
Thereafter	-
Total	$ 17,092,559

Schedule of Proportionate Employer Share
for Year Ended June 30, 2024
General Subgroup*

Employer	TPL	Prop. Share	Net Pension Liability	Deferred Outflows of Resources: Differences Between Expected and Actual Experience	Deferred Outflows of Resources: Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Deferred Outflows of Resources: Changes of Assum.	Deferred Outflows of Resources: Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Deferred Outflows of Resources: Total Deferred Outflows of Resources
General City	$ 1,189,698,018	98.27%	$ 524,566,270	$ -	$ 48,206,842	$ -	$ -	$ 48,206,842
Parking	18,643,889	1.54%	8,220,536	-	755,455	-	-	755,455
Airport	2,300,220	0.19%	1,014,222	-	93,205	-	-	93,205
Total for All Employers	**$ 1,210,642,127**	**100.00%**	**$ 533,801,028**	**$ -**	**$ 49,055,502**	**$ -**	**$ -**	**$ 49,055,502**

Employer	Deferred Inflows of Resources: Differences Between Expected and Actual Experience	Deferred Inflows of Resources: Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Deferred Inflows of Resources: Changes of Assum.	Deferred Inflows of Resources: Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Deferred Inflows of Resources: Total Deferred Inflows of Resources	Pension Expense: Prop. Share of Plan Pension Expense	Pension Expense: Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Pension Expense: Total Employer Pension Expense
General City	$ -	$ 40,516,400	$ -	$ -	$ 40,516,400	$ 40,298,825	$ 763,469	$ 41,062,294
Parking	-	634,937	-	-	634,937	631,527	(665,761)	(34,234)
Airport	-	78,336	-	-	78,336	77,916	(97,708)	(19,792)
Total for All Employers	**$ -**	**$ 41,229,673**	**$ -**	**$ -**	**$ 41,229,673**	**$ 41,008,268**	**$ -**	**$ 41,008,268**

** Totals may not add due to rounding.*

Schedule of Proportionate Employer Share
for Year Ended June 30, 2024
General Subgroup*

Employer	Employer Allocation Percentage	Schedule of Deferred Inflows and Outflows						
		2025	2026	2027	2028	2029	Thereafter	Total
General City	98.27%	$ (10,852,401)	$ 21,326,232	$ (698,948)	$ (2,084,440)	$ -	$ -	$ 7,690,443
Parking	1.54%	(170,069)	334,206	(10,953)	(32,665)	-	-	120,519
Airport	0.19%	(20,983)	41,233	(1,351)	(4,030)	-	-	14,869
TOTAL	100.00%	$ (11,043,453)	$ 21,701,671	$ (711,252)	$ (2,121,135)	$ -	$ -	$ 7,825,831

** Totals may not add due to rounding.*

Determination of Employer Contribution Allocation
for Year Ended June 30, 2024

Employer	General City	Parking	Airport	General Total	DOT	DWSD	Library	Total
Contributions* Before General Breakdown				$ 67,455,909	$ 37,429,233	$ 700,000	$ 100,000	$ 105,685,142
General Employer Allocation Percent	100.00%	0.00%	0.00%	100.00%	N/A	N/A	N/A	N/A
Times General Total	$ 67,455,909	$ 67,455,909	$ 67,455,909	67,455,909	N/A	N/A	N/A	N/A
Contribution Allocation Dollar	$ 67,455,909	$ -	$ -	$ 67,455,909	$ 37,429,233	$ 700,000	$ 100,000	$ 105,685,142

** Includes additional funding the System received from the MI Pension Grant Program ($23,185,142).*

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, 2024*

A. Total Pension Liability	General	DOT	DWSD	Library	Total
1. Service Cost	$ -	$ -	$ -	$ -	$ -
2. Interest on the Total Pension Liability	81,058,461	23,441,104	41,291,172	4,952,267	150,743,004
3. Changes of benefit terms	-	-	-	-	-
4. Difference between expected and actual experience of the Total Pension Liability	(7,647,380)	(8,768,999)	(6,234,300)	(1,452,359)	(24,103,038)
5. Changes of assumptions	890,534	266,200	469,499	51,731	1,677,964
6. Benefit payments, including refunds of employee contributions	(125,498,298)	(31,321,674)	(59,416,166)	(7,058,812)	(223,294,950)
7. Net change in Total Pension Liability	$ (51,196,683)	$ (16,383,369)	$ (23,889,795)	$ (3,507,173)	$ (94,977,020)
8. Total Pension Liability – Beginning	1,261,838,810	362,422,731	640,524,230	76,787,794	2,341,573,565
9. Total Pension Liability – Ending	**$ 1,210,642,127**	**$ 346,039,362**	**$ 616,634,435**	**$ 73,280,621**	**$ 2,246,596,545**
B. Plan Fiduciary Net Position					
1. Contributions – employer^	$ 67,455,909	$ 37,429,233	$ 700,000	$ 100,000	$ 105,685,142
2. Contributions – employee	-	-	-	-	-
3. Net investment income	54,836,310	4,134,243	49,128,301	6,162,226	114,261,080
4. Benefit payments, including refunds of employee contributions	(125,498,298)	(31,321,674)	(59,416,166)	(7,058,812)	(223,294,950)
5. Pension Plan Administrative Expense	(1,373,976)	(130,411)	(1,176,329)	(158,131)	(2,838,847)
6. Other	(5,172,463)	(1,992,430)	(2,444,389)	(209,425)	(9,818,707)
7. Net change in Plan Fiduciary Net Position	$ (9,752,518)	$ 8,118,961	$ (13,208,583)	$ (1,164,142)	$ (16,006,282)
8. Plan Fiduciary Net Position – Beginning	686,593,617	65,168,252	587,827,141	79,020,270	1,418,609,280
9. Plan Fiduciary Net Position – Ending	**$ 676,841,099**	**$ 73,287,213**	**$ 574,618,558**	**$ 77,856,128**	**$ 1,402,602,998**
C. Net Pension Liability	**$ 533,801,028**	**$ 272,752,149**	**$ 42,015,877**	**$ (4,575,507)**	**$ 843,993,547**
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	**55.91%**	**21.18%**	**93.19%**	**106.24%**	**62.43%**
E. Covered-employee payroll	**$ 51,528,192**	**$ 10,970,076**	**$ 10,092,380**	**$ 6,058,879**	**$ 78,649,527**
F. Net Pension Liability as a percentage of covered-employee payroll	**1035.94%**	**2486.33%**	**416.31%**	**-75.52%**	**1073.11%**

** Totals may not add due to rounding.*

^ Includes additional funding the System received from the MI Pension Grant Program ($23,185,142).

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,	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability										
Service Cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest on the Total Pension Liability	150,743,004	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
Benefit Changes	-	-	-	-	-	-	-	-	-	(731,824,895)
Difference between Expected and Actual Experience	(24,103,038)	(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	1,677,964	(1,789,161)	(181,357,524)	119,876,694	67,677,535	-	(110,274,515)	76,925,957	90,034,927	(101,559,893)
Benefit Payments	(214,776,802)	(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)
Refunds*	(8,518,148)	(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)
Net Change in Total Pension Liability	(94,977,020)	(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)
Total Pension Liability - Beginning	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
Total Pension Liability - Ending (a)	$ 2,246,596,545	$ 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
Plan Fiduciary Net Position										
Employer Contributions^	$ 105,685,142	$ 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
Employee Contributions	-	-	-	-	-	-	-	-	-	609,073
Pension Plan Net Investment Income	114,261,080	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
Benefit Payments	(214,776,802)	(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)
Refunds*	(8,518,148)	(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)
Pension Plan Administrative Expense	(2,838,847)	(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)
Other	(9,818,707)	(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	(16,006,282)	(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
Plan Fiduciary Net Position - Beginning	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
Plan Fiduciary Net Position - Ending (b)	$ 1,402,602,998	$ 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
Net Pension Liability - Ending (a) - (b)	$ 843,993,547	$ 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
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.43 %	60.58 %	62.65 %	67.25 %	59.15 %	65.81 %	69.98 %	67.57 %	66.07 %	72.04 %
Covered-Employee Payroll	$ 78,649,527	$ 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-Employee Payroll	1,073.11 %	1,110.60 %	888.29 %	796.82 %	775.13 %	625.74 %	588.66 %	655.94 %	494.65 %	406.42 %
Notes to Schedule:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

** For FY 2017, includes approximately $2.9 million of adjusted loan balances that were treated as refunds of ASF contributions.*
^ 2024 fiscal year includes additional funding the System received from the MI Pension Grant Program ($23,185,142).

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
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%
2024	2,246,596,545	1,402,602,998	843,993,547	62.43%	78,649,527	1,073.11%

** 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
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%
2024	82,406,705	82,500,000	(93,295)	78,649,527	104.90%

^ Actual Contributions for the fiscal year ending June 30, 2024 excludes revenue from the MI Pension Grant Program.
** 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

Valuation Date:	June 30, 2022
Notes	Actuarially determined contribution rates are calculated as of June 30, which is 12 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine FY 2024 Contribution Rates:

Actuarial Cost Method	Individual entry-age
Amortization Method	Level Principal, Closed
Remaining Amortization Period	30 years (Beginning with fiscal year 2024 contribution)
Asset Valuation Method	3-Year smoothed market
Inflation	2.50% price inflation
Salary Increases	N/A
Investment Rate of Return	6.75%

Other Information:

Notes	N/A

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 6.75% was used to measure the total pension liability as of June 30, 2024. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.75%. 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 the 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 6.75%, 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

	1% Decrease 5.75%	Current Single Discount Rate Assumption 6.75%	1% Increase 7.75%
Total Pension Liability (TPL)	$2,428,636,981	$2,246,596,545	$2,089,027,014
Net Position Restricted for Pensions	1,402,602,998	1,402,602,998	1,402,602,998
Net Pension Liability (NPL)	$1,026,033,983	$ 843,993,547	$ 686,424,016

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	10,792
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2,391
Active Plan Members	1,737
Total Plan Members	14,920

Additional information regarding the plan population may be found in the June 30, 2023 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 6.75% per year, compounded annually (net after investment expenses) as of June 30, 2024. 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 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 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 1608	1406 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. Members 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 6.75%; the municipal bond rate is 3.97%; and the resulting SDR is 6.75% as of June 30, 2024.

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, 2024, employer contributions were determined by a closed 29-year level principle amortization of any unfunded actuarial accrued liability using 6.75% 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 6.75% 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, 2024, the benefit payments reflect the plan provisions in force as of June 30, 2024.

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)
2025	$ -	$ -	$ 2,267,727	$ 82,670,895	$ 84,938,622
2026	-	-	2,229,740	84,459,447	86,689,187
2027	-	-	2,190,700	82,486,778	84,677,478
2028	-	-	2,148,472	80,514,109	82,662,581
2029	-	-	2,101,951	78,541,440	80,643,392
2030	-	-	2,054,130	76,568,772	78,622,901
2031	-	-	2,003,496	74,596,103	76,599,599
2032	-	-	1,950,073	72,623,434	74,573,507
2033	-	-	1,892,834	70,650,765	72,543,599
2034	-	-	1,831,520	68,678,097	70,509,616
2035	-	-	1,764,784	66,705,428	68,470,212
2036	-	-	1,694,615	64,732,759	66,427,374
2037	-	-	1,621,908	62,760,091	64,381,999
2038	-	-	1,547,705	60,787,422	62,335,127
2039	-	-	1,471,248	58,814,753	60,286,001
2040	-	-	1,393,130	56,842,084	58,235,215
2041	-	-	1,313,977	54,869,416	56,183,393
2042	-	-	1,234,130	52,896,747	54,130,877
2043	-	-	1,154,663	50,924,078	52,078,741
2044	-	-	1,075,964	48,951,409	50,027,373
2045	-	-	998,188	46,978,741	47,976,929
2046	-	-	921,859	45,006,072	45,927,931
2047	-	-	847,826	43,033,403	43,881,230
2048	-	-	776,382	41,060,734	41,837,116
2049	-	-	707,916	39,088,066	39,795,982
2050	-	-	642,680	37,115,397	37,758,077
2051	-	-	580,933	35,142,728	35,723,661
2052	-	-	522,853	33,170,059	33,692,913
2053	-	-	468,567	31,197,391	31,665,958
2054	-	-	418,169	-	418,169
2055	-	-	371,583	-	371,583
2056	-	-	328,833	-	328,833
2057	-	-	289,776	-	289,776
2058	-	-	254,335	-	254,335
2059	-	-	222,366	-	222,366
2060	-	-	193,688	-	193,688
2061	-	-	168,098	-	168,098
2062	-	-	145,389	-	145,389
2063	-	-	125,333	-	125,333
2064	-	-	107,708	-	107,708
2065	-	-	92,287	-	92,287
2066	-	-	78,854	-	78,854
2067	-	-	67,196	-	67,196
2068	-	-	57,118	-	57,118
2069	-	-	48,434	-	48,434
2070	-	-	40,976	-	40,976
2071	-	-	34,588	-	34,588
2072	-	-	29,136	-	29,136
2073	-	-	24,495	-	24,495
2074	-	-	20,557	-	20,557

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 6.75% (5.25% for ASF)	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(a)+(b)-(c)-(d)-(e)+(f)
2025	$ 1,402,602,998	$ 84,938,622	$ 217,312,911	$ 9,262,119	$ 2,194,860	$ 86,060,907	$ 1,344,832,638
2026	1,344,832,638	86,689,187	213,672,719	9,262,119	2,158,094	82,368,925	1,288,797,818
2027	1,288,797,818	84,677,478	209,931,493	9,262,119	2,120,308	78,801,965	1,230,963,342
2028	1,230,963,342	82,662,581	205,884,846	9,262,119	2,079,437	75,128,493	1,171,528,014
2029	1,171,528,014	80,643,392	201,426,805	9,262,119	2,034,411	71,365,728	1,110,813,799
2030	1,110,813,799	78,622,901	196,844,153	9,262,119	1,988,126	67,526,047	1,048,868,349
2031	1,048,868,349	76,599,599	191,991,986	9,262,119	1,939,119	63,617,800	985,892,525
2032	985,892,525	74,573,507	186,872,548	9,262,119	1,887,413	59,654,760	922,098,713
2033	922,098,713	72,543,599	181,387,405	9,262,119	1,832,013	55,654,867	857,815,642
2034	857,815,642	70,509,616	175,511,820	9,262,119	1,772,669	51,641,460	793,420,111
2035	793,420,111	68,470,212	169,116,627	-	1,708,078	47,884,662	738,950,281
2036	738,950,281	66,427,374	162,392,402	-	1,640,163	44,433,441	685,778,531
2037	685,778,531	64,381,999	155,425,077	-	1,569,793	41,077,991	634,243,651
2038	634,243,651	62,335,127	148,314,263	-	1,497,974	37,837,843	584,604,383
2039	584,604,383	60,286,001	140,987,555	-	1,423,974	34,732,887	537,211,743
2040	537,211,743	58,235,215	133,501,542	-	1,348,366	31,784,922	492,381,971
2041	492,381,971	56,183,393	125,916,415	-	1,271,756	29,013,274	450,390,466
2042	450,390,466	54,130,877	118,264,896	-	1,194,475	26,435,435	411,497,407
2043	411,497,407	52,078,741	110,649,587	-	1,117,561	24,065,527	375,874,527
2044	375,874,527	50,027,373	103,108,004	-	1,041,391	21,913,884	343,666,389
2045	343,666,389	47,976,929	95,654,845	-	966,114	19,989,770	315,012,129
2046	315,012,129	45,927,931	88,340,352	-	892,238	18,300,893	290,008,364
2047	290,008,364	43,881,230	81,245,968	-	820,584	16,851,044	268,674,085
2048	268,674,085	41,837,116	74,399,463	-	751,435	15,640,572	251,000,876
2049	251,000,876	39,795,982	67,838,557	-	685,169	14,667,646	236,940,777
2050	236,940,777	37,758,077	61,587,017	-	622,029	13,928,230	226,418,038
2051	226,418,038	35,723,661	55,669,909	-	562,266	13,416,370	219,325,894
2052	219,325,894	33,692,913	50,104,220	-	506,053	13,124,292	215,532,825
2053	215,532,825	31,665,958	44,902,113	-	453,511	13,042,708	214,885,867
2054	214,885,867	418,169	40,072,499	-	404,732	13,160,996	187,987,801
2055	187,987,801	371,583	35,608,225	-	359,643	11,495,082	163,886,598
2056	163,886,598	328,833	31,511,615	-	318,267	10,005,628	142,391,176
2057	142,391,176	289,776	27,768,771	-	280,465	8,680,200	123,311,917
2058	123,311,917	254,335	24,372,568	-	246,163	7,506,239	106,453,761
2059	106,453,761	222,366	21,309,010	-	215,221	6,471,048	91,622,944
2060	91,622,944	193,688	18,560,833	-	187,464	5,562,126	78,630,460
2061	78,630,460	168,098	16,108,625	-	162,697	4,767,366	67,294,602
2062	67,294,602	145,389	13,932,333	-	140,717	4,075,176	57,442,117
2063	57,442,117	125,333	12,010,511	-	121,306	3,474,580	48,910,212
2064	48,910,212	107,708	10,321,498	-	104,247	2,955,316	41,547,491
2065	41,547,491	92,287	8,843,810	-	89,322	2,507,885	35,214,532
2066	35,214,532	78,854	7,556,447	-	76,320	2,123,581	29,784,200
2067	29,784,200	67,196	6,439,344	-	65,037	1,794,495	25,141,510
2068	25,141,510	57,118	5,473,544	-	55,283	1,513,501	21,183,302
2069	21,183,302	48,434	4,641,368	-	46,878	1,274,228	17,817,719
2070	17,817,719	40,976	3,926,608	-	39,659	1,071,020	14,963,448
2071	14,963,448	34,588	3,314,564	-	33,477	898,881	12,548,877
2072	12,548,877	29,136	2,792,042	-	28,200	753,420	10,511,191
2073	10,511,191	24,495	2,347,292	-	23,708	630,791	8,795,478
2074	8,795,478	20,557	1,969,864	-	19,896	527,637	7,353,911

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 6.75% (5.25% for ASF)	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(a)+(b)-(c)-(d)-(e)+(f)
2075	$ 7,353,911	$ 17,223	$ 1,650,487	$ -	$ 16,670	$ 441,041	$ 6,145,018
2076	6,145,018	14,411	1,380,995	-	13,948	368,478	5,132,964
2077	5,132,964	12,044	1,154,195	-	11,657	307,770	4,286,925
2078	4,286,925	10,057	963,787	-	9,734	257,048	3,580,509
2079	3,580,509	8,393	804,291	-	8,123	214,713	2,991,201
2080	2,991,201	7,002	670,958	-	6,777	179,406	2,499,873
2081	2,499,873	5,841	559,682	-	5,653	149,973	2,090,352
2082	2,090,352	4,873	466,936	-	4,716	125,440	1,749,013
2083	1,749,013	4,067	389,710	-	3,936	104,990	1,464,424
2084	1,464,424	3,396	325,439	-	3,287	87,935	1,227,030
2085	1,227,030	2,838	271,961	-	2,747	73,704	1,028,864
2086	1,028,864	2,373	227,458	-	2,297	61,821	863,304
2087	863,304	1,987	190,402	-	1,923	51,888	724,854
2088	724,854	1,664	159,519	-	1,611	43,578	608,966
2089	608,966	1,396	133,754	-	1,351	36,620	511,877
2090	511,877	1,172	112,233	-	1,134	30,788	430,470
2091	430,470	984	94,248	-	952	25,896	362,150
2092	362,150	827	79,222	-	800	21,788	304,743
2093	304,743	695	66,675	-	673	18,334	256,424
2094	256,424	587	56,196	-	568	15,424	215,671
2095	215,671	495	47,437	-	479	12,967	181,217
2096	181,217	418	40,108	-	405	10,887	152,010
2097	152,010	354	33,962	-	343	9,122	127,181
2098	127,181	301	28,788	-	291	7,619	106,022
2099	106,022	255	24,411	-	247	6,338	87,957
2100	87,957	216	20,683	-	209	5,244	72,525
2101	72,525	183	17,483	-	177	4,309	59,357
2102	59,357	154	14,719	-	149	3,513	48,156
2103	48,156	128	12,322	-	124	2,837	38,676
2104	38,676	106	10,241	-	103	2,267	30,705
2105	30,705	88	8,437	-	85	1,790	24,061
2106	24,061	71	6,880	-	69	1,393	18,577
2107	18,577	58	5,540	-	56	1,068	14,107
2108	14,107	45	4,396	-	44	805	10,518
2109	10,518	36	3,431	-	35	595	7,683
2110	7,683	28	2,628	-	27	430	5,486
2111	5,486	21	1,971	-	20	304	3,820
2112	3,820	15	1,442	-	15	209	2,588
2113	2,588	10	1,027	-	10	140	1,702
2114	1,702	7	709	-	7	91	1,084
2115	1,084	5	474	-	5	57	667
2116	667	3	306	-	3	35	395
2117	395	2	190	-	2	20	225
2118	225	1	114	-	1	11	123
2119	123	1	65	-	1	6	64
2120	64	-	36	-	-	3	31
2121	31	-	19	-	-	1	14
2122	14	-	10	-	-	1	5
2123	5	-	5	-	-	0	0
2124	0	-	-	-	-	0	0

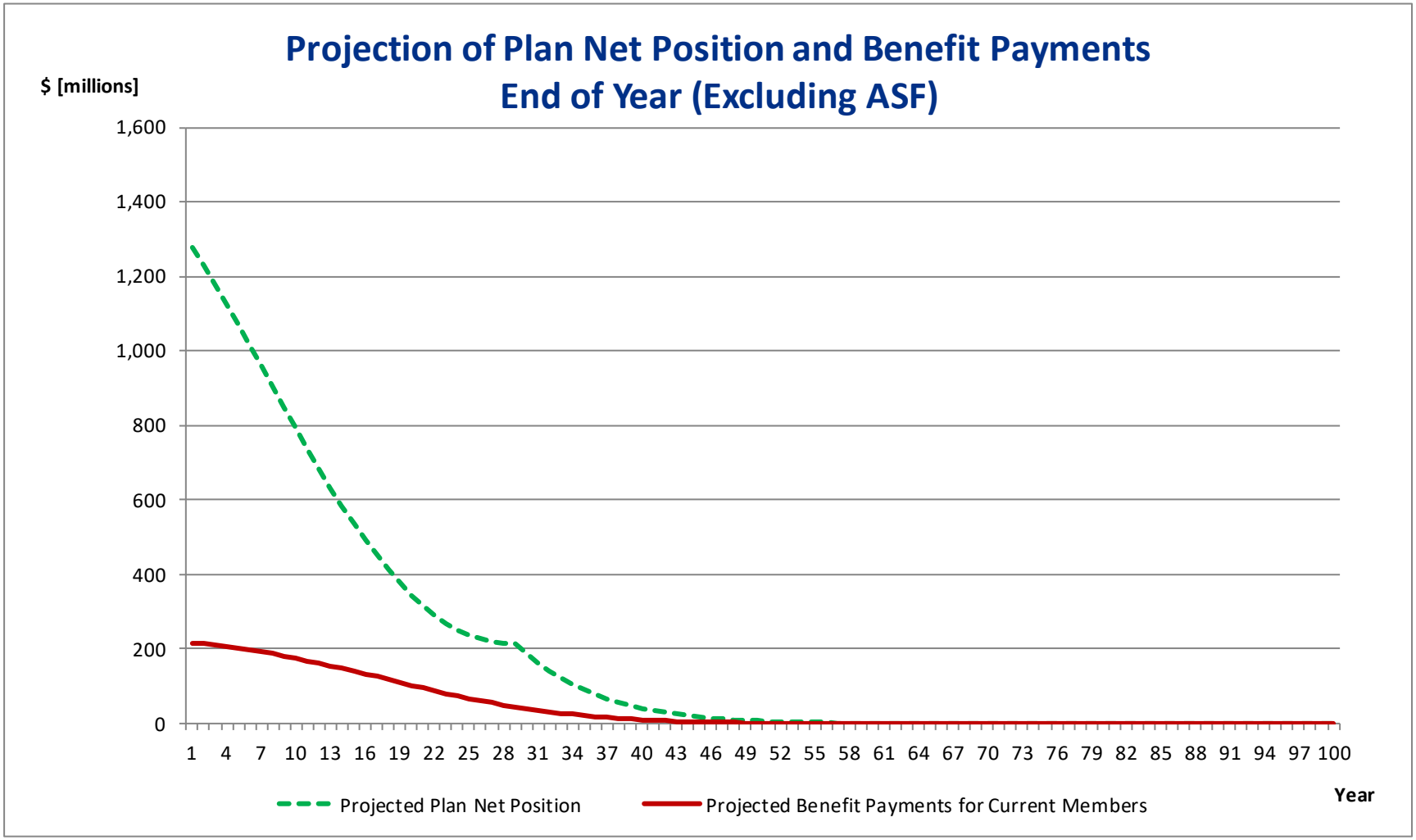
Employer contributions as shown may differ substantially from those determined by a funding valuation.

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)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+sdr)^(a-.5)
2025	$ 1,330,112,694	$ 217,312,911	$ 217,312,911	$ -	$ 210,330,177	$ -	$ 210,330,177
2026	1,278,038,732	213,672,719	213,672,719	-	193,730,166	-	193,730,166
2027	1,227,999,371	209,931,493	209,931,493	-	178,302,686	-	178,302,686
2028	1,176,475,116	205,884,846	205,884,846	-	163,808,634	-	163,808,634
2029	1,123,681,295	201,426,805	201,426,805	-	150,128,031	-	150,128,031
2030	1,069,957,266	196,844,153	196,844,153	-	137,435,573	-	137,435,573
2031	1,015,368,988	191,991,986	191,991,986	-	125,571,724	-	125,571,724
2032	960,136,587	186,872,548	186,872,548	-	114,494,962	-	114,494,962
2033	904,492,727	181,387,405	181,387,405	-	104,107,044	-	104,107,044
2034	848,787,481	175,511,820	175,511,820	-	94,365,115	-	94,365,115
2035	793,420,111	169,116,627	169,116,627	-	85,177,233	-	85,177,233
2036	738,950,281	162,392,402	162,392,402	-	76,618,746	-	76,618,746
2037	685,778,531	155,425,077	155,425,077	-	68,694,592	-	68,694,592
2038	634,243,651	148,314,263	148,314,263	-	61,406,803	-	61,406,803
2039	584,604,383	140,987,555	140,987,555	-	54,682,261	-	54,682,261
2040	537,211,743	133,501,542	133,501,542	-	48,504,729	-	48,504,729
2041	492,381,971	125,916,415	125,916,415	-	42,856,063	-	42,856,063
2042	450,390,466	118,264,896	118,264,896	-	37,706,645	-	37,706,645
2043	411,497,407	110,649,587	110,649,587	-	33,047,906	-	33,047,906
2044	375,874,527	103,108,004	103,108,004	-	28,848,195	-	28,848,195
2045	343,666,389	95,654,845	95,654,845	-	25,070,636	-	25,070,636
2046	315,012,129	88,340,352	88,340,352	-	21,689,504	-	21,689,504
2047	290,008,364	81,245,968	81,245,968	-	18,686,348	-	18,686,348
2048	268,674,085	74,399,463	74,399,463	-	16,029,668	-	16,029,668
2049	251,000,876	67,838,557	67,838,557	-	13,691,892	-	13,691,892
2050	236,940,777	61,587,017	61,587,017	-	11,644,159	-	11,644,159
2051	226,418,038	55,669,909	55,669,909	-	9,859,879	-	9,859,879
2052	219,325,894	50,104,220	50,104,220	-	8,312,995	-	8,312,995
2053	215,532,825	44,902,113	44,902,113	-	6,978,821	-	6,978,821
2054	214,885,867	40,072,499	40,072,499	-	5,834,369	-	5,834,369
2055	187,987,801	35,608,225	35,608,225	-	4,856,572	-	4,856,572
2056	163,886,598	31,511,615	31,511,615	-	4,026,079	-	4,026,079
2057	142,391,176	27,768,771	27,768,771	-	3,323,536	-	3,323,536
2058	123,311,917	24,372,568	24,372,568	-	2,732,607	-	2,732,607
2059	106,453,761	21,309,010	21,309,010	-	2,238,058	-	2,238,058
2060	91,622,944	18,560,833	18,560,833	-	1,826,155	-	1,826,155
2061	78,630,460	16,108,625	16,108,625	-	1,484,673	-	1,484,673
2062	67,294,602	13,932,333	13,932,333	-	1,202,896	-	1,202,896
2063	57,442,117	12,010,511	12,010,511	-	971,400	-	971,400
2064	48,910,212	10,321,498	10,321,498	-	782,008	-	782,008
2065	41,547,491	8,843,810	8,843,810	-	627,683	-	627,683
2066	35,214,532	7,556,447	7,556,447	-	502,401	-	502,401
2067	29,784,200	6,439,344	6,439,344	-	401,057	-	401,057
2068	25,141,510	5,473,544	5,473,544	-	319,349	-	319,349
2069	21,183,302	4,641,368	4,641,368	-	253,674	-	253,674
2070	17,817,719	3,926,608	3,926,608	-	201,038	-	201,038
2071	14,963,448	3,314,564	3,314,564	-	158,972	-	158,972
2072	12,548,877	2,792,042	2,792,042	-	125,443	-	125,443
2073	10,511,191	2,347,292	2,347,292	-	98,793	-	98,793
2074	8,795,478	1,969,864	1,969,864	-	77,665	-	77,665

Single Discount Rate Development
Present Values of Projected Benefits
End of Year
(Excluding ASF) (Concluded)

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)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+sdr)^(a-.5)
2075	$ 7,353,911	$ 1,650,487	$ 1,650,487	$ -	$ 60,958	$ -	$ 60,958
2076	6,145,018	1,380,995	1,380,995	-	47,780	-	47,780
2077	5,132,964	1,154,195	1,154,195	-	37,408	-	37,408
2078	4,286,925	963,787	963,787	-	29,262	-	29,262
2079	3,580,509	804,291	804,291	-	22,875	-	22,875
2080	2,991,201	670,958	670,958	-	17,876	-	17,876
2081	2,499,873	559,682	559,682	-	13,969	-	13,969
2082	2,090,352	466,936	466,936	-	10,917	-	10,917
2083	1,749,013	389,710	389,710	-	8,535	-	8,535
2084	1,464,424	325,439	325,439	-	6,677	-	6,677
2085	1,227,030	271,961	271,961	-	5,227	-	5,227
2086	1,028,864	227,458	227,458	-	4,095	-	4,095
2087	863,304	190,402	190,402	-	3,211	-	3,211
2088	724,854	159,519	159,519	-	2,520	-	2,520
2089	608,966	133,754	133,754	-	1,980	-	1,980
2090	511,877	112,233	112,233	-	1,556	-	1,556
2091	430,470	94,248	94,248	-	1,224	-	1,224
2092	362,150	79,222	79,222	-	964	-	964
2093	304,743	66,675	66,675	-	760	-	760
2094	256,424	56,196	56,196	-	600	-	600
2095	215,671	47,437	47,437	-	474	-	474
2096	181,217	40,108	40,108	-	376	-	376
2097	152,010	33,962	33,962	-	298	-	298
2098	127,181	28,788	28,788	-	237	-	237
2099	106,022	24,411	24,411	-	188	-	188
2100	87,957	20,683	20,683	-	149	-	149
2101	72,525	17,483	17,483	-	118	-	118
2102	59,357	14,719	14,719	-	93	-	93
2103	48,156	12,322	12,322	-	73	-	73
2104	38,676	10,241	10,241	-	57	-	57
2105	30,705	8,437	8,437	-	44	-	44
2106	24,061	6,880	6,880	-	34	-	34
2107	18,577	5,540	5,540	-	25	-	25
2108	14,107	4,396	4,396	-	19	-	19
2109	10,518	3,431	3,431	-	14	-	14
2110	7,683	2,628	2,628	-	10	-	10
2111	5,486	1,971	1,971	-	7	-	7
2112	3,820	1,442	1,442	-	5	-	5
2113	2,588	1,027	1,027	-	3	-	3
2114	1,702	709	709	-	2	-	2
2115	1,084	474	474	-	1	-	1
2116	667	306	306	-	1	-	1
2117	395	190	190	-	0	-	0
2118	225	114	114	-	0	-	0
2119	123	65	65	-	0	-	0
2120	64	36	36	-	0	-	0
2121	31	19	19	-	0	-	0
2122	14	10	10	-	0	-	0
2123	5	5	5	-	0	-	0
2124	0	-	-	-	-	-	-
				Totals	$ 2,174,106,241	$ -	$ 2,174,106,241


Projection of Plan Net Position and Benefit Payments
End of Year (Excluding ASF)
$ [millions]
1,600
1,400
1,200
1,000
800
600
400
200
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55 58 61 64 67 70 73 76 79 82 85 88 91 94 97 100
Year
Projected Plan Net Position
Projected Benefit Payments for Current Members

SECTION H

GLOSSARY OF TERMS

Glossary of Terms

Actuarial Accrued Liability (AAL)	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."
Actuarial Assumptions	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.
Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Equivalent	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.
Actuarial Cost Method	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.
Actuarial Gain (Loss)	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.
Actuarial Present Value (APV)	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.
Actuarial Valuation	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.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	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

AFC	Average Final Compensation.
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Amortization Method	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).
APTE	Association of Professional and Technical Employees.
ASF	Annuity Savings Fund.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	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.
Covered-Employee Payroll	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
Deferred Inflows and Outflows	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.
DIA	Detroit Institute of Art.
Discount Rate	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: 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

D.O.T.	Department of Transportation.
DWSD	Detroit Water and Sewerage Department.
EMS	Emergency Medical Service.
Entry Age Actuarial Cost Method (EAN)	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.
GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
GLWA	Great Lakes Water Authority.
Fiduciary Net Position	The fiduciary net position is the value of the assets of the trust.
Long-Term Expected Rate of Return	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.
Money-Weighted Rate of Return	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.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	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.
Net Pension Liability (NPL)	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

Non-Employer Contribution Entities	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.
Normal Cost	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method. Also known as service cost.
POA	The 8th Amended Plan for the Adjustment of the Debt of the City of Detroit.
SAAA	Senior Accountants, Analysts, and Appraisers Association.
UTGO	Unlimited Tax General Obligation.

APPENDIX

MICHIGAN PUBLIC ACT 202

State Reporting Assumptions for Fiscal Year 2024 Calculations as of June 30, 2023

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 2024 reporting may be found on the State website in the uniform assumptions memo dated February 13, 2024.

	PA 202	Assumptions used for GASB	Uniform Assumptions used for Fiscal Year 2023
Investment Rate of Return Discount Rate	Maximum of 6.90%^	**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 later if available	**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 15 Years	N/A	**15**
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 6.90%; for periods in which projected plan assets are NOT sufficient to make projected benefit payments – 3.65%.*

The calculations for PA 202 use a June 30, 2023 valuation 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, 2024 GASB report which has a valuation date of June 30, 2023.

State Reporting for Fiscal Year 2024
Calculations as of June 30, 2023

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	$ 1,501,039,291
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions	$ 2,327,504,951
26	Funded ratio using uniform assumptions	64.5%
27	Actuarially Determined Contribution (ADC) using uniform assumptions	$ 91,654,174
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, 2023.*

* *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.*

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

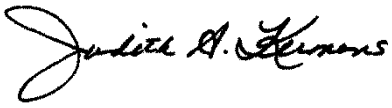
October 11, 2024

Mr. David Cetlinski, Executive Director
The General Retirement System of the City of Detroit
One Detroit Center
500 Woodward Avenue, Suite 3000
Detroit, Michigan 48226

Dear Mr. Cetlinski:

Please find enclosed 30 copies of the GASB Statement Nos. 67 and 68 report of the General Retirement System of the City of Detroit Component II.

Sincerely,
Gabriel, Roeder, Smith & Company



Judith A. Kermans, EA, FCA, MAAA
Senior Consultant and President

JAK:rmn
Enclosures

cc: Gail Oxendine
Kelly Tapper
James R. Sparks, GRS

The General Retirement System of the City of Detroit

Annual Actuarial Valuation of Component II (Legacy)

June 30, 2024



800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

February 6, 2025 (Revised)

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, 2024

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 (Legacy) benefits. The date of the valuation was **June 30, 2024.**

This report includes revisions to a previous version dated January 31, 2025 and replaces that report.

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 2026 Actuarially Determined Employer Contribution (ADEC) of Component II. The Component II ADEC shown on page 3 assumes payments will be received on a quarterly basis during the 2026 fiscal year. If the City is unable to make the quarterly contribution in any given quarter, we recommend a catch-up contribution equal to 25% of what the ADEC would have been if the entire employer contribution was expected to be received at the end of the 2026 fiscal year. See Comments and Recommendations for more information.

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 ADEC shown in this report are 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 shown 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.

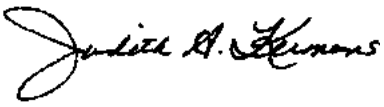
The assumptions used in the valuations concerning future experience are summarized in Section D of this report. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly 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.

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



Judith A. Kermans, EA, FCA, MAAA



James R. Sparks, ASA, FCA, MAAA

JAK/JRS:dj

Table of Contents

Page

Section A **Valuation Results**

Executive Summary 1
Valuation Results 2-6
Valuation Results – Comparative Statement 7
Liabilities Related to Restoration and the Restoration Reserve Account 8
Comments and Recommendations 9-13
Risks Measured 14-17
Low-Default-Risk Obligation Measure (Solvency Liability) 18-19
Other Observations 20

Section B **Fund Assets**

Statement of Plan Assets 21
Market Value of Assets 22
Allocation of Assets Used for Valuation 23
Funding Value of Assets 24

Section C **Participant Data**

Reconciliation of Raw Data 25
Reconciliation of Year-to-Year Data 26
Data Approximations and Assumptions 27-28
Summary of Member Data 29-30
Retiree and Beneficiary Data 31-32

Section D **Methods and Assumptions** 33-40

Section E **Plan Provisions** 41-43

Section F **Glossary** 44-47

Section G **Funding Policy** 48-55

SECTION A

VALUATION RESULTS

Executive Summary

Valuation Date	June 30, 2024	June 30, 2023
Contributions for Fiscal Year Ending	June 30, 2026	June 30, 2025
Remaining Amortization Years *(Closed 30-Year Level Principal Amortization)*	28	29
Actuarially Determined Employer Contribution* *(To Be Paid in Quarterly Installments)*	$ 87,969,497	$ 80,700,000
Membership		
Number of:		
Active Members	1,744	1,737
Retirees and Beneficiaries	10,713	10,792
Inactive, Nonretired Members	2,268	2,391
Total	14,725	14,920
Assets		
Funding Value of Assets (FVA)	$ 1,390,176,114	$ 1,501,039,291
Market Value of Assets (MVA)	$ 1,402,602,998	$ 1,418,609,280
Return on Funding Value	1.85 %	1.80 %
Return on Market Value	9.28 %	6.20 %
Actuarial Information (FVA)		
Actuarial Accrued Liability (AAL)	**$ 2,257,911,862**	**$ 2,327,504,951**
Unfunded Actuarial Accrued Liability: (AAL) - (FVA)	**$ 867,735,748**	**$ 826,465,660**
Funded Ratio: (FVA) / (AAL)	**61.57 %**	**64.49 %**
Actuarial Information (MVA)		
Actuarial Accrued Liability (AAL)	$ 2,257,911,862	$ 2,327,504,951
Unfunded Actuarial Accrued Liability: (AAL) - (MVA)	$ 855,308,864	$ 908,895,671
Funded Ratio: (MVA) / (AAL)	62.12 %	60.95 %

** Contributions are assumed to be paid into the Retirement System quarterly (i.e., ¼ on September 30, 2025; ¼ on December 31, 2025; ¼ on March 31, 2026; and ¼ on June 30, 2026).*

Valuation Results

Liability by Division

	General	D.O.T.	DWSD	Library	Totals
Accrued Pension Liabilities					
Retirees and beneficiaries	$ 956,584,951	$ 268,754,321	$ 497,950,277	$ 47,244,754	$ 1,770,534,303
Inactive members future deferred pensions	96,251,247	20,737,742	59,744,421	4,587,522	181,320,932
Active members	84,160,832	27,944,633	19,625,013	11,119,079	142,849,557
Total accrued pension liabilities	$ 1,136,997,030	$ 317,436,696	$ 577,319,711	$ 62,951,355	$ 2,094,704,792
Pension fund balance (MVA)#	670,193,387	61,408,452	580,565,174	74,119,347	1,386,286,360
Unfunded accrued pension liabilities	$ 466,803,643	$ 256,028,244	$ (3,245,463)	$ (11,167,992)	$ 708,418,432
Accrued Annuity Liabilities					
Retirees and beneficiaries#	$ 49,918,928	$ 9,151,747	$ 28,480,282	$ 3,165,809	$ 90,716,766
Members annuities & future refunds	39,316,290	15,381,306	11,306,667	6,486,041	72,490,304
Total accrued annuity liabilities	$ 89,235,218	$ 24,533,053	$ 39,786,949	$ 9,651,850	$ 163,207,070
Annuity fund balances (MVA)	6,647,711	11,878,762	(5,946,617)	3,736,782	16,316,638
Unfunded accrued annuity liabilities#	$ 82,587,507	$ 12,654,291	$ 45,733,566	$ 5,915,068	$ 146,890,432
Totals - Funding Value of Assets (FVA)					
Actuarial Accrued Liabilities	**$ 1,226,232,248**	**$ 341,969,749**	**$ 617,106,660**	**$ 72,603,205**	**$ 2,257,911,862**
Funding Value of Assets	**670,844,372**	**72,637,899**	**569,527,510**	**77,166,334**	**1,390,176,114**
Unfunded Actuarial Accrued Liabilities	**$ 555,387,876**	**$ 269,331,850**	**$ 47,579,150**	**$ (4,563,129)**	**$ 867,735,748**
Funded Ratio	**54.7%**	**21.2%**	**92.3%**	**106.3%**	**61.6%**
Totals - Market Value of Assets (MVA)					
Actuarial Accrued Liabilities#	$ 1,226,232,248	$ 341,969,749	$ 617,106,660	$ 72,603,205	$ 2,257,911,862
Market Value of Assets#	676,841,098	73,287,214	574,618,557	77,856,129	1,402,602,998
Unfunded Actuarial Accrued Liabilities	$ 549,391,150	$ 268,682,535	$ 42,488,103	$ (5,252,924)	$ 855,308,864
Funded Ratio	55.2%	21.4%	93.1%	107.2%	62.1%

 # The pension fund balance includes a receivable for future claw-back payments. Liabilities are shown gross, before the annuity savings claw-back.

Totals may not add due to rounding.

Valuation Results

Determination of FY 2026 Actuarially Determined Employer Contribution

Beginning with the 2024 fiscal year, a closed 30-year level principal amortization has been used for determining the contribution dollar amount. Beginning with the 2025 fiscal year, the dollar amount is to be contributed in quarterly installments paid on the last day of each quarter to the Retirement System.

Development of FY 2026 Contributions

	General City	D.O.T.	DWSD	Library	System Total
As of June 30, 2024:					
Actuarial Accrued Liability	$ 1,226,232,248	$ 341,969,749	$ 617,106,660	$ 72,603,205	**$ 2,257,911,862**
Funding Value of Assets (FVA)	670,844,372	72,637,899	569,527,510	77,166,334	**1,390,176,114**
Unfunded Actuarial Accrued Liability (UAAL)	$ 555,387,876	$ 269,331,850	$ 47,579,150	$ (4,563,129)	**$ 867,735,748**
During Fiscal Year 2025:					
Assumed Contribution[1]	(53,500,000)	(27,100,000)	-	(100,000)	**(80,700,000)**
Assumed Transfer for Excess Admin Expenses[2]	12,961,567	-	(12,961,567)	-	**-**
Assumed Administrative Expenses	1,279,864	332,401	616,753	75,891	**2,304,909**
Interest at 6.75%	37,070,286	17,514,301	2,357,162	(307,988)	**56,633,761**
Projected UAAL as of June 30, 2025	$ 553,199,593	$ 260,078,552	$ 37,591,498	$ (4,895,226)	**$ 845,974,417**
Remaining Amortization Years *(Closed 30-Year Level Principal Amortization)*	28	28	28	28	**28**
UAAL Contribution	$ 55,707,199	$ 26,189,911	$ 3,785,464	$ (492,949)	**$ 85,189,625**
$0 Minimum UAAL Contribution	55,707,199	26,189,911	3,785,464	-	**85,682,574**
Administrative Expense Contribution[3]	1,264,666	332,787	613,584	75,886	**2,286,923**
Actuarially Determined Employer Contribution[4]	**$ 56,971,865**	**$ 26,522,698**	**$ 4,399,048**	**$ 75,886**	**$ 87,969,497**

[1] *Contributions are assumed to be made in equal quarterly installments on the last day of each quarter of the fiscal year. The General City contribution includes the computed DWSD contribution for the 2025 fiscal year of $2.2M (see page 13 for more information).*

[2] *Transfer from General to DWSD for aggregate excess administrative expenses paid by the DWSD pension pool (see page 13 for more information).*

[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.*

If the City is unable to make the quarterly contribution in any given quarter, we recommend a catch-up contribution equal to 25% of the full end of year amount (see Comments and Recommendations for more information).

Totals may not add due to rounding.

Valuation Results

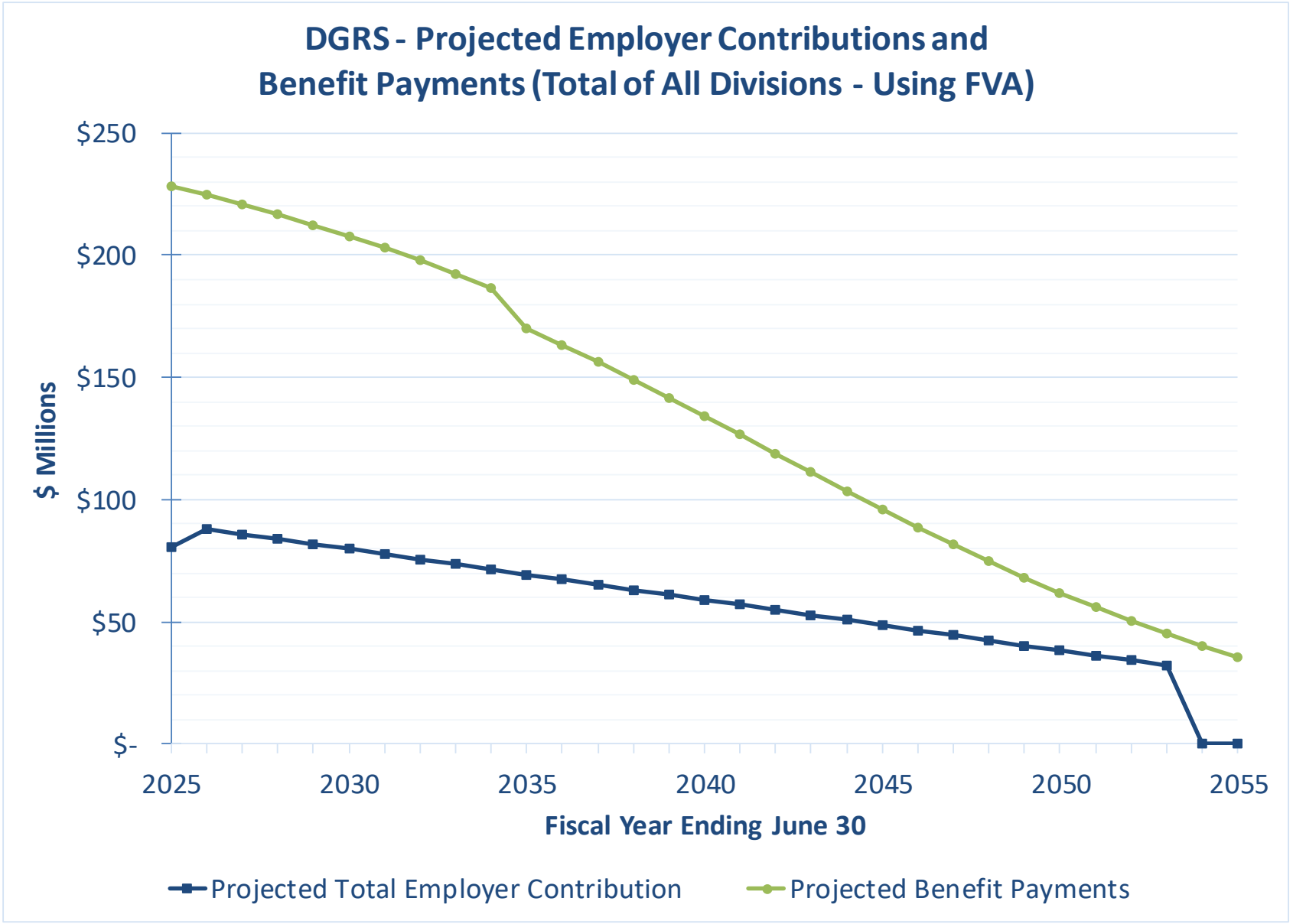
Projections of Employer Contributions, Benefits and Funded Status

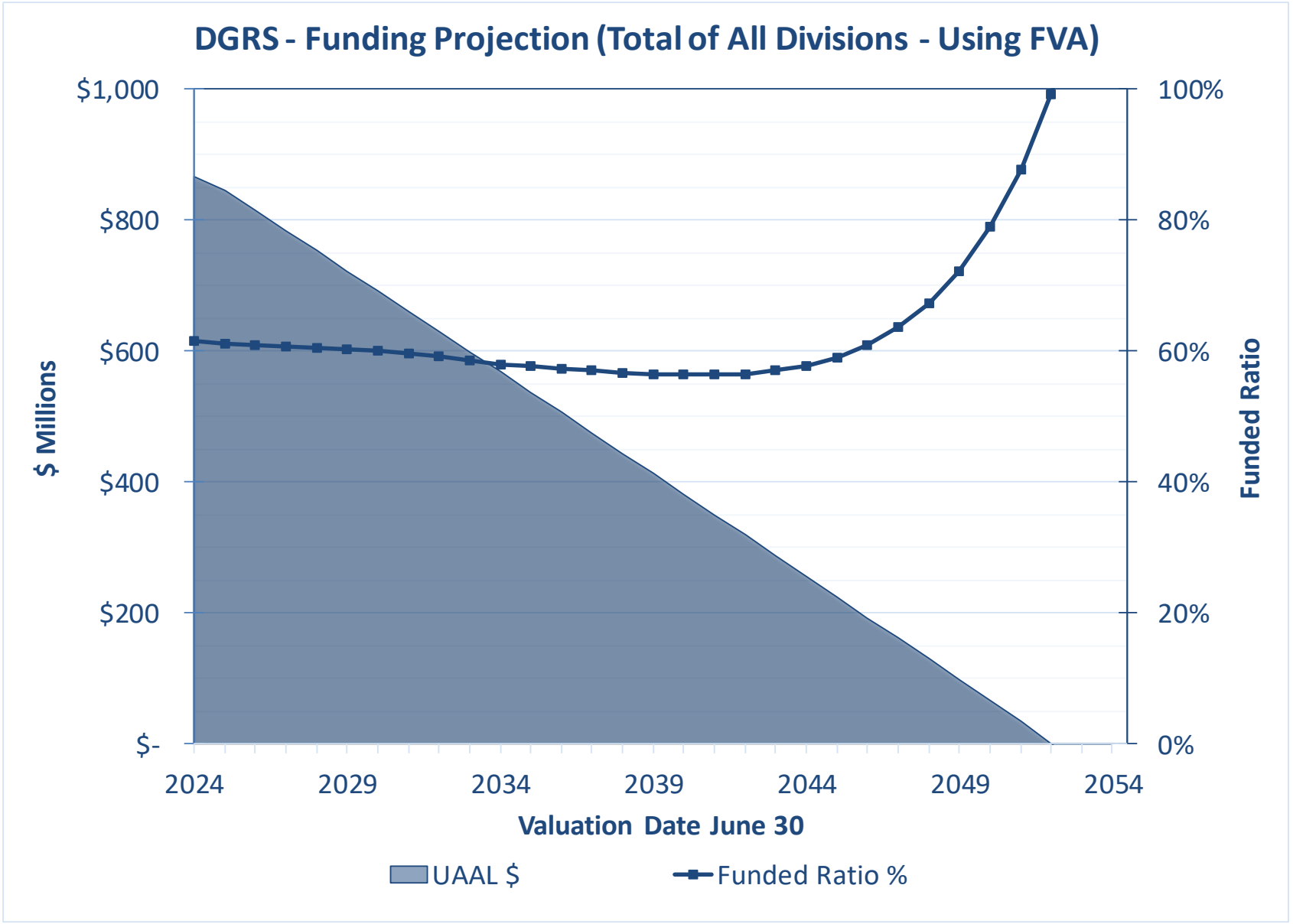
The charts that follow show a projection of the employer contributions, benefit payments and funded status using the Funding Value of Assets (FVA) and a closed 30-year (28 years as of the June 30, 2024 valuation) level principal amortization period. All actuarial assumptions are assumed to be met exactly each year in the projection (i.e., no future gains or losses). Employer contributions are equal to only the administrative expenses after the end of the amortization period. 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, employer 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 projected benefit payments for the upcoming fiscal year is about 6.3. This means that without additional contributions or investment income, plan assets can only pay retiree pensions for another several 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 and still earn the assumed rate of return if assets must be liquidated to pay retiree pensions.

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 Section G).


DGRS - Projected Employer Contributions and Benefit Payments (Total of All Divisions - Using FVA)
$250
$200
$150
$100
$50
$-
$ Millions
2025
2030
2035
2040
2045
2050
2055
Fiscal Year Ending June 30
Projected Total Employer Contribution
Projected Benefit Payments


DGRS - Funding Projection (Total of All Divisions - Using FVA)
$1,000
$800
$600
$400
$200
$-
$ Millions
100%
80%
60%
40%
20%
0%
Funded Ratio
2024
2029
2034
2039
2044
2049
2054
Valuation Date June 30
UAAL $
Funded Ratio %

Valuation Results – Comparative Statement

Present Value	June 30, 2024	June 30, 2023
Accrued Pension Liabilities (Employer Financed)		
Retirees and beneficiaries	$ 1,770,534,303	$ 1,802,247,467
Inactive members future deferred pensions	181,320,932	195,354,839
Active members	142,849,557	154,470,893
Total accrued pensions	$ 2,094,704,792	$ 2,152,073,199
Pension fund balances (MVA)	1,386,286,360	1,382,072,875
Unfunded accrued pension liabilities	$ 708,418,432	$ 770,000,324
Accrued Annuity Liabilities (Member Financed)		
Retirees and beneficiaries future annuities	$ 90,716,766	$ 92,546,717
Member annuities & future refunds	72,490,304	82,885,035
Total accrued annuity liabilities	$ 163,207,070	$ 175,431,752
Annuity fund balances (MVA)	16,316,638	36,536,405
Unfunded accrued annuity liabilities*	$ 146,890,432	$ 138,895,347
Totals - Funding Value of Assets (FVA)		
Actuarial Accrued Liabilities (AAL)	**$ 2,257,911,862**	**$ 2,327,504,951**
Funding Value of Assets (FVA)	**1,390,176,114**	**1,501,039,291**
Unfunded Actuarial Accrued Liabilities (UAAL)	**$ 867,735,748**	**$ 826,465,660**
Funded Ratio	**61.6%**	**64.5%**
Totals - Market Value of Assets (MVA)		
Actuarial Accrued Liabilities (AAL)	$ 2,257,911,862	$ 2,327,504,951
Market Value of Assets (MVA)	1,402,602,998	1,418,609,280
Unfunded Actuarial Accrued Liabilities (UAAL)	$ 855,308,864	$ 908,895,671
Funded Ratio	62.1%	60.9%

* *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)

	2022	2021	2020	2019	2018	2017	2016
Total AAL	$ 2,438.6	$ 2,542.6	$ 2,716.5	$ 2,866.1	$ 2,929.1	$ 2,995.8	$ 3,032.3
FVA^	1,671.6	1,818.6	1,596.1	1,798.9	1,940.6	1,966.7	1,933.5
UAAL	$ 767.0	$ 724.0	$ 1,120.4	$ 1,067.2	$ 988.4	$ 1,029.1	$ 1,098.8
Funded Ratio	68.5%	71.5%	58.8%	62.8%	66.3%	65.6%	63.8%

^MVA (Market Value of Assets) shown for June 30, 2021 valuation results and prior.

Liabilities Related to Restoration and the Restoration Reserve Account

Section G-4 (Restoration of Pension Benefits) of the Combined Plan, provides that benefits eliminated as part of the POA may be restored if certain conditions are met. Restored benefits are paid out of the Restoration Reserve Account (RRA), the balance of which depends on the Plan's funded ratio. As of the June 30, 2023 actuarial valuation and in accordance with Section G-4(2)(g), the Funded Level was below the target of 70% and the resulting RRA balance was $0.

Beginning July 1, 2023, rules for restoration are based upon Section G-4(3) (Restoration of Benefits from July 1, 2023 to June 30, 2033). According to Section G-4(3)(a), the 2023 Funded Level was 61% (which is below 69%) and therefore the resulting 2033 Funding Target and Restoration Target are expected to be 61% and 73%, respectively (note, legal review may be required to determine whether the Funding Target should be rounded to the nearest percent). Determination of whether restoration payments can be paid on or after July 1, 2023 follows similar rules that applied during the period ending June 30, 2023 (see Section G-4(3)(a)).

Based upon the projection included in the June 30, 2023 actuarial valuation using a 30-year level principal amortization, the funded level of the System is not projected to go above 61% by 2033. Additionally, incorporating the System experience through the 2024 fiscal year, we do not anticipate the 2033 Restoration Target will be satisfied and therefore no transfers to the RRA are anticipated to occur as of June 30, 2024**. Additional instruction from the System will be required to interpret the exact methodology that the Plan Actuary shall use to determine whether the 2033 Restoration Target has been satisfied. This valuation assumes no future restoration of Component II benefits.**

Comments and Recommendations

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, 2024. The main source of the loss was the phasing in of investment losses from prior years impacting the Funding Value of Assets. The chart below shows the estimated loss by division.

Development of Actuarial Gain or Loss

	($ Millions)				
	General City	D.O.T.	DWSD	Library	System Total
(1) UAAL as of June 30, 2023 (BOY)	$ 532.3	$ 286.8	$ 15.1	$ (7.7)	$ 826.5
(2) Actual Contributions	67.5	37.4	0.7	0.1	105.7
(3) Actual Administrative Expenses	1.4	0.1	1.2	0.2	2.8
(4) Interest at 6.75%	36.0	19.4	1.1	(0.5)	55.9
(5) Benefit Changes	-	-	-	-	-
(6) Assumption Changes	-	-	-	-	-
(7) Projected UAAL as of June 30, 2024	$ 502.2	$ 268.8	$ 16.6	$ (8.2)	$ 779.5
(8) Actual UAAL as of June 30, 2024	555.4	269.3	47.6	(4.6)	867.7
Gain or (Loss) (FVA): (7) - (8)	$ (53.1)	$ (0.5)	$ (31.0)	$ (3.6)	$ (88.2)
Gain or (Loss) from ASF Recoupment	$ (8.3)	$ (3.0)	$ (4.3)	$ (0.4)	$ (16.0)
Gain or (Loss) from Liabilities	(12.4)	5.3	1.4	1.1	(4.7)
Gain or (Loss) from Investments (FVA)	(32.4)	(2.8)	(28.1)	(4.3)	(67.6)
Total Gain or (Loss) (FVA)	$ (53.1)	$ (0.5)	$ (31.0)	$ (3.6)	$ (88.2)

Comments and Recommendations

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)	$ (67.6)	(2.9)%
Demographic Risk Areas:		
Active Experience	7.5	0.3 %
Post-Retirement Mortality	(7.3)	(0.3)%
Total Gain or (Loss) Related to Experience	$ (67.4)	(2.9)%
Data Improvements	(4.8)	(0.2)%
ASF Recoupment	(16.0)	(0.7)%
Total Gain or (Loss) During Period (FVA)	$ (88.2)	(3.8)%

^ Beginning of year Actuarial Accrued Liabilities were $2,328 million (i.e., $2.3 billion).

Demographic Experience

A summary of Actual (A) to Expected (E) activity is shown in the table below.

Year Ended 30-Jun	Retiree Deaths A	Retiree Deaths E	A/E%
2024	406	461	88%
2023	450	458	98%

Note: Significant differences between actual vs. expected deaths may be as a result of data changes and not reflect actual mortality.

Comments and Recommendations

Actuarial Assumptions

We anticipate the next comprehensive review of experience to cover the period from July 1, 2020 to June 30, 2025.

We understand that the Board may continue to explore changes in the assumed rate of return. As the actuary, we are required to assess the reasonability of this assumption each year.

Quarterly Contributions

The Component II Actuarially Determined Employer Contribution of $87,969,497 on page 3 assumes that contributions of $21,992,374 would be made on a quarterly basis, rather than once per year (at year end) during the 2026 fiscal year. The Actuarially Determined Employer Contribution for the year if payment was made at the end of the fiscal year would have been $90,165,925. **If the City is unable to make the quarterly contribution in any given quarter, we recommend a catch-up contribution equal to 25% of the end of year amount ($90,165,925 x 25% = $22,541,481).**

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. Aa 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, 2024 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 and Recommendations

Option Factors

The Board adopted option factors for the Plan in 2018. It is our understanding that the new factors have been fully implemented as of this valuation. **It is anticipated that an experience study will be performed after the June 30, 2025 valuation is completed. We recommenced the System consider whether the assumptions for optional forms of payment should be updated in conjunction with the next experience study.**

New Data System

This is the first year we have received data from the Retirement System's new data provider, Procentia. We assembled the valuation data from source files provided by Procentia. Some of the data required estimations to complete the valuation. A summary of data approximations and assumptions are provided later in this report. We will continue to work with the Retirement System and Procentia to help Procentia improve the data provided to the actuary for completion of the annual actuarial valuations.

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 21.4%. 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 calculations related to this situation, such as divisional cash flow projections or divisional funding policy suggestions.

Comments and Recommendations

DWSD (Water/Sewer) Contributions

We understand that the City, System and GLWA have a Memorandum of Understanding dated December 1, 2015 for assessing contributions, if any, to GLWA.

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 future separate contribution agreement with GLWA beyond those described herein.

Per the General Retirement System's June 30, 2024 Notes to Financial Statements (Note 14):

> During the fiscal year beginning on July 1, 2023, the parties to the pension reporting agreement were 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. Pending a formalized agreement, the parties verbally agreed to have the City make the DWSD-R/GLWA annual required contribution until such time that the aggregate excess of approximately $13 million is exhausted.

It is further our understanding that the approximately $13 million is to be transferred from the General City to division to the DWSD division during the 2025 fiscal year and it is both parties' intention for the DWSD to begin making annual required contribution payments beginning with the 2026 fiscal year.

Per Section 2.2 from the Memorandum of Understanding dated December 1, 2015:

> (b) 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 determine 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%. If the Authority Pension Pool is fully funded at 100% or more, no contributions for the current Fiscal Year will be required of the Authority. 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. Except for the additional payments required by this subsection (b), if any, the Authority shall have no further liability whatsoever to the City or the GRS in connection with any other shortfalls that that may occur with respect to the GRS Plan.
>
> (c) The UAAL calculations required to be furnished pursuant to this Agreement shall be calculated by the GRS Actuary using actuarial standards of the actuary industry.

This report does not reflect any potential additional contribution requirements per Section 2.2 from the MOU. We will assist the Retirement System in determining whether contributions are required of the Authority Pension Pool for the 2025 and 2026 Fiscal Years in a separate report.

Recommendation

In order to minimize the risk of insolvency, it is important that timely employer contributions in an amount equal to or greater than the actuarially calculated amount are received, in accordance with the funding policy.

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 of 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

	2024	2023	2022
(i) Classic measures			
– Funded ratio			
MVA	62.1%	60.9%	62.7%
FVA	61.6%	64.5%	68.5%
– UAAL amortization period	28	29	30
– Portfolio rate of return			
MVA	9.28%	6.20%	-5.77%
FVA	1.85%	1.80%	2.58%
– Geometric average portfolio rate of return[1]			
5-year			
MVA	3.03%	0.04%	-5.77%
FVA	2.08%	2.19%	2.58%
10-year			
MVA	N/A	N/A	N/A
FVA	N/A	N/A	N/A
– Standard deviation of return[1]			
5-year (to be built prospectively)			
MVA	7.95%	8.46%	0.00%
FVA	0.44%	0.55%	0.00%
10-year (to be built prospectively)			
MVA	N/A	N/A	N/A
FVA	N/A	N/A	N/A
(ii) Duration of the Actuarial Accrued Liability	7.8	7.9	8.1
(iii) Total UAAL / Covered Payroll[2]			
MVA	2.6	2.8	3.2
FVA	2.6	2.6	2.7
(iv) Total Assets / Covered Payroll[2]			
MVA	4.2	4.4	5.4
FVA	4.2	4.6	5.9
(v) Total AAL / Covered Payroll[2]	6.8	7.2	8.6
(vi) Non-Investment Cash flow / Beginning of year MVA	-9.6%	-13.0%	-10.5%
(vii) MVA / Benefit Payments	6.3	6.2	6.5
(viii) Solvency Liability ($ millions)[3]	$ 2,729	$ 2,964	$ 3,185

[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" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM 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 LDROM

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 LDROM 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 LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the June 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.12%, 4.34%, 4.22% and 4.45%. 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 Valuation Accrued Liability and the LDROM (Solvency Liability) as of June 30, 2024.

Valuation Accrued Liabilities	LDROM
$ 2,257,911,862	$ 2,728,640,989

The difference between the two measures (Valuation and LDROM) 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, 2024	
Cash and Cash Equivalents	$ 51,617,194
Investments at Fair Value	1,315,594,294
Receivables	82,356,876
Cash and Investments held as collateral for securities lending	33,021,506
Capital Assets - Net	3,968,571
Accounts Payable	(83,955,443)
Total Current Assets	**$ 1,402,602,998**

Market Value of Assets

Reserve Accounts

Funds	Fund Balances June 30, 2024	June 30, 2023
Annuity Savings	$ 72,490,304	$ 82,885,035
Annuity Reserve	(56,173,666)	(46,348,630)
Pension Accumulation	(211,008,876)	(266,432,063)
Pension Reserve	1,597,295,236	1,648,504,938
Total Fund Balances	**$ 1,402,602,998**	**$ 1,418,609,280**

Revenues and Expenditures

	Pension Funds	Annuity Funds	Total Funds
Balance, July 1, 2023	$ 1,382,072,875	$ 36,536,405	$ 1,418,609,280
Prior valuation audit adjustment	-	-	-
Market Value July 1, 2023	$ 1,382,072,875	$ 36,536,405	$ 1,418,609,280
Revenues			
Employer Contributions [#]	$ 105,310,142	$ -	$ 105,310,142
Employee Contributions	-	-	-
Foundation Contributions	375,000	-	375,000
Annuity Interest	-	75,623	75,623
Investment Income (Net of Investment Expenses)	114,261,080	-	114,261,080
Other Income	6,105,914	-	6,105,914
Transfers From Annuity Funds to Pension Funds	1,952,205	(1,952,205)	-
Total	$ 228,004,341	$ (1,876,582)	$ 226,127,759
Expenditures			
Benefit Payments	$ 204,951,765	$ 9,825,036	$ 214,776,801
Refund of Member Contributions		8,518,149	8,518,149
ASF Recoupment /Write Off	16,000,245	-	16,000,245
Transfer to Component I (Transition Cost)	-	-	-
Administrative Expenses	2,838,846	-	2,838,846
Total	$ 223,790,856	$ 18,343,185	$ 242,134,041
Market Value June 30, 2024	$ 1,386,286,360	$ 16,316,638	$ 1,402,602,998
Market Value Rate of Return (Net of all expenses)	9.47%	0.29%	9.28%
Net Cash Flow as Percent of Assets	(8.40)%	(55.55)%	(9.62)%

[#] *Includes $23.1 million Grant.*

Rates of return are dollar-weighted estimates assuming contributions occur at the end of the year and remaining items are mid-year cash flows. “Annuity 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, 2023	Adjustments	Contributions[#]	Benefit Payments	Admin. Expenses	Investment and Other[^]	June 30, 2024
Annuity Savings Fund							
General	$ 45,551,295	$ -	$ -	$ (5,684,188)	$ -	$ (550,817)	$ 39,316,290
D.O.T.	16,838,504	-	-	(1,242,290)	-	(214,908)	15,381,306
DWSD	13,512,045	-	-	(1,097,535)	-	(1,107,843)	11,306,667
Library	6,983,191	-	-	(494,135)	-	(3,015)	6,486,041
Totals	$ 82,885,035	$ -	$ -	$ (8,518,148)	$ -	$ (1,876,583)	$ 72,490,304
Annuity Reserve Fund							
General	$ (27,156,856)	$ -	$ -	$ (5,511,723)	$ -	$ -	$ (32,668,579)
D.O.T.	(2,615,980)	-	-	(886,564)	-	-	(3,502,544)
DWSD	(14,209,343)	-	-	(3,043,941)	-	-	(17,253,284)
Library	(2,366,451)	-	-	(382,808)	-	-	(2,749,259)
Totals	$ (46,348,630)	$ -	$ -	$ (9,825,036)	$ -	$ -	$ (56,173,666)
Pension Accumulation Fund							
General	$ (213,606,614)	$ (88,495,208)	$ 67,455,909	$ -	$ (1,373,975)	$ 50,214,663	$ (185,805,225)
D.O.T.	(199,445,723)	(22,109,550)	37,429,233	-	(130,411)	2,356,721	(181,899,730)
DWSD	115,438,913	(38,286,474)	700,000	-	(1,176,329)	47,791,754	124,467,864
Library	31,181,361	(4,850,831)	100,000	-	(158,131)	5,955,816	32,228,215
Totals	$ (266,432,063)	$ (153,742,063)	$ 105,685,142	$ -	$ (2,838,846)	$ 106,318,954	$ (211,008,876)
Pension Reserve Fund							
General	$ 881,805,792	$ 88,495,208	$ -	$ (114,302,388)	$ -	$ -	$ 855,998,612
D.O.T.	250,391,451	22,109,550	-	(29,192,819)	-	-	243,308,182
DWSD	473,085,526	38,286,474	-	(55,274,690)	-	-	456,097,310
Library	43,222,169	4,850,831	-	(6,181,868)	-	-	41,891,132
Totals	$ 1,648,504,938	$ 153,742,063	$ -	$ (204,951,765)	$ -	$ -	$ 1,597,295,236
Retirement System Totals	$ 1,418,609,280	$ -	$ 105,685,142	$ (223,294,949)	$ (2,838,846)	$ 104,442,371	$ 1,402,602,998

[#] *Includes $23.1 million Grant.*

[^] *Includes ASF Write-off /allowance and transfers from ASF to PAF.*

Funding Value of Assets

	2022	2023	2024	2025	2026
A. Funding Value Beginning of Year	$ 1,818,649,298	$ 1,671,628,547	$ 1,501,039,291		
B. Market Value End of Year	1,529,846,295	1,418,609,280	1,402,602,998		
C. Market Value Beginning of Year	1,818,649,298	1,529,846,295	1,418,609,280		
D. Additions During Year:					
D1. City Contributions (End of Year)	48,275,000	48,275,000	105,685,142		
D2. Member Contributions	0	0	0		
D3. Total	48,275,000	48,275,000	105,685,142		
E. Deductions During Year:					
E1. Benefits Paid During Year	222,756,595	217,569,517	214,776,801		
E2. Refunds	13,796,354	10,869,398	8,518,149		
E3. Transfers/ASF Recoupment/Write Off	0	15,592,259	16,000,245		
E4. Administrative Expenses	2,541,080	2,680,907	2,838,846		
E5. Total	239,094,029	246,712,081	242,134,041		
F. Investment Income:					
F1. Average Funding Value	1,699,102,284	1,548,272,507	1,379,972,271		
F2. Assumed Rate	6.75%	6.75%	6.75%		
F3. Amount for Immediate Recognition: F1 X F2	114,689,404	104,508,394	93,148,128		
F4. Market Total: B - C - D3 + E5	(97,983,974)	87,200,066	120,442,617		
F5. Amount for Phased-In Recognition: F4-F3	(212,673,378)	(17,308,328)	27,294,489		
G. Phased-In Recognition of Investment Income:					
G1. Current Year: F5/3	(70,891,126)	(5,769,443)	9,098,163		
G2. 1st Prior Year	0	(70,891,126)	(5,769,443)	$ 9,098,163	
G3. 2nd Prior Year	0	0	(70,891,126)	(5,769,442)	$ 9,098,163
G4. Total Recognized Investment Gain	(70,891,126)	(76,660,569)	(67,562,406)	3,328,721	9,098,163
H. Total Interest Distributed - Current Year: F3 + G4	43,798,278	27,847,825	25,585,722		
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	1,390,176,114		
I2. Upper Corridor Limit 115% x B	1,759,323,239	1,631,400,672	1,612,993,448		
I3. Lower Corridor Limit 85% x B	1,300,369,351	1,205,817,888	1,192,212,548		
I4. **Funding Value End of Year**	**$1,671,628,547**	**$1,501,039,291**	**$1,390,176,114**		
J. Difference Between Market & Funding Value: B - I4	(141,782,252)	(82,430,011)	12,426,884		
K. Recognized Rate of Return: H / F1	2.58%	1.80%	1.85%		
L. Market Rate of Return: F4 / (F1 + C - A)	(5.77)%	6.20%	9.28%		
M. Ratio of Funding Value to Market Value: I4 / B	109.27%	105.81%	99.11%		

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 Data

Active Members

A) Count reported in Active file	9,039
B) Duplicate Records	(42)
C) PFRS Revenue Group	(3,038)
D) Hired after June 30, 2014	(4,206)
E) Non-eligible class code & bargaining unit	(9)
F) No hire date	-
G) Number of records to value	1,744

Inactive Vested Members

A) Number of records reported on data file	4,875
B) PFRS Revenue Group	(1,207)
C) Less than 8 years of Legacy plus Hybrid vesting service	(997)
D) Records already receiving Legacy benefits and included in Legacy retiree data	(400)
E) Terminated after 6/30/2024	(1)
F) No Legacy Benefit Service	(2)
G) Number of records to value	2,268

Retired Members and Beneficiaries

A) Number of records reported on data file	20,181
B) Number of records in PFRS	(8,704)
C) GRS Comp I (Hybrid) Records	(764)
D) Number of records valued	10,713

Notes:
This years' active data includes 140 records not reported last year. Additionally, this year's active data file provided a 2014 Water/Sewage identifier. This information was previously carried over from prior valuations. Members are assumed to be DWSD if they are currently reported in Revenue Group "3" or the 2014 Water/Sewage identifier is populated. This new identifier caused the DWSD member count to increase despite the closed nature of the GRS Comp II (Legacy) plan.

Active Row B: It is our understanding that through the course of the year these members were terminated from either GRS or PFRS and are active in the other plan. This resulted in there being two records for these members. These people will be included in their current reported revenue group. The record in the Retirement System the member is no longer active was removed.

Active Row C: Are records that were reported with a revenue group of "7" (police) or "8" (fire).

Active Row D: Consistent with prior practice, we have not valued records with a date of hire after June 30, 2014 in Component II. Several dozen records with a hire date after June 30, 2014 were listed with Legacy benefit service.

Active Row E: We have received a separate list of Class Codes and Bargaining Units that are not eligible to receive Legacy benefits. Individuals reported with these codes/units were excluded.

Inactive Row B: Are records that were reported with a revenue group of "7" (police) or "8" (fire).

Inactive Row F: Service provided in the data file is benefit service. Vesting service was determined by combining Legacy and Hybrid service in the vested data file.

Reconciliation of Year-to-Year Data as of June 30, 2024

	Active	Term. Vested	Retirees		Totals
	Count	Count	Count	Annual Benefits	Count
2023	**1,737**	**2,391**	**10,792**	**$ 203,731,919**	**14,920**
Change in Pay/Pensions	N/A	N/A	N/A	(517,340)	
Rehired (Not Vested)	140	-			140
Rehired (Vested)	23	(23)	-	-	-
New Beneficiary			82	862,635	82
Retired	(77)	(115)	227	3,732,807	35
Non-Duty Disabled			-	-	-
Duty Disabled			-	-	-
Assumed Death/Removals		(143)	(406)	(6,147,618)	(549)
Vested Term	(53)	32			(21)
Non-Vested Terminated	(26)				(26)
Data Adjustment	-	126	18	56,631	144
2024	**1,744**	**2,268**	**10,713**	**$ 201,719,034**	**14,725**

Notable Data Changes:

35 new retirees came from nowhere. We believe some of these are a result of new EDRO's.

The data adjustments relate to records where we could not specifically identify the activity during the year. These adjustments increased significantly with this year's new data set. 143 Terminated Vested members were valued last year but will not be valued this year because there is no record in this year's data. This, in effect, is assuming that these members refunded and forfeited their defined benefit. Similarly, 126 new Terminated Vested members were valued this year but not in last year's data file.

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 January 8, 2025 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.

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, 2024 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 2024 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.

This year's valuation data file indicated the DWSD status of members as of June 30,2014. Any members that were indicated as being DWSD division members as of June 30, 2014 were valued under the DWSD for this valuation, regardless of the division reported as of 2024.

Data Approximations and Assumptions

Deferred Vested

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. 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) 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, 2024

Active Members

	General	D.O.T.	DWSD	Library	Totals^
Number	1,061	277	266	140	1,744
% Change in active members	(0.8)%	(0.7)%	9.9 %	(4.1)%	0.4 %
Average reported 2014 AFC^	$45,636	$53,271	$45,710	$42,479	$46,607
Average age	56.4	56.7	56.3	57.5	56.5
Average benefit service*	13.5	14.3	13.8	15.8	13.9
Average eligibility service*	22.0	23.1	22.8	24.7	22.5

^ 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

** In cases where the benefit service was blank, vesting service and benefit service were computed by taking time elapsed from date of hire to either date of plan termination or valuation date.*

Retired Members and Survivor Beneficiaries

	General^	D.O.T.	DWSD	Library	Totals
Number	6,173	1,567	2,652	321	10,713
Annual benefits ($ millions) #	$ 117.6	$ 29.8	$ 57.7	$ 6.4	$ 211.5
Average benefits #	$19,049	$18,987	$21,772	$19,932	$19,740
% Change in reported average benefit	0.8 %	(1.4)%	(2.0)%	0.3 %	(0.2)%

^ 8 records were reported with no date of birth and were assumed to be age 65.

 # Includes annuities. Does not include reductions resulting from the annuity claw-backs.

Inactive Vested Members

	General^	D.O.T.	DWSD	Library	Totals
Number	1,233	278	661	96	2,268
Average AFC*	$39,687	$44,152	$48,532	$32,418	$42,504
Average years of service#	14.5	12.9	14.8	12.3	14.3
Annual benefits ($ millions)	$ 11.7	$ 2.6	$ 7.8	$ 0.6	$ 22.7
Average benefits	$ 9,503	$ 9,323	$11,756	$ 6,561	$10,013
% Change in average years of service	(4.1)%	(12.4)%	(2.5)%	(10.7)%	(4.9)%
% Change in average AFC	0.3 %	(0.7)%	(1.1)%	(0.8)%	(0.5)%

^ 1 record was reported with no date of birth and was assumed to be age 65.

** If the AFC was not provided, $30,000 was used for the AFC. This assumption was based upon a prior analysis of the valuation data.*

 # In cases where the Legacy benefit service was reported as zero but the record had a date of hire before June 30, 2014, benefit service was estimated by taking time elapsed from date of hire to date of plan termination.

Active Members as of June 30, 2024 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	1	7	1	2				11
35-39	4	20	17	5	1			47
40-44	6	12	25	23	18	0		84
45-49	4	21	31	44	56	22	1	179
50-54	10	28	38	45	97	93	10	321
55-59	6	14	38	53	102	154	72	439
60-64	3	23	33	38	72	110	136	415
65-69	3	5	19	23	30	32	64	176
70-74	1	7	7	10	2	11	13	51
75-79	0	0	5	2	6	3	5	21
Totals	**38**	**137**	**214**	**245**	**384**	**425**	**301**	**1,744**

Group Averages:

Age:	56.5 years
Benefit Service:	13.9 years
Eligibility Service:	22.5 years

Service shown in this schedule is Legacy Benefit service plus Hybrid Benefit service.

Retirees and Beneficiaries as of June 30, 2024
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*	4	$ 26,340	0	$ 0	0	$ 0	4	$ 26,340
20-24	11	138,204					11	138,204
25-29	6	42,924					6	42,924
30-34	9	89,364	0	0			9	89,364
35-39	22	122,112	0	0			22	122,112
40-44	20	118,536	1	9,132	2	33,732	23	161,400
45-49	24	202,176	8	49,884	1	9,276	33	261,336
50-54	101	1,271,796	20	191,124	8	58,452	129	1,521,372
55-59	290	5,719,008	57	621,936	14	187,716	361	6,528,660
60-64	1,061	19,909,380	112	1,735,476	32	412,512	1,205	22,057,368
65-69	2,027	39,084,120	213	3,051,120	34	526,608	2,274	42,661,848
70-74	1,994	41,693,316	158	2,227,380	43	759,264	2,195	44,679,960
75-79	1,787	38,630,100	117	1,666,500	32	708,120	1,936	41,004,720
80-84	1,093	21,423,612	43	462,228	28	381,588	1,164	22,267,428
85-89	647	10,572,852	26	260,988	17	219,408	690	11,053,248
90-94	359	5,519,400	7	71,868	18	179,868	384	5,771,136
95 and Over	241	3,049,668	7	61,812	19	220,140	267	3,331,620
Totals	**9,696**	**$187,612,908**	**769**	**$10,409,448**	**248**	**$3,696,684**	**10,713**	**$201,719,040**

** May include records with defective birth dates.*
 # Includes survivor beneficiaries of deceased retirees.
^ Excludes annuities.

Retirees and Beneficiaries as of June 30, 2024
Tabulated by Year of Retirement

Year of Retirement	No.	Annual Allowances^ Total	Annual Allowances^ Average
1950 & before	0	$ 0	$ 0
1951-1955	0	0	0
1956-1960	0	0	0
1961-1965	3	13,644	4,548
1966-1970	5	33,468	6,694
1971-1975	19	139,596	7,347
1976-1980	48	494,688	10,306
1981-1985	134	1,822,776	13,603
1986-1990	299	3,967,836	13,270
1991-1995	721	11,038,440	15,310
1996-2000	1,074	20,391,000	18,986
2001-2005	1,708	38,350,560	22,453
2006-2010	2,074	47,508,936	22,907
2011-2015	2,330	44,313,936	19,019
2016	307	4,756,248	15,493
2018	293	4,089,324	13,957
2019	288	4,068,120	14,125
2020	311	4,668,840	15,012
2021	348	5,123,076	14,721
2022	308	4,613,328	14,978
2023	320	4,583,244	14,323
2024	123	1,741,980	14,162
Totals	**10,713**	**$201,719,040**	**$18,829**

^ 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 set by the Board.

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 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 in quarterly installments at the end of each quarter of the employer fiscal year.

Present assets are set equal to Funding Value of Assets for purposes of calculating the Actuarially Determined Employer Contribution.

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 2024	Future Life Expectancy (Years)	
	Men	Women
45	37.76	40.22
50	32.83	35.16
55	28.45	30.57
60	24.20	26.03
65	20.07	21.56
70	16.07	17.21
75	12.40	13.19
80	9.19	9.63

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	% of Active Members Separating within Next Year – Withdrawal: 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. Ordinary	D.O.T. Duty	Others Ordinary	Others 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.
Average Final Compensation (AFC)	Frozen AFC is reported in the data provided for the annual valuation. Longevity payments and Sick Leave are included directly in the reported frozen AFC. 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.
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 in equal quarterly installments on the last day of each quarter 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

Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability (AAL)	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	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.
Actuarial Cost Method	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.
Actuarially Determined Employer Contribution	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.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV)	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.
Actuarial Present Value of Future Benefits (APVFB)	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.
Actuarial Valuation	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	Annuity 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

E.M.S.	Emergency Medical Service.
Equivalent Single Amortization Period	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.
Experience Gain/Loss	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.
Funded Ratio	The ratio of the Funding Value of Assets to the Actuarial Accrued Liability.
Funding Value of Assets (FVA)	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).
FY	Fiscal Year.
GASB	Governmental Accounting Standards Board.
GASB Statement No. 67 and GASB Statement No. 28	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.
GLWA	Great Lakes Water Authority.
MVA	Market Value Assets.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

Glossary

Open Amortization Period	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.
PAF	Pension Accumulation Fund.
POA	The 8th Amended Plan for the Adjustment of the Debt of the City of Detroit.
Reserve Account	An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.
RSF	Rate Stabilization Fund.
Solvency Liability	A market-based measurement of the pension obligations.
Transition Cost	Initial unfunded liability as described in Section E-16 of the Plan document.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Funding Value of Assets.
Valuation Date	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.
VPIF	Variable Pension Improvement Factor. Discussed in Section 6.2 of the Plan Document.

SECTION G

FUNDING POLICY

Actuarial 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.

General Retirement System of the City of Detroit

Financial Report
with Supplementary Information
June 30, 2024

General Retirement System of the City of Detroit

Contents

Independent Auditor's Report	1-3
Management's Discussion and Analysis	4-9
Basic Financial Statements	
Statement of Fiduciary Net Position	10
Statement of Changes in Fiduciary Net Position	11
Notes to Financial Statements	12-38
Required Supplementary Information	39
Schedule of Changes in the Net Pension Liability and Related Ratios Legacy Plan	40
Schedule of Investment Returns Legacy and Hybrid Plans	41
Schedule of Pension Contributions Legacy Plan	42
Schedule of Changes in the City's Net Pension (Asset) Liability and Related Ratios Hybrid Plan	43
Schedule of Pension Contributions Hybrid Plan	44
Schedule of Changes in the City's Net OPEB Liability and Related Ratios Open Death Benefit Plan	45
Schedule of OPEB Contributions Open Death Benefit Plan	46
Schedule of OPEB Investment Returns Open and Closed Death Benefit Plans	47
Schedule of Changes in the City's Net OPEB Liability and Related Ratios Closed Death Benefit Plan	48
Notes to Required Supplementary Information	49-50
Supplementary Information	51
Statement of Changes in Fiduciary Net Position by Division - Legacy Defined Benefit Plan	52
Schedule of DWSD/GLWA Excess of Contributions Paid Toward Administrative Expenses as Compared to Actual DWSD/GLWA Allocable Administrative Expenses	53
Notes to Supplementary Information	54

Plante & Moran, PLLC
P.O. Box 307
3000 Town Center, Suite 100
Southfield, MI 48075
Tel: 248.352.2500
Fax: 248.352.0018
plantemoran.com

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, 2024 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, 2024 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.

PRAXITY™
Empowering Business Globally

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.

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 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 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, 2023 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated December 7, 2023. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2023 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Plante & Moran, PLLC

December 19, 2024

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, 2024.

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

The U.S. economy has remained resilient this fiscal year, although there has been a small uptick in the unemployment rate and the housing market remains limited by the lack of available supply. The U.S. inflation rate was down to 2.6 percent in June 2024. That is not too far off the Federal Reserve's target of 2.0 percent. The U.S. stock market also saw healthy returns during the first half of the 2024 calendar year. We remain optimistic about the strength and long-term growth of the U.S. economy. The System's investment returns are a testament of that strength. The fiscal year 2024 investment return was 9.6 percent.

This year, the System saw an upward spike in investment income. This primarily resulted from the realization of gains related to the sale of investments and investment market value appreciation.

Also, during this fiscal year, the Legacy Plan reverted back to the City being fully responsible for the funding of employer contributions. The funding requirement is calculated by our actuary. That calculation, known as the actuarially determined employer contribution, resulted in an inflow of $82.1 million into the Legacy Plan.

The System also received a grant from the State of Michigan this year. The purpose of the grant was to provide funding to underfunded defined benefit pension plans with a funding ratio of less than 60 percent. The amount of the grant was $22,968,047. There was an additional $217,095.24 in interest added to the total as a result of the length of time that the City held the funds. The revenue groups that received the funds were the Department of Transportation and the General City. These are the groups that were underfunded, qualifying the System to meet the grant requirement.

The transfers to Component I from Component II in the prior fiscal year related to the hybrid plan's transition cost. The transfer guidelines were established by the bankruptcy's plan of adjustment. The purpose of the transfers was to assist in funding the obligations of the hybrid plan caused by legacy plan members who were active and fully vested at the time of the transition from the Legacy Plan to the Hybrid Plan. Those particular members were automatically vested in the new hybrid plan. The ability to make those transfers ceased last fiscal year.

Condensed Financial Information

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

	2024	2023
Assets	$ 1,871,807,799	$ 1,790,953,379
Liabilities	103,423,263	57,334,754
Fiduciary Net Position		
Restricted:		
Pension	1,739,432,066	1,707,502,532
Postemployment benefits other than pension	28,952,470	26,116,093
Total fiduciary net position	**$ 1,768,384,536**	**$ 1,733,618,625**

	2024	2023
Additions		
Net investment income (loss):		
Interest, dividends, and other income	$ 52,256,064	$ 40,702,871
Net increase in fair value of investments	100,947,610	64,840,515
Investment-related expenses	(10,790,036)	(9,291,674)
Net investment income	142,413,638	96,251,712
Securities lending income	332,748	412,111
Contributions:		
Employer	95,939,289	63,153,813
Employee	19,928,667	18,842,551
Foundation and State of Michigan Pension Grant	23,560,142	375,000
Total contributions	139,428,098	82,371,364
ASF recoupment interest	5,230,674	5,509,059
Transfer from Component II to Component I	-	15,592,259
Other income	1,439,010	2,142,960
Total additions - Net	288,844,168	202,279,465
Deductions		
Benefit payments	218,779,021	221,414,865
Member refunds and withdrawals	14,284,872	16,066,741
Transfer to Component I from Component II	-	15,592,259
General and administrative expenses	5,014,119	4,733,373
ASF recoupment write-off	16,000,245	1,379,089
Total deductions	254,078,257	259,186,327
Net Increase (Decrease) in Net Position Held in Trust	**$ 34,765,911**	**$ (56,906,862)**

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 (the "City"), 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 on 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.

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, 2023, there were 5,333 active members, with 762 retirees and 830 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, 2023, there were 1,737 active members in Component II, with 10,792 members receiving benefits and 2,391 terminated plan members entitled to but not yet receiving benefits.

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. The active membership elects 5 members 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 3 remaining members, the mayor of the City (or designee), the city treasurer, and one representative from the Detroit City Council, serve ex officio. 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, which will all eventually become six years, with staggered expirations. Additionally, two 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.

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"). Now that we are beyond the 2023 fiscal year, the City and various other employer constituents, such as the library; DWSD; and Huntington Place, formerly known as the COBO Authority, are responsible for the full funding obligations of Component II of the System, consistent with Michigan law. This funding amount is calculated by the System's actuary.

The Plan of Adjustment allowed 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.

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 toward their defined benefit pensions earned with the City. The contribution percentage varies based on the revenue group the member belongs to. That percentage is calculated by the System’s actuary. The City contributes an additional 5 percent of the member’s base 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, 2024, the City met its obligation for Component I employer contributions by contributing $13,673,679 to DGRS.

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 2024, DGRS paid out $231,900,000 in benefits, consisting of $217,600,000 in benefits to retirees and beneficiaries plus $14,300,000 in refunds of annuity savings fund balances and mandatory contributions. The benefits and refunds represent approximately 13.1 percent of the net position of the System as of June 30, 2024. Employer, foundation, State of Michigan pension grant, and employee contributions were $139,200,000, or 7.9 percent of the net position of the System. The excess of benefits over contributions of $92.7 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, 2024:

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.

Total Fund Composite

DGRS' total fund composite return for the year was 9.6 percent, net of fees and expenses using a time-weighted methodology. The fund returned 3.0 percent, 6.9 percent, and 6.4 percent for its 3-, 5-, and 10-year annualized returns, respectively, net of fees and expenses.

From June 30, 2023 to June 30, 2024, U.S. financial markets were largely influenced by the Federal Reserve's aggressive interest rate hikes, aimed at tackling persistent inflation. By mid-2024, rates had reached 5.25 percent, contributing to slower economic growth and dampening consumer spending. Despite these challenges, the stock market, particularly tech stocks, performed well, lifted by optimism around AI advancements. Inflation moderated somewhat but remained above the Federal Reserve's 2 percent target, keeping expectations for rate cuts subdued. Geopolitical tensions, particularly in the Middle East and the ongoing war in Ukraine, added to global market volatility, with energy prices and supply chains affected. U.S. political uncertainty, driven by the lead-up to the 2024 presidential election, also created additional market jitters, with investors wary of potential policy shifts. The U.S. dollar remained strong during these global risks, while bond markets saw fluctuations in response to the Federal Reserve's tightening. As of June 2024, markets were in a cautious holding pattern, awaiting further signals from the Federal Reserve, while heightened geopolitical risks increase the likelihood of surprises for global markets going forward.

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

2023	7.50 %
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 9.38 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, 2024

	Component II Plan (Legacy)		Component I Plan (Hybrid)		
	Defined Benefit Fund	Income Stabilization Fund	Defined Benefit Fund	Death Benefit Plans	Total
Assets					
Cash and cash equivalents (Note 3)	$ 32,236,393	$ 1,000,813	$ 26,574,116	$ 673,663	$ 60,484,985
Investments: (Notes 3 and 4)					
Global equities	687,779,665	6,484,514	147,880,629	20,260,326	862,405,134
Global fixed income	223,500,529	2,671,080	63,720,231	2,258,607	292,150,447
Real estate	198,977,680	1,875,998	42,782,516	1,732,335	245,368,529
Private equity	102,706,192	968,332	22,083,027	82,873	125,840,424
Diversifying strategies	118,890,303	1,120,920	25,562,798	4,089,571	149,663,592
Receivables:					
Investment income	1,802,788	16,997	387,611	-	2,207,396
Contributions (Note 1)	-	-	1,086	-	1,086
Other receivables	372,402	2,205	2	9,583	384,192
ASF recoupment receivable - Net (Note 1)	75,898,626	-	-	-	75,898,626
Notes receivable from participants	1,770,021	-	1,339,907	-	3,109,928
Receivables from investment sales	2,513,039	23,694	540,332	-	3,077,065
Restricted investments (Note 11)	3,120,725	29,423	670,992	-	3,821,140
Cash and investments held as collateral for securities lending: (Note 3)					
Certificate of deposit	14,016,034	132,146	3,013,610	-	17,161,790
Repurchase agreements	12,703,180	119,768	2,731,331	-	15,554,279
U.S. corporate floating rate	3,475,624	32,769	747,300	-	4,255,693
Commercial paper	1,307,421	12,327	281,111	-	1,600,859
Time deposits	1,519,247	14,324	326,656	-	1,860,227
Capital assets - Net (Note 1)	3,968,572	-	2,993,835	-	6,962,407
Total assets	1,486,558,441	14,505,310	341,637,090	29,106,958	1,871,807,799
Liabilities					
Accrued expenses	6,681,300	17,076	1,496,069	154,488	8,348,933
Payables for investment purchases	42,861,620	404,108	9,215,747	-	52,481,475
Due to the City of Detroit, Michigan	383,621	-	-	-	383,621
Amounts due to broker under securities lending agreements (Note 3)	33,004,474	311,172	7,096,346	-	40,411,992
Lease liability	1,024,428	-	772,814	-	1,797,242
Total liabilities	83,955,443	732,356	18,580,976	154,488	103,423,263
Net Position - Restricted for					
Pension	1,402,602,998	13,772,954	323,056,114	-	1,739,432,066
Postemployment benefits other than pension	-	-	-	28,952,470	28,952,470
Total net position	**$ 1,402,602,998**	**$ 13,772,954**	**$ 323,056,114**	**$ 28,952,470**	**$ 1,768,384,536**

See notes to financial statements.

General Retirement System of the City of Detroit

Statement of Changes in Fiduciary Net Position

Year Ended June 30, 2024
(with comparative totals for the year ended June 30, 2023)

	Component II Plan (Legacy)		Component I Plan (Hybrid)			
	Defined Benefit Fund	Income Stabilization Fund	Defined Benefit Fund	Death Benefit Plans	Total	2023
Additions						
Investment income (loss):						
Interest, dividends, and other income	$ 42,892,995	$ 403,981	$ 8,618,459	$ 340,629	$ 52,256,064	$ 40,702,871
Net increase in fair value of investments	79,876,903	764,130	16,738,753	3,567,824	100,947,610	64,840,515
Investment-related expenses	(8,759,618)	(83,141)	(1,860,172)	(87,105)	(10,790,036)	(9,291,674)
Net investment income	114,010,280	1,084,970	23,497,040	3,821,348	142,413,638	96,251,712
Securities lending income (loss):						
Interest and dividends	1,093,438	10,376	227,010	-	1,330,824	473,373
Net loss on collateralized securities	(842,640)	(7,787)	(147,649)	-	(998,076)	(61,262)
Total securities lending income	250,798	2,589	79,361	-	332,748	412,111
Contributions:						
Employer	82,125,000	-	13,673,679	140,610	95,939,289	63,153,813
Employee	-	-	19,821,458	107,209	19,928,667	18,842,551
Foundation and State of Michigan Pension Grant	23,560,142	-	-	-	23,560,142	375,000
Total contributions	105,685,142	-	33,495,137	247,819	139,428,098	82,371,364
ASF recoupment interest (Note 1)	5,230,674	-	-	-	5,230,674	5,509,059
Transfer from Component II to Component I	-	-	-	-	-	15,592,259
Other income	950,864	1,282	486,864	-	1,439,010	2,142,960
Total additions - Net	226,127,758	1,088,841	57,558,402	4,069,167	288,844,168	202,279,465
Deductions						
Benefit payments	214,776,801	433,909	2,367,176	1,201,135	218,779,021	221,414,865
Member refunds and withdrawals	8,518,148	-	5,766,724	-	14,284,872	16,066,741
Transfer to Component I from Component II	-	-	-	-	-	15,592,259
General and administrative expenses	2,838,846	-	2,143,618	31,655	5,014,119	4,733,373
ASF recoupment write-offs and allowance adjustments (Note 1)	16,000,245	-	-	-	16,000,245	1,379,089
Total deductions	242,134,040	433,909	10,277,518	1,232,790	254,078,257	259,186,327
Net (Decrease) Increase in Fiduciary Net Position	(16,006,282)	654,932	47,280,884	2,836,377	34,765,911	(56,906,862)
Net Position Restricted for Pension/OPEB - Beginning of year	1,418,609,280	13,118,022	275,775,230	26,116,093	1,733,618,625	1,790,525,487
Net Position Restricted for Pension/OPEB - End of year	**$ 1,402,602,998**	**$ 13,772,954**	**$ 323,056,114**	**$ 28,952,470**	**$ 1,768,384,536**	**$ 1,733,618,625**

See notes to financial statements.

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, 2024, 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.

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 $843,993,547 at June 30, 2024 was $29,537,162, 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 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, 2023, from which the summarized information was derived.

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.

From 2015 through 2023, the contributions received by the Combined Plan were made in accordance with the provisions of the POA. Beginning in 2024, the contributions received by the Combined Plan are made in accordance with actuarially determined amounts. 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.

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 $846,400,000, or 48 percent, of the System's net position as of June 30, 2024 does not have a readily determinable market value. Of this balance, approximately $14,600,000 has been estimated by management. The remaining $831,800,000 is based on valuations performed by the investee company management as of June 30, 2024, which are also subject to annual audits that are generally performed 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 fair value is based on information provided by investment managers, general partners, real estate advisors, and other means. 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.

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. The receivable will be collected, with 6.75 percent interest, as a reduction to monthly pension benefits for those with recoupment balances outstanding. As of June 30, 2024, the System has approximately $90,600,000 to be collected. In fiscal year 2024, the System, based on historic information related to collection history and write-offs, has recorded an allowance of approximately $14,700,000 against this gross receivable balance. This is the first year an allowance was recorded given the sufficiency of historical write-off trends in order to properly estimate an allowance on the receivable balance.

Receivable/Payable from Investment Sales/Purchases

The System liquidated investments prior to year end and reported a receivable from investment sales at June 30, 2024 in the amount of $3,077,065. 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, 2024 in the amount of $52,481,475. This amount was paid subsequent to year end.

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, 2024 was $1,770,021 and $1,339,907 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, 2024, this amount has been shown as restricted assets on the statement of fiduciary net position.

Note 1 - Significant Accounting Policies (Continued)

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the Unites 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.

Upcoming Accounting Pronouncements

In June 2022, the Governmental Accounting Standards Board issued Statement No. 101, *Compensated Absences*, which updates the recognition and measurement guidance for compensated absences under a unified model. This statement requires that liabilities for compensated absences be recognized for leave that has not been used and leave that has been used but not yet paid in cash or settled through noncash means and establishes guidance for measuring a liability for leave that has not been used. It also updates disclosure requirements for compensated absences. The provisions of this statement are effective for the System's financial statements for the year ending June 30, 2025. This standard is not expected to have a significant impact on the System's financial statements.

In December 2023, the Governmental Accounting Standards Board issued Statement No. 102, *Certain Risk Disclosures*, which requires governments to assess whether a concentration or constraint makes the government vulnerable to the risk of a substantial impact. It also requires governments to assess whether an event or events associated with a concentration or constraint that could cause the substantial impact have occurred, have begun to occur, or are more likely than not to begin to occur within 12 months of the date the financial statements are issued. If certain criteria are met for a concentration or constraint, disclosures are required in the notes to the financial statements. The provisions of this statement are effective for the System's financial statements for the year ending June 30, 2025. The System is evaluating the impact this will have when effective.

In April 2024, the Governmental Accounting Standards Board issued Statement No. 103, *Financial Reporting Model Improvements*, which establishes new accounting and financial reporting requirements or modifies existing requirements. For the System, the impact of this new pronouncement, when implemented, will primarily be limited to the management's discussion and analysis. The provisions of this statement are effective for the System's financial statements for the year ending June 30, 2026.

In September 2024, the Governmental Accounting Standards Board issued Statement No. 104, *Disclosure of Certain Capital Assets*, which requires certain types of capital assets, such as lease assets, intangible right-to-use assets, subscription assets, and other intangible assets, to be disclosed separately by major class of underlying asset in the capital assets note. The statement also requires additional disclosures for capital assets held for sale. The provisions of this statement are effective for the System's financial statements for the year ending June 30, 2026. This standard is not expected to have a significant impact on the System's financial statements.

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 were not subject to amendment before June 30, 2023 unless an amendment was 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. The active membership elects 5 members to serve six-year terms. The retiree membership elects 1 retiree member to serve a two-year term. The mayor of the City of Detroit, Michigan appoints 1 member from the citizens of the City to serve a six-year term. The remaining 3 members, these members being the mayor of the City (or designee), the city treasurer, and one representative from the Detroit City Council, serve ex officio. Expirations of terms of elected trustees are staggered.

The Investment Committee has five independent members appointed to initial terms, which will all eventually become six years, with staggered expirations. Additionally. two 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 were subject to amendment by the City Council. Further changes to benefits were provided for under the POA.

Employees Covered by Benefit Terms

The following members were covered by the benefit terms:

	Component II (Legacy Plan)	Component I (Hybrid Plan)
Date of member count	June 30, 2023	June 30, 2023
Inactive plan members or beneficiaries currently receiving benefits	10,792	762
Inactive plan members entitled to but not yet receiving benefits	2,391	830
Active plan members	1,737	5,333
Total employees covered by the plan	14,920	6,925

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 earn only additional service credit in the new Hybrid Plan.

Note 2 - Pension Plan Description (Continued)

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, from 2015 through 2023, contributions were based on specific provisions in accordance with the Plan of Adjustment. Beginning in 2024, the contributions are based on the actuarially determined rate.

Employer and Nonemployer Contributing Entity Contributions

Component II

For Component II, during fiscal year 2024, employer contributions were actuarially determined based on the amount necessary to fund the plan on an actuarial basis. For fiscal year 2024, total employer contributions from the city-related entities and GLWA were $82.5 million, which includes $375,000 from the Foundation for Detroit's Future (the "Foundation"). In addition, during fiscal year 2024, Component II received $23,185,142 from the Protecting Michigan Pension Grant Program, which includes $217,095 in interest from the City of Detroit, Michigan given the funds were first sent to the City prior to being transferred to Component II.

Component I

For Component I, during fiscal year 2024, employer contributions were actuarially determined based on the amount necessary to fund the plan on an actuarial basis. The City and related entities were required to contribute the following percent of base compensation of active members:

- General City - 4.01%
- Department of Transportation - 4.50%
- Detroit Water and Sewer Department - 4.39%
- Library - 4.83%

During fiscal year 2024, the City and related entities contributed $13,673,679 into the Hybrid Plan.

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, 2024, there were no employee contributions into Component II, 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, 2024, 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 2024, the plan received mandatory and voluntary employee contributions of $19,821,458.

Note 2 - Pension Plan Description (Continued)

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, 2024, 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.

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 $5.8 million of the System's checking account balances was uninsured and uncollateralized at June 30, 2024. 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.

Note 3 - Deposits and Investments (Continued)

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	$ 140,283	$ 10,791	$ 107,907	$ 13,370	$ 8,215
U.S. government mortgage-backed securities	27,114	2,370	5,002	1,397	18,345
Mutual funds	41,570	-	35,221	6,349	-
Government securities	383	-	225	139	19
U.S. government securities	30,692	708	14,795	8,223	6,966
Asset backed	5,343	-	5,343	-	-
Total	$ 245,385	$ 13,869	$ 168,493	$ 29,478	$ 33,545

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, 2024, 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	$ 1,642	$ 1,773	$ 16,903	$ 16,675	$ 19,672	$ 11,970	$ 71,648
U.S. government mortgage-backed securities	161	26,953	-	-	-	-	-
Mutual funds	-	-	-	-	-	-	41,570
Government securities	-	263	-	-	-	-	120
Asset backed	5,343	-	-	-	-	-	-
Total	$ 7,146	$ 28,989	$ 16,903	$ 16,675	$ 19,672	$ 11,970	$ 113,338

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 Receivable
Canadian dollar	$ 729	$ -	$ 71
Eurocurrency unit	-	1	143
Japanese yen	-	-	87
Norwegian krone	-	-	78
Swiss franc	-	-	81
Total	$ 729	$ 1	$ 460

Note 3 - Deposits and Investments (Continued)

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, 2024, the collateral provided was 102.71 percent of the market value of the loaned securities, which is more 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, 2024 was two 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, 2024, 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, 2024 were $40,411,992 and $39,346,939, respectively.

The following represents the balances relating to the securities lending transactions as of June 30, 2024; investments are reported at fair value:

Securities Lent	Underlying Securities
U.S. corporate fixed income	$ 14,707,257
U.S. equities	20,023,988
U.S. governments	4,615,694
Total	$ 39,346,939

The fair market value of the collateral pool related to securities lending at June 30, 2024 was $40,432,848. The investments were in asset-backed securities, certificate of deposit, time deposits, commercial paper, corporate bonds, and repurchase agreements. Approximately 95 percent of these securities had a duration of less than one year and 5 percent had a duration between one and three years.

The credit ratings of the securities lending collateral pool held at June 30, 2024, as rated by S&P, are as follows:

Ratings	Amount
AAA	$ 550,996
AA	5,949,910
A	14,955,000
A-1	3,460,000
NR	15,516,942
Total	$ 40,432,848

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.

Note 4 - Fair Value Measurements (Continued)

The System has the following recurring fair value measurements as of June 30, 2024:

	Assets Measured at Fair Value on a Recurring Basis at June 30, 2024			
	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, 2024
Fixed income:				
Government securities (U.S. and other)	$ 16,643,114	$ 382,947	$ -	$ 17,026,061
Corporate bonds	-	144,596,569	-	144,596,569
U.S. government mortgage backed	-	27,114,147	-	27,114,147
Asset-backed securities	-	5,331,341	-	5,331,341
Certificate of deposit (negotiable)	-	17,161,790	-	17,161,790
Commercial paper	-	1,600,858	-	1,600,858
Mutual funds	41,569,459	-	-	41,569,459
Privately negotiated debt	-	36,082	-	36,082
U.S. Treasury	-	14,048,718	-	14,048,718
Total fixed income	58,212,573	210,272,452	-	268,485,025
Equity:				
Common stock	581,082,479	-	-	581,082,479
Preferred stock	1,524,367	4,863,566	-	6,387,933
Total equity	582,606,846	4,863,566	-	587,470,412
Partnership investments	-	-	830,000	830,000
Real estate private equity funds	-	-	10,178,580	10,178,580
Real estate-related investments	-	-	3,600,000	3,600,000
Total	$ 640,819,419	$ 215,136,018	$ 14,608,580	870,564,017
Investments measured at NAV:				
International equity funds				302,671,579
Fixed-income funds				44,598,506
Hedge funds				145,574,021
Real estate funds				213,899,287
Private equity funds				125,010,424
Total investments measured at NAV				831,753,817
Total investments measured at fair value				$ 1,702,317,834

A total of approximately $17,400,000 of repurchase agreements and time deposits recorded at amortized cost are 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.

The fair value of preferred stock and fixed-income securities at June 30, 2024 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.

Note 4 - Fair Value Measurements (Continued)

The fair value of the remaining investments at June 30, 2024 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, 2024, 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	$ 302,671,579	$ -	Monthly	Up to 30 days
Fixed-income funds	44,598,506	-	Daily	10 business days
Hedge funds	145,574,021	-	Quarterly	100 days
Real estate funds	213,899,287	-	Quarterly	90 days
Private equity funds	125,010,424	56,841,324	N/A	N/A
Total investments measured at NAV	$ 831,753,817	$ 56,841,324		

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.

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).

Note 4 - Fair Value Measurements (Continued)

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, 2024:

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, 2024, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 9.38 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. The balance is currently negative and, as a result, has been combined with the pension reserve fund for disclosure.

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 2024 retirements have not yet been determined.

Note 6 - Pension Plan Reserves (Continued)

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 2024, the board approved the interest rate at 0 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. Due to the required transfers to fund the pension reserve fund, the fund as of June 30, 2024 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 2024, 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, 2024 are included in the table below. The reserve balances as of June 30, 2024 shown below do not include the current year transfer amount related to fiscal year 2024 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, 2024 are as follows:

	Required Reserve	Amount Funded
Annuity savings fund	$ 72,490,304	$ 72,490,304
Pension reserve fund	1,802,247,467	1,330,112,694
Annuity reserve fund	-	-
Pension accumulation fund	-	-

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.

Note 6 - Pension Plan Reserves (Continued)

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 0 percent rate of return for fiscal year ended June 30, 2024).

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 2024, 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 2024, 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 2024, investment income was transferred to other reserve funds, and, therefore, this reserve balance at June 30, 2024 remains unfunded.

The balances of the reserve accounts for Component I as of June 30, 2024 are included in the table below. As of June 30, 2024, not all transfers from the accumulated mandatory employee contribution fund to the pension accumulation fund for retirements have occurred.

The balances of the above reserves for Component I that were funded as of June 30, 2024 are as follows:

	Required Reserve	Amount Funded
Accumulated mandatory employee contribution fund	$ 81,041,103	$ 81,041,103
Accumulated voluntary employee contribution fund	39,928,350	39,928,350
Pension accumulation fund	-	202,086,661

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

The net pension liability has been measured as of June 30, 2024 and is composed of the following:

Total pension liability	$ 2,246,596,545
Plan fiduciary net position	1,402,602,998
City's pension liability	$ 843,993,547
Plan fiduciary net position as a percentage of the total pension liability	62.43 %

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2023, which used update procedures to roll forward the estimated liability to June 30, 2024. 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	6.75%	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. Although in the current year the assumptions are identical, the investment return used for financial reporting purposes 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, 2023 valuation to calculate the total pension liability as of June 30, 2024 were based on the results of an actuarial experience study for the period from July 1, 2015 through June 30, 2020.

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, 2024 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, 2024 was 6.75 percent; however, the single discount rate used at the beginning of the year was 6.76 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.

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

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 based on actuarially determined amounts. 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, 2024 for each major asset class included in the pension plan's target asset allocation, as disclosed in the investment note, are summarized in the following table:

Asset Class	Long-term Expected Real Rate of Return
Global equity	4.45 %
Global fixed income	4.30
Real estate/Real assets	4.11
Diversifying strategies	4.09

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 6.75 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 (5.75 percent) or 1 percentage point higher (7.75 percent) than the current rate:

	1 Percentage Point Decrease (5.75%)	Current Discount Rate (6.75%)	1 Percentage Point Increase (7.75%)
Net pension liability	$ 1,026,033,983	$ 843,993,547	$ 686,424,016

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, 2024 based on benefits in force as of that date and is composed of the following:

Total pension liability	$ 301,513,026
Plan fiduciary net position	323,056,114
City's net pension asset	$ (21,543,088)
Plan fiduciary net position as a percentage of the total pension liability	107.14 %

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

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2023, which used update procedures to roll forward the estimated liability to June 30, 2024. 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 6.76 percent as compared to 6.75 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. Although in the current year, the assumptions are identical, the investment return used for financial reporting purposes 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, 2023 valuation to calculate the total pension liability as of June 30, 2024 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 2 percent simple COLA to model the potential average COLA over time, which is a change from the 0.5 percent assumed at the beginning of year total pension liability.

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, 2024 was 6.75 percent; however, the single discount rate used at the beginning of the year was 6.76 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. 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.

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

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 6.75 percent, as well as what the City's net pension liability (asset) would be if it were calculated using a discount rate that is 1 percentage point lower (5.75 percent) or 1 percentage point higher (7.75 percent) than the current rate:

	1 Percentage Point Decrease (5.75%)	Current Discount Rate (6.75%)	1 Percentage Point Increase (7.75%)
Net pension liability (asset) of the City	$ 22,150,463	$ (21,543,088)	$ (57,106,648)

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 Plans were 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.

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, 2023, 8,556 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, 2023
Inactive, nonretired members	384
Retirees and beneficiaries	2,807
Active plan members	8,065
Total participants covered by the plan	11,256

Note 9 - Other Postemployment Benefit Plan (Continued)

Contributions

Open Plan

The City of Detroit Employee Benefit Plan board establishes contribution rates for the Open 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 26-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, 2024, the employer contribution rate for each active member was $19.63 per year. Active plan members are required to contribute $10.40 per year, except for police lieutenants and sergeants and fire equivalents, who must contribute $13.00 a year. For retired plan members, required contributions are $1.08 a year. During the year ended June 30, 2024, the Open Plan received employer contributions of $140,610 and employee/retiree contributions of $94,319.

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 per year. Total employee contributions for the year ended June 30, 2024 for the Closed Plan were $12,890.

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, 2024 is equal to the plan net position of $23,412,240.

Open Plan

The net OPEB liability has been measured as of June 30, 2024 and is composed of the following:

Total OPEB liability	$ 6,166,222
Plan fiduciary net position	5,540,230
Net OPEB liability of the City	$ 625,992
Plan fiduciary net position as a percentage of the total OPEB liability	89.85 %

Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of June 30, 2023, which used update procedures to roll forward the estimated liability to June 30, 2024. 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.

Note 9 - Other Postemployment Benefit Plan (Continued)

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, 2023 valuation to calculate the total pension liability as of June 30, 2024 were based on the results of an actuarial experience study for the period from July 1, 2015 through June 30, 2020.

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 %	4.44 %
International equities	25.00	5.34
Bonds	25.00	3.03
REITs	4.00	3.73
Global multisector fixed income	20.00	2.56
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 (asset) 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 (asset) of the City	$ 1,824,966	$ 625,992	$ (314,424)

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.

Note 9 - Other Postemployment Benefit Plan (Continued)

Rate of Return

For the year ended June 30, 2024, the annual money-weighted rate of return on OPEB plan investments, net of OPEB plan investment expense, was 14.69 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 $731,777 as of June 30, 2024.

Future principal and interest payment requirements related to the System's lease liability at June 30, 2024 are as follows:

Years Ending	Principal	Interest	Total
2025	$ 219,132	$ 103,928	$ 323,060
2026	241,081	114,276	355,357
2027	264,556	103,928	368,484
2028	289,651	50,869	340,520
2029	316,466	34,269	350,735
2030-2031	466,356	16,789	483,145
Total	$ 1,797,242	$ 424,059	$ 2,221,301

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.

Based on these provisions, $0 and $15,592,259 was transferred from Component II to Component I toward the transition costs in the fiscal years ended June 30, 2024 and 2023, respectively. The cumulative amount of transfers from prior fiscal years was $25,786,066. No more transfers will occur given the combined plan document only specified transfers to be made through June 30, 2023.

Note 11 - Commitments (Continued)

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, 2024, the amount of pledged collateral is $3,821,140.

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 on December 10, 2014.

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 2024.

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.

Note 12 - City of Detroit, Michigan's Chapter 9 Bankruptcy Plan of Adjustment and Continuing Impact on the Plan (Continued)

- 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.
- 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, 2024 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 $406 million for this Trust as of June 30, 2024 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.

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 was approximately $13 million.

During the fiscal year beginning on July 1, 2023, the parties to the pension reporting agreement were 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. Pending a formalized agreement, the parties verbally agreed to have the City make the DWSD-R/GLWA annual required contribution until such time that the aggregate excess of approximately $13 million is exhausted. The City did make the first quarter payment for fiscal year 2025 on behalf of DWSD-R/GLWA in accordance with this verbal agreement.

Required Supplementary Information

Page 305

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

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability										
Interest	$ 150,743,003	$ 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
Changes in benefit terms	-	-	-	-	-	-	-	-	-	(731,824,895)
Differences between expected and actual experience	(24,103,038)	(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	1,677,964	(1,789,161)	(181,357,524)	119,876,694	67,677,535	-	(110,274,515)	76,925,957	90,034,927	(101,559,893)
Benefit payments, including refunds	(223,294,949)	(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)
Net Change in Total Pension Liability	(94,977,020)	(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)
Total Pension Liability - Beginning 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
Total Pension Liability - End of year	**$ 2,246,596,545**	**$ 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**
Plan Fiduciary Net Position										
Contributions - Employer, state, and foundation	$ 105,685,142	$ 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
Contributions - Employee	-	-	-	-	-	-	-	-	-	609,073
Net investment income (loss)	114,261,078	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
Administrative expenses	(2,838,846)	(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)
Benefit payments, including refunds	(223,294,949)	(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)
Other (includes ASF recoupment)	(9,818,707)	(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
Net Change in Plan Fiduciary Net Position	(16,006,282)	(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
Plan Fiduciary Net Position - Beginning 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
Plan Fiduciary Net Position - End of year	**$ 1,402,602,998**	**$ 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**
Net Pension Liability - Ending	**$ 843,993,547**	**$ 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**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.43 %	60.58 %	62.65 %	67.25 %	59.15 %	65.81 %	69.98 %	67.57 %	66.07 %	72.04 %
Covered Payroll	$ -	$ 78,649,527	$ 83,104,746	$ 102,653,636	$ 111,124,304	$ 142,215,060	$ 149,373,313	$ 141,454,717	$ 143,882,722	$ 200,722,197
Net Pension Liability as a Percentage of Covered Payroll	- %	1,173.52 %	1,097.25 %	862.57 %	992.00 %	657.24 %	557.45 %	667.20 %	690.06 %	412.06 %

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 2024 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

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015*
Annual money-weighted rate of return - Net of investment expense	9.38 %	4.94 %	(7.27)%	28.31 %	(0.78)%	3.28 %	6.70 %	12.60 %	1.10 %	2.40 %

*Fiscal year 2015 does 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

Last Ten Fiscal Years

Years Ended June 30

	2024	2023*	2022*	2021*	2020*	2019*	2018*	2017*	2016*	2015*
Actuarially determined contribution	$ 82,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contributions in relation to the actuarially determined contribution	82,500,000	-	-	-	-	-	-	-	-	-
Contribution Deficiency	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Covered Payroll	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contributions as a Percentage of Covered Payroll	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %

*The contributions starting with fiscal year 2015 through 2023 were determined by the provisions of the POA; the contributions were not actuarially determined and, therefore, not subject to disclosure in accordance with GASB Statement No. 67 within this schedule.

Notes to Schedule of Pension Contributions Legacy Plan

Actuarial valuation information relative to the determination of contributions:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, which is 12 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Individual entry-age
Amortization method	Level principal, closed
Remaining amortization period	30 years (Beginning with fiscal year 2024 contribution)
Asset valuation method	3-year smoothed market
Inflation	2.50% price inflation
Salary increase	N/A
Investment rate of return	6.75%
Mortality	PubG-2010(B) Below-Median General Mortality Table

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

Last Ten Fiscal Years

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability										
Service cost	$ 23,496,093	$ 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	16,505,580	14,296,616	14,050,863	12,218,430	10,270,622	7,531,400	5,438,061	4,084,390	2,495,896	695,469
Differences between expected and actual experience	(11,142,531)	(6,162,346)	(18,137,902)	(10,183,406)	(7,464,424)	7,556,858	4,546,865	(4,667,487)	(1,263,760)	(1,202,108)
Changes in assumptions	31,718,494	(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	6,582,488	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	(8,133,900)	(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	59,026,224	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	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	-
Total Pension Liability - End of year	**$ 301,513,026**	**$ 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	$ 13,673,679	$ 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	13,238,970	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)	23,576,401	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	(2,143,618)	(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	6,582,488	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	(4,888,237)	(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	(3,245,663)	(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	486,864	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	47,280,884	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	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	-
Plan Fiduciary Net Position - End of year	**$ 323,056,114**	**$ 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	**$ (21,543,088)**	**$ (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	107.14 %	113.73 %	106.66 %	101.80 %	90.62 %	96.92 %	98.71 %	86.57 %	73.75 %	81.74 %
Covered Payroll	$ 330,528,688	$ 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	(6.52)%	(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 Pension Contributions
Hybrid Plan

	Last Fiscal Year Year Ended June 30
	2024
Actuarially determined contribution	$ 13,673,679
Contributions in relation to the actuarially determined contribution	13,673,679
Contribution Deficiency (Excess)	**$ -**
Covered Payroll	$ 330,528,688
Contributions as a Percentage of Covered Payroll	4.14 %

Contributions before fiscal year 2024 were determined by the provisions of the POA; the contributions were not actuarially determined and, therefore, not subject to disclosure in accordance with GASB Statement No. 67 within this schedule.

Notes to Schedule of Pension Contributions Hybrid Plan

Actuarial valuation information relative to the determination of contributions:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, which is 12 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Individual entry-age
Amortization method	Level percentage of payroll, closed
Remaining amortization period	15 years closed (Beginning with fiscal year 2024)
Asset valuation method	3-year smoothed market
Inflation	3% wage inflation
Salary increase	3-7.90% including inflation
Investment rate of return	6.75%
VPIF	2%
Mortality	PubG-2010(B) Below-Median General Mortality Table

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

Last Eight Fiscal Years

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability								
Service cost	$ 159,364	$ 132,945	$ 154,693	$ 129,692	$ 142,198	$ 129,558	$ 114,919	$ 103,457
Interest	323,009	326,131	331,758	311,172	281,348	255,501	223,231	215,053
Differences between expected and actual experience	(289,588)	21,270	33,174	2,304	215,945	197,652	325,148	-
Changes in assumptions	-	-	117,486	806,689	-	-	-	-
Benefit payments, including refunds	(218,724)	(260,207)	(186,198)	(213,821)	(205,148)	(234,422)	(184,826)	(230,000)
Net Change in Total OPEB Liability	(25,939)	220,139	450,913	1,036,036	434,343	348,289	478,472	88,510
Total OPEB Liability - Beginning of year	6,192,161	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	**$ 6,166,222**	**$ 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	$ 140,610	$ 126,937	$ 106,510	$ 114,790	$ 113,842	$ 92,990	$ 107,627	$ 88,709
Contributions - Employee	94,319	89,485	85,236	96,996	86,147	73,457	96,337	80,151
Net investment income (loss)	724,251	393,971	(671,339)	1,128,321	11,617	246,685	296,957	315,310
Administrative expenses	(5,824)	(5,104)	(6,584)	(18,094)	(55,108)	(61,160)	(32,001)	(61,755)
Benefit payments, including refunds	(218,724)	(260,207)	(186,198)	(213,821)	(205,148)	(234,422)	(184,826)	(230,000)
Other	-	-	-	-	-	-	(221,948)	-
Net Change in Plan Fiduciary Net Position	734,632	345,082	(672,375)	1,108,192	(48,650)	117,550	62,146	192,415
Plan Fiduciary Net Position - Beginning of year	4,805,598	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	**$ 5,540,230**	**$ 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	**$ 625,992**	**$ 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	89.85 %	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 Eight Fiscal Years

Years Ended June 30

	2024	2023	2022	2021	2020	2019	2018	2017
Actuarially determined contribution	$ 140,610	$ 126,937	$ 106,510	$ 114,790	$ 113,842	$ 92,990	$ 93,797	$ 104,659
Contributions in relation to the actuarially determined contribution	140,610	126,937	106,510	114,790	113,842	92,990	107,627	88,709
Contribution Excess (Deficiency)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 13,830**	**$ (15,950)**

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	Entry age normal
Amortization method	Level dollar, closed beginning with contribution for fiscal year ended June 30, 2021
Remaining amortization period	27 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 Eight Fiscal Years

Years Ended June 30

	2024	2023	2022	2021	2020	2019	2018	2017
Annual money-weighted rate of return, net of investment expense	14.69 %	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

Last Eight Fiscal Years

	2024	2023	2022	2021	2020	2019	2018	2017
Total OPEB Liability - Increase (decrease) in total OPEB liability due to availability of assets	$ 2,101,745	$ 553,487	$ (4,209,561)	$ 4,496,393	$ (944,616)	$ 12,295	$ 38,822	$ (15,035)
Total OPEB Liability - Beginning of year	21,310,495	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	**$ 23,412,240**	**$ 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	$ 12,890	$ 9,244	$ 9,390	$ 19,867	$ 12,925	$ 9,080	$ 9,528	$ -
Net investment income (loss)	3,097,095	1,880,092	(3,277,720)	5,538,571	63,605	1,295,090	1,416,686	1,996,352
Administrative expenses	(25,829)	(24,922)	(32,147)	(18,096)	-	-	-	-
Benefit payments, including refunds	(982,411)	(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	2,101,745	553,487	(4,209,561)	4,496,393	(944,616)	12,295	38,822	(15,035)
Plan Fiduciary Net Position - Beginning of year	21,310,495	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	**$ 23,412,240**	**$ 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 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	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.

See notes to required supplementary information.

General Retirement System of the City of Detroit

Notes to Required Supplementary Information

June 30, 2024

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.

In 2024, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.76 to 6.75 percent. Also, for Component I, the Variable Pension Improvement Factor assumption changed from 0.50 percent to 2 percent.

OPEB Information

Changes in Assumptions

In 2021, the discount rate changed from 7.00 to 5.99 percent.

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.

Supplementary Information

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, 2024

	DWSD Subdivisions		General Retirement System - Divisions				
	GLWA	DWSD-R	DWSD - Division Total (all DWSD Subdivisions)	General Division	DOT	Library	Total - General Retirement System (all Divisions)
Beginning Net Position - July 1, 2023	413,242,476	174,584,665	587,827,141	686,593,617	65,168,252	79,020,270	1,418,609,280
Additions:							
Investment income (loss):							
Interest, dividends, and other income	13,295,586	5,617,054	18,912,640	21,110,020	1,591,536	2,372,237	43,986,433
Net increase in fair value of investments	24,144,041	10,200,257	34,344,298	38,334,616	2,890,140	4,307,849	79,876,903
Net unrealized loss on collateralized securities	(254,701)	(107,605)	(362,306)	(404,401)	(30,489)	(45,444)	(842,640)
Investment related expenses	(2,647,731)	(1,118,601)	(3,766,332)	(4,203,926)	(316,944)	(472,416)	(8,759,618)
Net investment income	34,537,195	14,591,105	49,128,300	54,836,309	4,134,243	6,162,226	114,261,078
Contributions:							
Employer contributions	492,100	207,900	700,000	51,425,000	29,900,000	100,000	82,125,000
Foundation for Detroit's Future	-	-	-	265,012	109,988	-	375,000
State of Michigan Pension Grant	-	-	-	15,765,896	7,419,246	-	23,185,142
Total contributions	492,100	207,900	700,000	67,455,908	37,429,234	100,000	105,685,142
ASF recoupment interest	1,018,581	430,325	1,448,906	2,705,946	964,007	111,815	5,230,674
Other income	263,464	111,307	374,771	467,418	53,658	55,017	950,864
Total additions - net	36,311,340	15,340,637	51,651,977	125,465,581	42,581,142	6,429,058	226,127,758
Deductions:							
Member refunds and withdrawals	771,567	325,968	1,097,535	5,684,188	1,242,290	494,135	8,518,148
Retirees' pension and annuity benefits	40,997,998	17,320,633	58,318,631	119,814,110	30,079,384	6,564,676	214,776,801
General and administrative expenses	826,959	349,370	1,176,329	1,373,975	130,411	158,131	2,838,846
ASF Recoupment Write-off	3,000,446	1,267,619	4,268,065	8,345,826	3,010,096	376,258	16,000,245
Total deductions	45,596,970	19,263,590	64,860,560	135,218,099	34,462,181	7,593,200	242,134,040
Net Increase (Decrease) in Net Position	(9,285,630)	(3,922,953)	(13,208,583)	(9,752,518)	8,118,961	(1,164,142)	(16,006,282)
End of Year Net Position Restricted for Pensions - June 30, 2024	**403,956,846**	**170,661,712**	**574,618,558**	**676,841,099**	**73,287,213**	**77,856,128**	**1,402,602,998**

General Retirement System of the City of Detroit

Schedule of DWSD/GLWA Excess of Contributions Paid Toward Administrative Expenses

For the Year Ended June 30, 2024

	DWSD Division Total	
	GLWA	DWSD-R
Amount Paid in Excess of Administrative Expenses Otherwise Allocable - June 30, 2023	$ 9,111,980	$ 3,849,587
City payments against excess	-	-
Cumulative Amount Paid in Excess of Administrative Expenses Otherwise Allocable - June 30, 2024	**$ 9,111,980**	**$ 3,849,587**

Allocation Between Divisions

The Combined Plan's allocation methodology to allocate fiscal year 2024 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, 2024. 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 through fiscal year 2023 had been allocated to the general division. Correspondingly, the expenses transferred to the general division were 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 occurred until 2023, at which point the City and GLWA were to 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. As of June 30, 2023, the aggregate excess of administrative expenses paid by DWSD-R and GLWA were $12,961,567. As of June 30, 2024, the City and GLWA have not formally agreed to a resolution of this excess.

Contributions - In fiscal year 2024, the Plan received contributions from the divisions, the Foundation for Detroit's Future, and a one-time State of Michigan pension grant. The employer contributions were allocated between the divisions according to which division the contribution was received from. 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, 2024. The State of Michigan pension grant was allocated between the general division and DOT given these were the two divisions that were under 60% funded as of the 2020 actuarial valuation that was used to apply for the grant.

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).

Plante & Moran, PLLC
P.O. Box 307
3000 Town Center, Suite 100
Southfield, MI 48075
Tel: 248.352.2500
Fax: 248.352.0018
plantemoran.com

December 19, 2024

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, 2024 and have issued our report thereon dated December 19, 2024. 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 and a significant deficiency. 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. Their assistance and professionalism are invaluable.

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 Watterworth

Michelle M. Watterworth, CPA

Spencer Tawa

Spencer Tawa, CPA

PRAXITY
Empowering Business Globally

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, 2024, 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 and another deficiency that we consider to be a significant deficiency.

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 data used in the System's June 30, 2024 financial statements are as of June 30, 2023, which was accumulated and transmitted to the actuary from the old ERP system. Beginning with the June 30, 2024 data, the data will come from the new system, IntelliPlan.

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 in the census data. The more significant errors are as follows:

- 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 $23,000, with most of our sample having a difference of 9 percent (the System reported higher salary than actual to the actuary). While the System relies on wage information from the City, the differences we noted were due to how the System captured and reported the salary information to the actuary. We recommend the System perform procedures to validate that the proper salary information is being captured from the City and ultimately being reported to the actuary.

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

- We noted several different types of errors with persons either improperly included in census or improperly excluded from the census data, although the vast majority of the errors of this type related to people (actives, deferred and retirees) being improperly excluded from the census data. As an example, for Components II and I, we noted there were members receiving a pension benefit that were not included in the census data and members that should have been included as vested in the data that had inappropriately fallen off the listings in the current year. We recommend the System implement procedures and controls to ensure completeness of the data being transmitted to the actuary.

- We continue to note 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 there was great variability in the discrepancies between reported AFC and actual, which ranged from an AFC that was 21 percent higher than it should have been to 110 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.

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 implementing a new information technology system; during that process, 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 additional 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 as accurate as possible. Those controls that the System puts in place should be documented, including the performance of any analytics and any follow up done to validate and correct the data.

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

The System has complex 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. The System has been in the process of modifying the information technology system. For the System's financial statements for the fiscal year ended June 30, 2024, the data submitted to the actuary was from the old ERP system. Beginning next year, the data will come from the new system, IntelliPlan, which has already begun to be used for benefit payment calculations.

Based on our procedures, we identified the following related to the IT system:

- User access reviews (all systems) - No formal user access reviews are being performed. We recommend formal user access reviews as these are a tool to verify that personnel have the correct access level depending on the role within the organization. If users have incorrect permissions, it could lead to unintended changes, including to personnel profiles, unknown risk, and inappropriate system access.

- Intrusion detection - A formal incident response plan and disaster recovery plan have not been documented. In the event of an incident or disaster that impacts availability of IT resources, DRS may not have a clear plan on restoring operations.

- Shared administrator account for the active directory - The administrator account for the active directory is shared between multiple personnel. This will mean that it is not possible to track who changes were performed by. Additionally, it will be difficult to track and restrict user access.

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

- Monitoring of administrator activity (all systems) - There is also not a process to proactively monitor administrator activity. As a result, an inadvertent mistake or malicious action made by an administrator could go undetected. In addition, without this monitoring, given the shared administrator account, it is possible for changes to be made without the knowledge of management.

- Old IT system used for census data - As mentioned above, this is the last year the census data will be submitted to the actuary from the old IT system. Concerns with the prior system include inadequate segregation of duties and lack of monitoring of master file changes. 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. Additionally, it is recommended to 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.

A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the following deficiency in the System's internal control to be a significant deficiency:

Controls Over Voluntary Contribution Reporting

After year end, as a result of our audit procedures, the System realized the information the City's payroll department sends it each pay period, with the breakdown of the voluntary contributions to Component I, was incorrect. While the amount in total was proper, as it matched the dollar amount that the City was sending to the System, the breakdown between how much was related to the Police & Fire (P&F) and the General Retirement System (GRS) was incorrect. The City had inaccurately coded those voluntary contributions from Police & Fire members as contributions from general system employees. When this error was identified during our audit procedures, the System performed procedures to determine the amount of the error on a cumulative basis. The cumulative error in voluntary contributions coded to GRS that should have been coded to the P&F System is approximately $3.7 million. This issue only relates to financial reporting; the tracking of each individuals' voluntary contribution fund in the System's separate IT system was proper. While the System was currently performing a reconciliation between the financial reporting system and the separate IT system at a high level when preparing reserve fund workpapers, that reconciliation did not reveal these errors. We recommend the System implement additional controls over voluntary contributions to ensure the information that is being recorded in the System's general ledger ultimately agrees to the System's reserves subledger within the separate IT system.

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 July 19, 2024, 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 September 4, 2024.

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 2024, except for GASB 100, *Accounting Changes and Error Corrections*. The adoption of GASB 100 resulted in enhanced reporting requirements related to changes in accounting estimates; for the System, additional disclosures were required related to the allowance on the Annuity Savings Fund (ASF) recoupment receivable.

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 most sensitive estimates affecting the financial statements are the following:

Investment Valuations - The financial statements include investments valued at approximately $14.6 million (less than 1 percent of net position) at June 30, 2024 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 $832 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.

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

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 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.

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, 2024, the System is currently using 6.75 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. 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.

- 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.

Allowance on Annuity Savings Fund (ASF) Recoupment Receivable - For members who elected to make employee contributions into the defined contributions-style program, referred to as the annuity savings fund, 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 was 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 until paid in full, or the balance is forgiven upon the members' deaths (or their beneficiaries', as applicable). The current gross receivable recorded in the System's financial statements is approximately $90.6 million as of June 30, 2024. 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. In fiscal year 2024, now that the System has sufficient historical information related to collections and write-offs, the System recorded an allowance of $14.7 million against this receivable balance. The System will evaluate this allowance annually.

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 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 disclosure affecting the financial statements is the disclosure 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.

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

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.

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 19, 2024.

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.

Formalize Evidence of Preparation and Review of Documents

The System's process and controls properly include preparation and review of numerous workpapers to support financial statement reporting. However, sometimes the System does not document those activities and, therefore, cannot easily substantiate that they were performed. We recommend the System formalize the preparation and review process to ensure that the System can validate these critical procedures and controls were performed, by whom and on what date. Currently, there is documentation of preparation and review of things like manual journal entries and bank reconciliations, but such items as the reserve workpapers are missing this documentation.

Informational Items

Cybersecurity and Information Technology Controls

Cyberattacks are on the rise across the globe, and the cost of these attacks is ever increasing. Public pension systems are not immune to these attacks; there are many systems across the nation that have been a target of cybercriminal activity. Because of these attacks, systems are at risk both financially and legally. Even a system with a highly mature cybersecurity risk management program still has a residual risk that a material cybersecurity breach could occur and not be detected in a timely manner. We commend the System for recently undergoing a cybersecurity system assessment and encourage it to continue to prioritize addressing the items identified as part of that process.

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, 2024, the Income Stabilization Fund's net position was $13.8 million. 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 (GASB) 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 update and a link to previous fall and spring updates are available here: GASB accounting standard update: Fall 2024 | Our Insights | Plante Moran.

Section III - Other Recommendations and Related Information
(Continued)

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.

GASB Statement No. 102 - Certain Risk Disclosures

This new accounting pronouncement will be effective for the System for the year ending June 30, 2025. This statement requires a government to assess whether a concentration or constraint makes the government vulnerable to the risk of a substantial impact. It also requires a government to assess whether an event or events associated with a concentration or constraint that could cause the substantial impact have occurred, have begun to occur, or are more likely than not to begin to occur within 12 months of the date the financial statements are issued. If certain criteria are met for a concentration or constraint, disclosures are required in the notes to the financial statements.

GASB Statement No. 103 - Financial Reporting Model Improvements

This new accounting pronouncement will be effective for the System for the year ending June 30, 2026. This statement establishes new accounting and financial reporting requirements or modifies existing requirements. The impact to the system will primarily be with the reporting of management's discussion and analysis.

GASB Statement No. 104 - Disclosure of Certain Capital Assets

This new accounting pronouncement requires certain types of capital assets, such as lease assets, intangible right-to-use assets, subscription assets, and other intangible assets, to be disclosed separately by major class of underlying asset in the capital assets note. The statement also requires additional disclosures for capital assets held for sale. The System will be required to implement this new standard for the year ending June 30, 2026.

Attachment

Client: General Retirement System of the City of Detroit
Opinion Unit: Fiduciary Funds (all)
Y/E: 6/30/2024

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	Component I voluntary contributions for Police & Fire originally recorded as General Retirement System contributions (GRS owes PFRS)				$ 3,700,000				$ (3,700,000)		$ (3,700,000)
JUDGMENTAL ADJUSTMENTS:											
B1	None										
ITEMS UNABLE TO AUDIT:											
C1	None										
		$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	-
	Total	$ -	$ -	$ -	$ 3,700,000	$ -	$ -	$ -	$ (3,700,000)	$ -	$ (3,700,000)

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 understatement of the total pension liability of approximately $5.6 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.

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

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

Re: FY 2025 Second Quarter Budget Amendments through December 31, 2024, 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 FY 2025 second quarter budget amendments as presented.

..Title

FY 2025 Second Quarter Budget Amendments through December 31, 2024 and Proposed Budget Resolution

..Body

Agenda of: April 23, 2025
Item No.: **2025-109**
Amount: N/A

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: April 23, 2025

RE: FY 2025 Second Quarter Budget Amendments through December 31, 2024 and Proposed Budget Amendment Resolution

MOTION

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), adopts the **proposed FY 2025 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 March 28, 2025 which presents the proposed budget amendments for the second quarter of FY 2025. The reports included in this communication include the following.

1. Quarterly Budget Amendment Report for FY 2025 ending December 31, 2024.

2. Resolution Adopting the Budget Amendments through the second quarter of FY 2025.

BUDGET IMPACT

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

COMMITTEE REVIEW

This matter was reviewed by the Audit Committee at its meeting on March 28, 2025. The Audit Committee [insert action] that the Board of Directors for the Great Lakes Water Authority adopt the proposed FY 2025 second quarter budget amendments.

SHARED SERVICES IMPACT

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



FY 2025 Second Quarter Budget Amendment Report Through December 31, 2024 & Proposed Budget Amendment Resolution

Presented to the Audit Committee
March 28, 2025

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

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. For this second quarter FY 2025 budget amendment, the focus has been on high level adjustments as the staff continue to work through the implementation of Workday. Overall, with these proposed amendments the budget is materially in line with current activity.

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 Revenue Requirement
    B. Sewer System Revenue Requirement
    C. I&E Funding History*
    D. Operations & Maintenance by Fund – Water System and Sewer System*
    E. Operations & Maintenance by Service Area*
    F. Unallocated Reserve by Service Area*

2. **Appropriation Level – Debt Service – Water and Sewer Systems**
    A. Water System Debt Service Coverage Calculation
    B. Sewer System Debt Service Coverage Calculation
    C. Water System Flow of Funds Basis*
    D. Sewer System Flow of Funds Basis*

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

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

Table 1A - Water System Revenue Requirement – Appropriation Level

Water System	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Revenues					
Revenue from Charges					
Wholesale Charges	$ 347,758,000	$ -	$ -	$ 347,758,000	$ 176,613,843
Less: Bad Debt Expense	-	-	-	-	-
Local System Charges	27,094,800	-	-	27,094,800	13,547,400
Total Revenue from Charges	374,852,800	-	-	374,852,800	190,161,243
Investment Earnings					
Unrestricted	6,692,200	-	5,085,800	11,778,000	6,373,664
Restricted for Debt Service	3,182,100	-	16,900	3,199,000	1,880,252
Total Investment Earnings	9,874,300	-	5,102,700	14,977,000	8,253,916
Other Revenue	400,000	-	-	400,000	232,769
Total Revenues	$ 385,127,100	$ -	$ 5,102,700	$ 390,229,800	$ 198,647,928
Revenue Requirements					
Operations & Maintenance Expense	$ 169,625,000	$ -	$ 5,000,000	$ 174,625,000	$ 88,567,051
Debt Service	175,300,800	-	(12,137,400)	163,163,400	87,574,420
General Retirement System Pension	2,283,300	-	(630,000)	1,653,300	1,141,650
Water Residential Assistance Program Contribution	1,947,800	-	(71,300)	1,876,500	973,902
Extraordinary Repair & Replacement Deposit	-	-	906,400	906,400	-
Regional System Lease	22,500,000	-	-	22,500,000	11,250,000
Working Capital Requirement	6,200,000	-	-	6,200,000	-
Improvement & Extension Fund Transfer Pending	7,270,200	-	12,035,000	19,305,200	3,635,100
Total Revenue Requirements	$ 385,127,100	$ -	$ 5,102,700	$ 390,229,800	$ 193,142,123
Net Actual to Date					$ 5,505,805

Table 1A Commentary - Water System - Revenue Requirement – Appropriation Level

Revenues

Increase to the Water System revenues of $5.1 million is the net of the following.

- *$5.1 million Investment Earnings increase* – Based on a detailed analysis of the projected investment earnings and cash flows for the year based on actual through December 31, 2024. Actual rate of return on investments exceeded the projections.

Revenue Requirements

Net increase to the Revenue Requirements of $5.1 million is net of the following.

- *Increase of $5 million in Operation & Maintenance Expense* – Increase in costs of $3 million for chemical purchases related to the corrosion control program and an initial estimate of $2 million for the southwest Detroit water main break repairs. The

adjustment for the water main break repairs will be in the Field Service Operations area, Contractual Operating Services All Water.

- *$12.1 million Debt Service decrease* - The bond refunding transaction in June 2024 also included a debt reserve release of $16 million. This resulted in a large decrease in debt service for FY 2025. In addition, there is a delay in the issuance of new money bonds in FY 2025. While this is good news for FY 2025, the FY 2026 debt requirement will likely increase to $179 million.
- *$0.6 million General Retirement System Pension decrease* – This is a result of using the prepaid administrative fees to offset the required FY 2025 contribution.
- *$71,300 decrease in WRAP* - For the correcting adjustment presented in Board item 2024-120A from June 2024 Board meeting presentation on the FY 2025 WRAP Funding Report
- *$0.9 million increase in ER&R Deposit* – Due to increase in O&M expense, the required deposit also decreases. The ER&R funding is 15% of the combined budgeted operations and maintenance expenses of both the regional and local system.
- *Working Capital Requirement* – No budget adjustment for the second quarter. This will be analyzed for next budget amendment.
- The overall net increase of the amendments to the revenue and revenue requirements results in an increase to the Improvement & Extension Fund of $12 million. The positive impact on those funds will help to offset unexpected capital improvement program needs such as the southwest Detroit water main.



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

Sewer System	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Revenues					
Revenue from Charges					
Wholesale Charges	$ 287,517,600	$ -	$ (130,800)	$ 287,386,800	$ 144,029,689
Less: Bad Debt Expense	-	-	-	-	-
Local System Charges	205,924,800	-	-	205,924,800	102,962,400
Industrial Waste Control	8,719,300	-	-	8,719,300	4,417,972
Pollutant Surcharges	5,434,400	-	-	5,434,400	2,390,508
Total Revenue from Charges	507,596,100	-	(130,800)	507,465,300	253,800,569
Investment Earnings					
Unrestricted	10,494,500	-	5,656,500	16,151,000	8,874,457
Restricted for Debt Service	1,861,500	-	2,142,500	4,004,000	2,309,688
Total Investment Earnings	12,356,000	-	7,799,000	20,155,000	11,184,145
Other Revenue	700,000			700,000	148,352
Total Revenues	$ 520,652,100	$ -	$ 7,668,200	$ 528,320,300	$ 265,133,066
Revenue Requirements					
Operations & Maintenance Expense	$ 228,934,000	$ -	$ 2,500,000	$ 231,434,000	$ 116,924,058
Debt Service	226,279,400	-	(8,107,900)	218,171,500	113,432,597
General Retirement System Pension	4,846,300	-	(1,127,500)	3,718,800	2,423,148
Water Residential Assistance Program Contribution	2,651,700	-	(110,200)	2,541,500	1,325,850
Extraordinary Repair & Replacement Deposit	-	-	-	-	-
Regional System Lease	27,500,000	-	-	27,500,000	13,750,002
Working Capital Requirement	2,300,000	-	-	2,300,000	-
Improvement & Extension Fund Transfer Pending	28,140,700	-	14,513,800	42,654,500	14,070,348
Total Revenue Requirements	$ 520,652,100	$ -	$ 7,668,200	$ 528,320,300	$ 261,926,003
Net Actual to Date					$ 3,207,063

Table 1B Commentary - Sewer System - Revenue Requirement – Appropriation Level

Revenues

Net increase to Sewer System revenues of $7.7 million is largely due to the following.

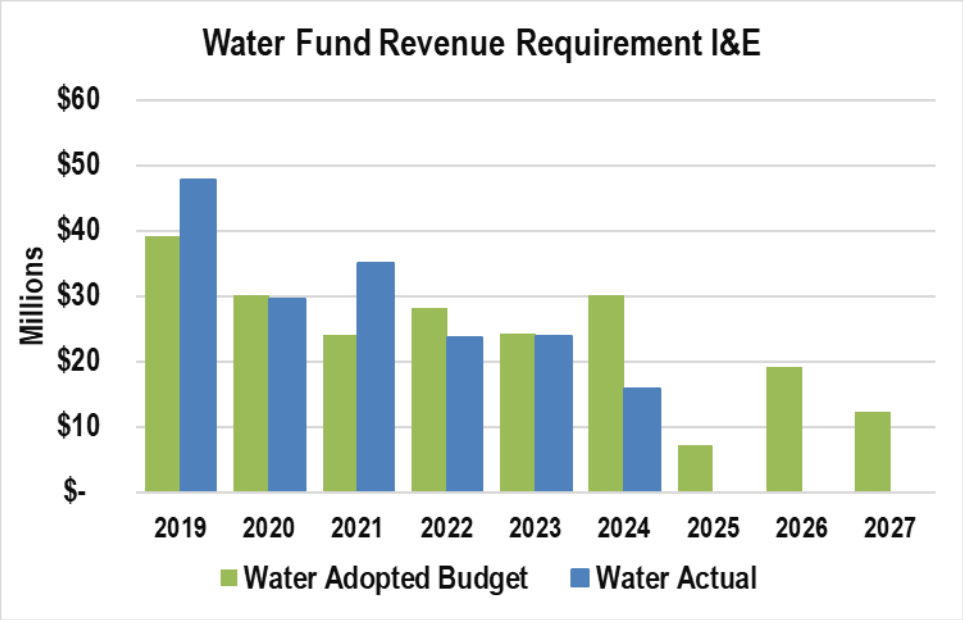
- *Wholesale Charges decrease of $103,800* – Per November 21, 2024 Board item 2024-399 memo to the Board on Clarification – FY 2025 Sewer Service Charge for the City of Highland Park based on the contract agreement.
- *$7.8 million investment earnings increase* – Based on a detailed analysis of the projected investment earnings and cash flows for the year based on actual through December 31, 2024. Actual rate of return on investments exceeded the projections.

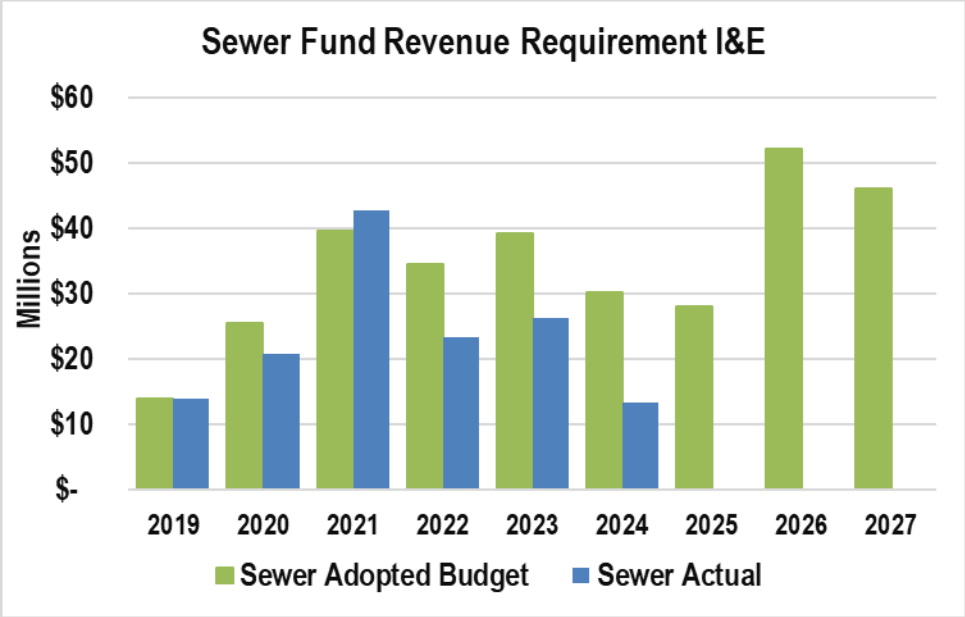
Revenue Requirements

Net increase to the Revenue Requirements of $7.7 million is the result of the following.

- *Increase in Operations & Maintenance Expense of $2.5 million* – This is due to the estimated sewer system chemical usage as a result of the corrosion control program.
- *$8.1 million Debt Service decrease* – This is a result of the bond refunding transaction in June 2024 which also included a debt reserve release of $16 million. Note that the FY 2026 debt requirement is expected to increase to $220 million.
- *$1.1 million General Retirement System Pension decrease* – As a result of using the prepaid administrative fees to offset the required FY 2025 contribution.
- *$110,200 decrease in WRAP* - For the adjustment presented in Board item 2024-120A from June 2024 Board meeting presentation on the FY 2025 WRAP Funding Report
- *Working Capital Requirement* – No budget adjustment for the second quarter. This will be analyzed for next budget amendment.
- The overall net increase of the amendments to the revenue and revenue requirements results in an increase to the Improvement & Extension Fund of $14.5 million. This adjustment helps to recover from negative variances in prior years.

Table 1C - Supplemental Information – Historical I&E Funding – Water and Sewer System





The current budget amendments result in additional funds available for I&E purposes assuming there will be no additional increases in operations and maintenance expenses for the rest of the fiscal year. It should be noted that these increases help to offset the declining nature of the funds set aside to reduce capital financing.

Table 1D - Supplemental Information – Operations & Maintenance by Fund - Water System and Sewer System

	FY 2025				
	Adopted	Amendments		Amended	Activity Thru
System	Budget	1st Quarter	2nd Quarter	Budget	12/31/2024
Water System	$ 169,625,000	$ -	$ 5,000,000	$ 174,625,000	$ 88,567,051
Sewer System	228,934,000	-	2,500,000	231,434,000	116,924,058
Total	**$ 398,559,000**	**$ -**	**$ 7,500,000**	**$ 406,059,000**	**$ 205,491,108**

Totals may be off due to rounding.

This table summarizes the total Operations and Maintenance Expense for each System.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

Table 1E - Supplemental Information – Operations and Maintenance by Service Area

Operating Area	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
A Water System Operations	$ 94,669,900	$ -	$ 3,000,000	$ 97,669,900	$ 47,821,266
B Wastewater System Operations	147,245,100	-	2,500,000	149,745,100	73,645,587
C Centralized Services	116,980,200	-	2,000,000	118,980,200	65,514,235
D Administrative Services	39,663,800	-		39,663,800	18,523,060
Employee Benefits					(13,040)
Total	**$ 398,559,000**	**$ -**	**$ 7,500,000**	**$ 406,059,000**	**$ 205,491,108**

Totals may be off due to rounding.

The $7.5 million total in FY 2025 Q2 budget amendments is attributable to 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., financial services, public affairs, general counsel, and organizational development). The costs of the latter two categories, centralized and administrative, are allocated to the water and sewer systems based upon an internal cost allocation plan that is performed on an annual basis.

Table 1F - Supplemental Information - Unallocated Reserve by Service Area

O&M Unallocated Reserves	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Water System Operations	$ 5,131,000	$ -	$ -	$ 5,131,000	$ -
Wastewater System Operations	4,251,400	-	-	4,251,400	-
Centralized Services	2,071,000	-	-	2,071,000	-
Administrative & Other Services	752,000	-	-	752,000	-
Total	**$ 12,205,400**	**$ -**	**$ -**	**$ 12,205,400**	**$ -**

Totals may be off due to rounding.

An Unallocated Reserve account is established for each of the four service areas. A 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 a service 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. In this high-level budget amendment for the second quarter, no change was made to the unallocated reserves.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

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

Water System Debt Service Coverage Calculation	FY 2025 Adopted Budget	Amendments 1st Quarter Regional System	1st Quarter Local System	1st Quarter Adjustment to Adopted Local System	2nd Quarter Regional System	2nd Quarter Local System	2nd Quarter Adjustment to Local System	FY 2025 Amended Budget
Revenues								
GLWA Revenues								
Wholesale Charges	$ 347,758,000	$ -			$ -			$ 347,758,000
Local System Charges	27,094,800	-			-			27,094,800
Invesment Earnings & Other Revenues	10,274,300	-			5,102,700			15,377,000
Total GLWA Revenues	385,127,100	-		-	5,102,700			390,229,800
Local System Revenues	91,543,300		-	538,100		-	-	92,081,400
Miscellaneous Revenue (Local System)	4,336,300		-	(636,300)		-	-	3,700,000
Total Revenues	**481,006,700**	**-**	**-**	**(98,200)**	**5,102,700**	**-**	**-**	**486,011,200**
Operations & Maintenance Transfers								
GLWA Regional System	169,625,000	-		-	5,000,000			174,625,000
DWSD Local System	46,614,900	-	-	(146,200)	-	-	-	46,468,700
Total Operations & Maintenance Transfers	**216,239,900**	**-**	**-**	**(146,200)**	**5,000,000**	**-**	**-**	**221,093,700**
Pledged Revenue	**$ 264,766,800**	**$ -**	**$ -**	**$ 48,000**	**$ 102,700**	**$ -**	**$ -**	**$ 264,917,500**
Debt Service by Lien								
Senior Lien Bonds	$ 151,609,800	$ -	$ -	$ -	$ (11,872,700)	$ -	$ -	$ 139,737,100
Second Lien Bonds	51,930,500	-	-	-	(1,233,200)	-	-	50,697,300
Junior Lien Bonds	18,368,100	-	-	(1,314,900)	968,500	-	(112,800)	17,908,900
Total Debt Service **	**$ 221,908,400**	**$ -**	**$ -**	**$ (1,314,900)**	**$ (12,137,400)**	**$ -**	**$ (112,800)**	**$ 208,343,300**
Debt Service Coverage								
Senior Lien Bonds	1.75							1.90
Senior and Second Lien Bonds	1.30							1.39
All bonds, including SRF Junior Lien Bonds	1.19							1.27

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget. The adopted GLWA budget was based on preliminary DWSD budget information. The first quarter Adjustment to Local System column is to align the schedule with the DWSD budget which was adopted on March 20, 2024.

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

For purposes of Debt Service coverage, the Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense is combined to determine net revenues to calculate the Debt Service Coverage. The Board adopts the Total Debt Service** amount shown on the Water System Debt Service Coverage Calculation table. This is the amount necessary to pay the principal and interest on all Regional Water System bonds.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

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

Sewer System Debt Service Coverage Calculation	FY 2025 Adopted Budget	Amendments 1st Quarter Regional System	1st Quarter Local System	1st Quarter Adjustment to Local System	2nd Quarter Regional System	2nd Quarter Local System	2nd Quarter Adjustment to Local	FY 2025 Amended Budget
Revenues								
GLWA Revenues								
Wholesale Charges	$ 287,517,600	$ -			$ (130,800)			$ 287,386,800
Local System Charges	205,924,800	-			-			205,924,800
Invesment Earnings & Other Revenues	13,056,000	-			7,799,000			20,855,000
Total GLWA Revenues	506,498,400	-			7,668,200		-	514,166,600
Local System Revenues	82,938,500		-	2,711,500		-	-	85,650,000
Miscellaneous Revenue (Local System)	8,755,000		-	(755,000)		-	-	8,000,000
Total Revenues	**598,191,900**	**-**	**-**	**1,956,500**	**7,668,200**	**-**	**-**	**607,816,600**
Operations & Maintenance Transfers								
GLWA Regional System	228,934,000	-			2,500,000			231,434,000
DWSD Local System	57,986,800		-	(629,900)		-	-	57,356,900
Total Operations & Maintenance Transfers	**286,920,800**	**-**	**-**	**(629,900)**	**2,500,000**	**-**	**-**	**288,790,900**
Pledged Revenue	**$ 311,271,100**	**$ -**	**$ -**	**$ 2,586,400**	**$ 5,168,200**	**$ -**	**$ -**	**$ 319,025,700**
Debt Service by Lien								
Senior Lien Bonds	$ 157,316,400	$ -	$ -	$ -	$ (5,188,200)	$ -	$ -	$ 152,128,200
Second Lien Bonds	53,776,500	-	-	-	(465,400)	-	-	53,311,100
Junior Lien Bonds	47,436,600	-	-	-	(2,454,300)	-	(107,000)	44,875,300
Total Debt Service **	**$ 258,529,500**	**$ -**	**$ -**	**$ -**	**$ (8,107,900)**	**$ -**	**$ (107,000)**	**$ 250,314,600**
Debt Service Coverage								
Senior Lien Bonds	1.98							2.10
Senior and Second Lien Bonds	1.47							1.55
All bonds, including SRF Junior Lien Bonds	1.20							1.27

* Rows highlighted in light grey in the above table are designed to align with the DWSD Budget. The adopted GLWA budget was based on preliminary DWSD budget information. The first quarter Adjustment to Local System column is to align the schedule with the DWSD budget which was adopted on March 20, 2024.

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

For purposes of Debt Service coverage, we look at the combined Regional and Local (DWSD) revenue less operations & maintenance (O&M) expense to determine net revenues to calculate the Debt Service Coverage. The Board adopts the Total Debt Service** amount shown on the Sewer System Debt Service Coverage Calculation table. This is the amount necessary to pay the principal and interest on all Regional Sewer System bonds.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

Table 2C – Supplemental Information – Water System Flow of Funds Basis

Water System Flow of Funds Basis	FY 2025 Adopted Budget	Amendments 1st Quarter Regional System	1st Quarter Local System	1st Quarter Adjustment to Adopted Local System	2nd Quarter Regional System	2nd Quarter Local System	2nd Quarter Adjustment to Local System	FY 2025 Amended Budget
Revenues								
Regional System Revenues								
Wholesale Charges	$ 347,758,000	$ -			$ -			$ 347,758,000
Local System Charge	27,094,800	-			-			27,094,800
Total Regional System Wholesale Revenues	**374,852,800**	**-**			**-**		**-**	**374,852,800**
DWSD Local System Revenues - Detroit Customers	91,543,300		-	538,100		-	-	92,081,400
Miscellaneous Revenue (Local System)	4,336,300		-	(636,300)		-	-	3,700,000
Investment Earnings & Other Revenues (Regional System)	10,274,300	-		-	5,102,700			15,377,000
Total Revenues	**$ 481,006,700**	**$ -**	**$ -**	**$ (98,200)**	**$ 5,102,700**	**$ -**	**$ -**	**$ 486,011,200**
Revenue Requirements								
Operations & Maintenance Expense								
Regional System	$ 169,625,000	$ -			$ 5,000,000			$ 174,625,000
Local System	46,614,900		-	1,031,300		-	-	47,646,200
Less Shared Service Revenue			-	(1,177,500)		-	-	(1,177,500)
Net Local System O&M Transfer	46,614,900			(146,200)				46,468,700
Total Operations & Maintenance Expense	**216,239,900**	**-**	**-**	**(146,200)**	**5,000,000**	**-**	**-**	**221,093,700**
Nonoperating Requirements								
Allocable Debt Service								
Regional System	175,300,800	-			(12,137,400)			163,163,400
Local System	46,607,600		-	(1,314,900)		-	(112,800)	45,179,900
GRS Pension								
Regional System	2,283,300	-			(630,000)			1,653,300
Local System	1,612,400		-	-		-	(445,000)	1,167,400
WRAP Contribution								
Regional System	1,947,800	-			(71,300)			1,876,500
Local System	888,500		-	(1,200)		-	-	887,300
Regional System								
ER&R Fund Deposit	-	-			906,400			906,400
Working Capital Requirement	6,200,000	-			-			6,200,000
Lease Payment to Local System I&E Account	22,500,000	-			-		-	22,500,000
Reserve for Revenue Financed Capital from Net Revenues								
Regional System	7,270,200	-			12,035,000			19,305,200
Local System	156,200		-	1,364,100		-	557,800	2,078,100
Total Revenue Requirements	**$ 481,006,700**	**$ -**	**$ -**	**$ (98,200)**	**$ 5,102,700**	**$ -**	**$ -**	**$ 486,011,200**

Rows highlighted in light grey in the above table are designed to align with the DWSD Budget.
The Adopted Budget Column was based on preliminary DWSD budget information.
The 1st Quarter column Adjustment to Adopted Local System is to align the schedule with the DWSD budget which was adopted on March 20, 2024.
The 2nd Quarter column Adjustment to Local System is to recognize known changes that DWSD has not amended their budget for but that are taken into account for the MBO monthly flow of funds.

This schedule is provided to demonstrate compliance with the pledge of establishing sufficient regional and local system revenues to service financial commitments consistent with the Master Bond Ordinance flow of funds.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

Table 2D – Supplemental Information – Sewer System Flow of Funds Basis

Sewer System Flow of Funds Basis	FY 2025 Adopted Budget	Amendments 1st Quarter Regional System	1st Quarter Local System	1st Quarter Adjustment to Adopted Local System	2nd Quarter Regional System	2nd Quarter Local System	2nd Quarter Adjustment to Local System	FY 2025 Amended Budget
Revenues								
Regional System Revenues								
Wholesale Charges	$ 287,517,600	$ -			$ (130,800)			$ 287,386,800
Local System Charge	205,924,800	-			-			205,924,800
Industrial Waste Control	8,719,300	-			-			8,719,300
Pollutant Surcharges	5,434,400	-			-			5,434,400
Total Regional System Wholesale Revenues	**507,596,100**	**-**			**(130,800)**			**507,465,300**
DWSD Local System Revenues - Detroit Customers	82,938,500		-	2,711,500		-	-	85,650,000
Miscellaneous Revenue (Local System)	8,755,000		-	(755,000)		-	-	8,000,000
Other Revenues & Investment Earnings (Regional System)	13,056,000	-			7,799,000			20,855,000
Total Revenues	**$ 612,345,600**	**$ -**	**$ -**	**$ 1,956,500**	**$ 7,668,200**	**$ -**	**$ -**	**$ 621,970,300**
Revenue Requirements								
Operations & Maintenance Expense								
Regional System	$ 228,934,000	$ -			$ 2,500,000			$ 231,434,000
Local System	57,986,800		-	692,600		-	-	58,679,400
Less Shared Service Revenue	-		-	(1,322,500)		-	-	(1,322,500)
Net Local System O&M Transfer	57,986,800		-	(629,900)		-	-	57,356,900
Total Operations & Maintenance Expense	**286,920,800**	**-**	**-**	**(629,900)**	**2,500,000**	**-**	**-**	**288,790,900**
Nonoperating Requirements								
Allocable Debt Service								
Regional System	226,279,400	-			(8,107,900)			218,171,500
Local System	32,250,100		-	-		-	(107,000)	32,143,100
GRS Pension								
Regional System	4,846,300	-			(1,127,500)			3,718,800
Local System	1,279,900		-	-		-	(297,500)	982,400
WRAP Contribution								
Regional System	2,651,700	-			(110,200)			2,541,500
Local System	1,343,500		-	18,700		-	-	1,362,200
Regional System								
ER&R Fund Deposit	-	-			-			-
Working Capital Requirement	2,300,000	-			-			2,300,000
Lease Payment to Local System I&E Account	26,333,200	-	-	1,166,800	-	-	-	27,500,000
Reserve for Revenue Financed Capital from Net Revenues								
Regional System	28,140,700	-			14,513,800			42,654,500
Local System	-		-	1,400,900		-	404,500	1,805,400
Total Revenue Requirements	**$ 612,345,600**	**$ -**	**$ -**	**$ 1,956,500**	**$ 7,668,200**	**$ -**	**$ -**	**$ 621,970,300**

Rows highlighted in light grey in the above table are designed to align with the DWSD Budget.
The Adopted Budget Column was based on preliminary DWSD budget information.
The 1st Quarter column Adjustment to Adopted Local System is to align the schedule with the DWSD budget which was adopted on March 20, 2024.
The 2nd Quarter column Adjustment to Local System is to recognize known changes that DWSD has not amended their budget for but that are taken into account for the MBO monthly flow of funds.

This schedule is provided to demonstrate compliance with the pledge of establishing sufficient regional and local system revenues to service financial commitments consistent with the Master Bond Ordinance flow of funds.



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

Water Improvement & Extension Fund	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Inflows					
Transfer from Water Operations Fund - Revenue Transfers	$ 7,270,200	$ -	$ 12,035,000	$ 19,305,200	$ 3,635,100
Grant Revenues & Capital Contributions	-	-	-	-	-
Investment Earnings (a)	938,700	-	4,990,300	5,929,000	3,547,372
Total Inflows	8,208,900	-	17,025,300	25,234,200	7,182,472
Outflows					
Transfer to Water Operations Fund - Investment Earnings (a)	938,700	-	4,990,300	5,929,000	366,783
Capital Improvement Plan funded by I&E	-	-	-	-	-
Capital Outlay	10,527,800	-	-	10,527,800	5,214,346
Transfer to Construction Fund- Revenue Financed Capital	15,000,000	-	(15,000,000)	-	-
Total Outflows	26,466,500	-	(10,009,700)	16,456,800	5,581,129
Net Increase (Use) of Reserves	(18,257,600)	-	27,035,000	8,777,400	1,601,343
Non-budgeted Inflows (Outflows)					
Unrealized gain on investments	-	-	-	-	19,494
Change in Net Position	(18,257,600)	-	27,035,000	8,777,400	1,620,837
Beginning Net Position	147,212,300			147,212,300	147,212,300
Projected Ending Net Position	$ 128,954,700	$ -	$ 54,070,000	$ 164,767,100	$ 148,833,137

(a) Note: As outlined in the Master Bond Ordinance, the investment earnings in the I&E Fund are transferred to the Receiving Fund to then offset revenue requirement needs.

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

Inflows

- *Transfers from Water Operations Fund – Revenue Transfers* - The proposed budget amendment is to match the amount available for transfer from the FY 2025 revenue requirement based upon general operating fund performance. (see Table 1A - Appropriation Level - Water System Revenue Requirement line item I&E Fund Transfer Pending).

- *Investment Earnings* - The proposed budget amendment reflects an adjustment based on the projected investment earnings for the year. Interest rates provided by the Authority's investment advisor previously were below actual earnings 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.

Outflows

- *Transfer to Water Operations Fund – Investment Earnings* - The increase is based on the projected investment earnings. Note: This line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as required by the Master Bond Ordinance. Any variance in activity between the two lines represents a timing difference. The larger difference between the two lines for the period presented is a result of a reclassification that will be posted in March 2025.
- *Capital Improvement Plan funded by I&E* - No budget amendment is required. This line represents the target use of I&E for capital as well as an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing.
- *Capital Outlay* – There are no proposed budget amendments for this quarter.
- *Transfer to Construction Fund - Revenue Financed Capital* –The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for the current fiscal year.

Net Increase (Use) of Reserves - This amount represents the net amount of the inflows less the outflows.

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

Sewer Improvement & Extension Fund	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Inflows					
Transfer from Sewer Operations Fund - Revenue Transfers	$ 28,140,700	$ -	$ 14,513,800	$ 42,654,500	$ 14,070,348
Grant Revenues & Capital Contributions	-	-	-	-	-
Investment Earnings (a)	1,076,000	-	4,984,000	6,060,000	3,604,387
Total Inflows	29,216,700	-	19,497,800	48,714,500	17,674,735
Outflows					
Transfer to Sewer Operations Fund - Investment Earnings (a)	1,076,000	-	4,984,000	6,060,000	408,734
Capital Spending Other (net operating expenses)	-	-	-	-	11,219
Capital Improvement Plan funded by I&E	-	-	-	-	-
Capital Outlay	12,071,300	-	-	12,071,300	3,610,506
Transfer to Construction Fund- Revenue Financed Capital	5,500,000	-	-	5,500,000	-
Total Outflows	18,647,300	-	4,984,000	23,631,300	4,030,459
Net Increase (Use) of Reserves	10,569,400	-	14,513,800	25,083,200	13,644,276
Non-budgeted Inflows (Outflows)					
Unrealized gain on investments	-	-	-	-	15,855
Change in Net Position	10,569,400	-	14,513,800	25,083,200	13,660,131
Beginning Net Position	138,290,300			138,290,300	138,290,300
Projected Ending Net Position	$ 148,859,700	$ -	$ 14,513,800	$ 163,373,500	$ 151,950,431

(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 Commentary- Sewer System - Improvement & Extension Fund - Appropriation Level

Inflows

- *Transfer from Sewer Operations Fund – Revenue Transfers* - The proposed budget amendment is to match the amount available for transfer from the FY 2025 revenue requirement based upon general operating fund performance. (see Table 1B - Appropriation Level - Sewer System Revenue Requirement line item I&E Fund Transfer Pending).

- *Grant Revenues & Capital Contributions* – There is no change in the budget for this quarter related to grant funds.
- *Investment Earnings* - The proposed budget amendment reflects an adjustment based on the projected investment earnings for the year. Interest rates provided by the Authority's investment advisor previously were below actual earnings 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.

Outflows

- *Transfer to Sewer Operations Fund- Investment Earnings* - The increase is based on the projected investment earnings. Note: This line offsets Earnings on Investments and represents the transfer of earnings back to the general operating fund as required by the Master Bond Ordinance. Any variance in activity between the two lines represents a timing difference. The larger difference between the two lines for the period presented is a result of a reclassification that will be posted in March 2025.
- *Capital Spending Other* – This category will generally net to zero by year end. ILAG costs and reimbursements fall in this category.
- *Capital Improvement Plan funded by I&E* - No budget amendment is required. This line represents the target use of I&E for capital as well as an adjustment to the projects in the Board adopted capital improvement plan (CIP) that do not meet the criteria for debt financing.
- *Capital Outlay* - There are no proposed budget amendments for this quarter.
- *Transfer to Construction Fund - Revenue Financed Capital* - There are no proposed budget amendments for this quarter.

Net Increase (Use) of Reserves - This amount represents the net amount of the inflows less the outflows.



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

Water Construction Fund	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Inflows					
Transfer from Water Improvement & Extension Fund	$ 15,000,000	$ -	$ (15,000,000)	$ -	$ -
Transfers in from Water Operations Fund					
Bond Proceeds	271,562,500	-	(41,562,500)	230,000,000	-
SRF loan proceeds	30,800,000	-	30,843,600	61,643,600	38,820,138
Investment Earnings	7,953,300	-	(3,288,300)	4,665,000	3,361,186
Grant Revenues & Capital Contributions	-	-	1,240,400	1,240,400	1,240,387
Other Revenue - Sale of Assets	-	-	-	-	-
Total Inflows	325,315,800	-	(27,766,800)	297,549,000	43,421,711
Outflows					
Transfer to Water Operations Fund					
Bond Cost of Issuance	-	-	1,725,000	1,725,000	-
Capital Program	210,000,000	-	-	210,000,000	80,769,989
Total Outflows	210,000,000	-	1,725,000	211,725,000	80,769,989
Net Increase (Use) of Reserves	115,315,800	-	(29,491,800)	85,824,000	(37,348,278)
Beginning Net Position	131,327,100			131,327,100	131,327,100
Projected Ending Net Position	$ 246,642,900	$ -	$ (29,491,800)	$ 217,151,100	$ 93,978,822
CIP Plan					
Capital Improvement Plan	$ 207,333,000			$ 207,333,000	$ 207,333,000
Capital Spend Rate Assumption	*100%*			*100%*	
Capital Spending Ratio					*39%*
CIP Financial Plan					
CIP Expenditures paid through Construction Fund	$ 210,000,000	$ -	$ -	$ 210,000,000	$ 80,769,989
CIP Expenditures paid through I&E Fund	-	-	-	-	-
Financial Plan (Budgeted) CIP Expenditures	$ 210,000,000	$ -	$ -	$ 210,000,000	$ 80,769,989

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

Inflows

- *Transfers from Water Improvement & Extension Fund* - The proposed budget amendment is to match the amount available for transfer to the FY 2025 Improvement & Extension Fund (see Table 3A - Appropriation Level - Water System Improvement & Extension Fund line item Revenue Financed Capital - Transfer to Construction Fund). The proposed budget amendment reflects a rebalancing of use of I&E and Construction funds for FY 2025.
- *Bond Proceeds* - The budget amendment is to align the budget with the anticipated bond issue in June 2025.
- *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. Details related to the SRF projects are presented in the semiannual debt report. The most recent semiannual debt report is presented in the April 2024 Audit Committee binder which provides details related to the SRF funding and associated projects.
- *Investment Earnings* - The proposed budget amendment reflects an adjustment based on the projected investment earnings for the year.
- *Grant Revenues & Capital Contributions* - The budget increase is related to grant funds that have been received.

Outflows

- *Bond Cost of Issuance* - The budget amendment is to align the activity related to the anticipated cost of issuance for the June 2025 bonds.
- *Capital Program* - This line represents the anticipated CIP spend for the current year. No budget amendment is being proposed for this quarter.

Net Increase (Use) of Reserves - This amount represents the net amount of the inflows less the outflows.

CIP Plan

- *Capital Improvement Plan* - This line represents the original CIP Plan approved by the Board for FY 2025.
- *Capital Spend Rate Assumption* - The Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes,

despite the prioritization established. Amendments to the spend rate assumption are made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The most recent quarterly construction work-in-progress (CWIP) report is presented in the February 2025 Audit Committee binder.

CIP Financial Plan

- The financial plan applies the SRA to the amount of capital expenditures in the CIP and then rounds the result up to the nearest $5 million. This is to recognize the dynamic nature of the CIP.

GLWA Great Lakes Water Authority

Quarterly Budget Amendment Report
FY 2025 Ending December 31, 2024

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

Sewer Construction Fund	FY 2025 Adopted Budget	Amendments 1st Quarter	Amendments 2nd Quarter	Amended Budget	Activity Thru 12/31/2024
Inflows					
Transfer from Sewer Improvement & Extension Fund	$ 5,500,000	$ -	$ -	$ 5,500,000	$ -
Transfers in from Sewer Operations Fund					
Bond Proceeds	-	-	50,000,000	50,000,000	-
SRF loan proceeds	96,852,000	-	-	96,852,000	45,565,458
Investment Earnings	2,359,000	-	3,701,000	6,060,000	4,104,403
Grant Revenues & Capital Contribution	-	-	-	-	-
Total Inflows	104,711,000	-	53,701,000	158,412,000	49,669,861
Outflows					
Transfer to Sewer Operations Fund					
Bond Cost of Issuance	-		375,000	375,000	-
Capital Program	170,000,000		15,000,000	185,000,000	69,303,533
Total Outflows	170,000,000	-	15,375,000	185,375,000	69,303,533
Net Increase (Use) of Reserves	(65,289,000)	-	38,326,000	(26,963,000)	(19,633,672)
Beginning Net Position	172,408,200			172,408,200	172,408,200
Projected Ending Net Position	$ 107,119,200	$ -	$ 38,326,000	$ 145,445,200	$ 152,774,528
CIP Plan					
Capital Improvement Plan	$ 169,189,000			$ 169,189,000	$ 169,189,000
Capital Spend Rate Assumption	*100%*			*100%*	
Capital Spending Ratio					*41%*
CIP Financial Plan					
CIP Expenditures paid through Construction Fund	$ 170,000,000	$ -	$ 15,000,000	$ 185,000,000	$ 69,303,533
CIP Expenditures paid through I&E Fund	-	-	-	-	-
Financial Plan (Budgeted) CIP Expenditures	$ 170,000,000	$ -	$ 15,000,000	$ 185,000,000	$ 69,303,533

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

Inflows

- *Transfers from Sewer Improvement & Extension Fund* - The proposed budget amendment is to match the amount available for transfer from the FY 2025 Improvement & Extension Fund (see Table 3B - Appropriation Level - Sewer System Improvement & Extension Fund line item Revenue Financed Capital - Transfer to Construction Fund). There is no proposed budget amendment for the second quarter.
- *Bond Proceeds* - The budget amendment is to align the budget with the anticipated bond issue in June 2025.
- *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. There is no proposed amendment for the second quarter related to the timing of project design and construction activity. Details related to the SRF projects are presented in the semiannual debt report. The most recent semiannual debt report is presented in the April 2024 Audit Committee binder which provides details related to the SRF funding and associated projects.
- *Investment Earnings* - The proposed budget amendment reflects an adjustment based on the projected investment earnings for the year.
- *Grant Revenues & Capital Contributions* – There is no budget amendment for the second quarter.

Outflows

- *Bond Cost of Issuance* - The budget amendment is to align the activity related to the anticipated cost of issuance for the June 2025 bonds.
- *Capital Program* - This line represents the anticipated CIP spend for the current year. The budget amendment is based on current spend projections.
- *Net Increase (Use) of Reserves* - This amount represents the net amount of the inflows less the outflows.

CIP Plan

- *Capital Improvement Plan* - This line represents the original CIP Plan approved by the Board for FY 2025.
- *Capital Spend Rate Assumption* - The Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established. Amendments to the spend rate assumption are

made to align the projected financial use of resources with revised capital improvement plan spending forecasts. The most recent quarterly construction work-in-progress (CWIP) report is presented in the February 2025 Audit Committee binder.

CIP Financial Plan

- The financial plan applies the SRA to the amount of capital expenditures in the CIP and then rounds the result up to the nearest $5 million. This is to recognize the dynamic nature of the CIP.

Great Lakes Water Authority

Resolution 2025-109
Resolution Adopting the Budget Amendments through the Second Quarter of FY 2025

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 2025 budget on February 28, 2024, for the twelve-month fiscal year beginning July 1, 2024;

WHEREAS Following a review of the budget amendment report through the FY 2025 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	Water System		Sewer System	
Appropriation Category	Adopted	Amended	Adopted	Amended
Revenues				
Wholesale Charges	$ 347,758,000	No Change	$ 287,517,600	$ 287,386,800
Less: Bad Debt	-	No Change	-	No Change
Local System Charges	27,094,800	No Change	205,924,800	No Change
Industrial Waste Control	NA	NA	8,719,300	No Change
Pollutant Surcharges	NA	NA	5,434,400	No Change
Investment Earnings - Unrestricted	6,692,200	$ 11,778,000	10,494,500	$ 16,151,000
Investment Earnings - Restricted for Debt Service	3,182,100	$ 3,199,000	1,861,500	$ 4,004,000
Other Revenue	400,000	No Change	700,000	No Change
Total Revenues	**$ 385,127,100**	**$ 390,229,800**	**$ 520,652,100**	**$ 528,320,300**
Revenue Requirements				
Operations & Maintenance Expense	$ 169,625,000	$ 174,625,000	$ 228,934,000	$ 231,434,000
Debt Service	175,300,800	$ 163,163,400	226,279,400	$ 218,171,500
General Retirement System Pension	2,283,300	$ 1,653,300	4,846,300	$ 3,718,800
Water Residential Assistance Program Contribution	1,947,800	$ 1,876,500	2,651,700	$ 2,541,500
Extraordinary Repair & Replacement Deposit	-	$ 906,400	-	No Change
Regional System Lease	22,500,000	No Change	27,500,000	No Change
Working Capital Requirement	6,200,000	No Change	2,300,000	No Change
Improvement & Extension Fund Transfer	7,270,200	$ 19,305,200	28,140,700	$ 42,654,500
Total Revenue Requirements	**$ 385,127,100**	**$ 390,229,800**	**$ 520,652,100**	**$ 528,320,300**

WHEREAS Following a review of the budget amendment report through the FY 2025 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	Water System		Sewer System	
Appropriation Category	**Adopted**	**Amended**	**Adopted**	**Amended**
Debt Service by Lien				
Senior Lien Bonds	$ 151,609,800	$ 139,737,100	$ 157,316,400	$ 152,128,200
Second Lien Bonds	51,930,500	50,697,300	53,776,500	53,311,100
SRF Junior Lien Bonds	18,368,100	17,908,900	47,436,600	44,875,300
Total Debt Service	**$ 221,908,400**	**$ 208,343,300**	**$ 258,529,500**	**$ 250,314,600**

WHEREAS Following a review of the budget amendment report through the FY 2025 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	Water System		Sewer System	
Appropriation Category	**Adopted**	**Amended**	**Adopted**	**Amended**
Inflows				
Transfers In from Operating	$ 7,270,200	$ 19,305,200	$ 28,140,700	$ 42,654,500
Grant Revenues & Capital Contributions	-	No Change	-	No Change
Investment Earnings	938,700	5,929,000	1,076,000	6,060,000
Total Inflows	**8,208,900**	**25,234,200**	**29,216,700**	**48,714,500**
Outflows				
Transfer out Investment Earnings	938,700	5,929,000	1,076,000	6,060,000
Capital Improvement Plan funded by I&E	-	No Change	-	No Change
Capital Outlay	10,527,800	No Change	12,071,300	No Change
Transfer out Revenue Financed Capital	15,000,000	-	5,500,000	No Change
Total Outflows	**26,466,500**	**16,456,800**	**18,647,300**	**23,631,300**
Net Increase (Use) of Reserves	**$ (18,257,600)**	**$ 8,777,400**	**$ 10,569,400**	**$ 25,083,200**

WHEREAS Following a review of the budget amendment report through the FY 2025 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	Water System		Sewer System	
Appropriation Category	**Adopted**	**Amended**	**Adopted**	**Amended**
Inflows				
Transfer from Improvement & Extension Fund	$ 15,000,000	$ -	$ 5,500,000	No Change
Bond Proceeds	271,562,500	230,000,000	-	50,000,000
SRF loan proceeds	30,800,000	61,643,600	96,852,000	No Change
Investment Earnings	7,953,300	4,665,000	2,359,000	6,060,000
Grant Revenues & Capital Contributions	-	1,240,400	-	No Change
Other Revenue	-	No Change	-	No Change
Total Inflows	**$ 325,315,800**	**$ 297,549,000**	**$ 104,711,000**	**$ 158,412,000**
Outflows				
Bond Cost of Issuance	-	1,725,000	-	375,000
Capital Program	210,000,000	No Change	170,000,000	185,000,000
Total Outflows	**$ 210,000,000**	**$ 211,725,000**	**$ 170,000,000**	**$ 185,375,000**
Net (Use) Increase of Reserves	**115,315,800**	**85,824,000**	**(65,289,000)**	**(26,963,000)**

WHEREAS The GLWA Audit Committee reviewed the budget amendments at its meeting on March 28, 2025; and

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

NOW THEREFORE BE IT:

RESOLVED That the GLWA Board approves the FY 2025 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.

GLWA Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

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

Re: CFO Update

Reminder: Solicitation Underway for External Auditors

The bidders conference for this triennial task was held on Monday, March 24, 2025. The proposals are due April 8, 2025. All activity related to this procurement is in Bonfire via the GLWA website.

March is Procurement Month!

Thank you to all of our GLWA Procurement team members who carry out their responsibilities with a commitment to transparency, ethics, fairness, and securing the best outcome for GLWA.

Professional Development Program - Master Bond Ordinance (MBO) Overview Lunch and Learn

On February 19, 2025, the Financial Services Area (FSA) held their third lunch and learn session titled, "Master Bond Ordinance (MBO) Overview" in the 14th Floor Training Room of the Water Board Building. The primary purpose of this peer-to-peer lunch and learn series is to promote professional development as well as nurture a culture of knowledge sharing within GLWA. This initiative allows team members to present information on a relevant topic to their colleagues during the lunch break. The key components to FSA's lunch and learn sessions are:

- Knowledge sharing: enables team members to share their expertise, skills, and insights with others across different teams.
- Career development: provides opportunities for team members to practice presentation skills, enhance leadership abilities, and learn about new areas within the company.
- Team building: promotes collaboration and connection between team members by creating a casual environment for interaction and discussion.
- An informal learning environment encourages open dialogue, questions, and discussions without the pressure of a formal training setting.

Members of the Public Finance Team, including Nicholas Fedewa (Manager) and Sandy Chen (Management Professional), presented an overview of the MBO process. The topics covered

related to key components of the MBO, MBO roles and responsibilities within FSA, and MBO accounting and Workday tips. The attendees were able to gain a better understanding of the Master Bond Ordinance, increase essential skills to account for GLWA and DWSD activity related to the Master Bond Ordinance, and network with peers.

GLWA

Great Lakes Water Authority

Monthly Financial Report Binder

December 2024

Presented to the
Great Lakes Water Authority
Audit Committee on March 28, 2025

TABLE OF CONTENTS

Executive Summary Dashboard 1
Budget to Actual Analysis 3
Basic Financial Statements 9
Financial Activity Charts 17
Financial Operations Key Performance Indicators 20
    Liquidity 20
Budget to Financial Statements Crosswalk 22
Capital Improvement Plan Financial Summary 27
Master Bond Ordinance Transfers 30
Cash and Investments 37
Retail Revenues, Receivables, & Collections 41
Wholesale Billings, Receivables, & Collections 47
Trust Receipts and Disbursements 52

GLWA Great Lakes Water Authority

Financial Report
Executive Summary Dashboard
for the Month Ended December 31, 2024

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)

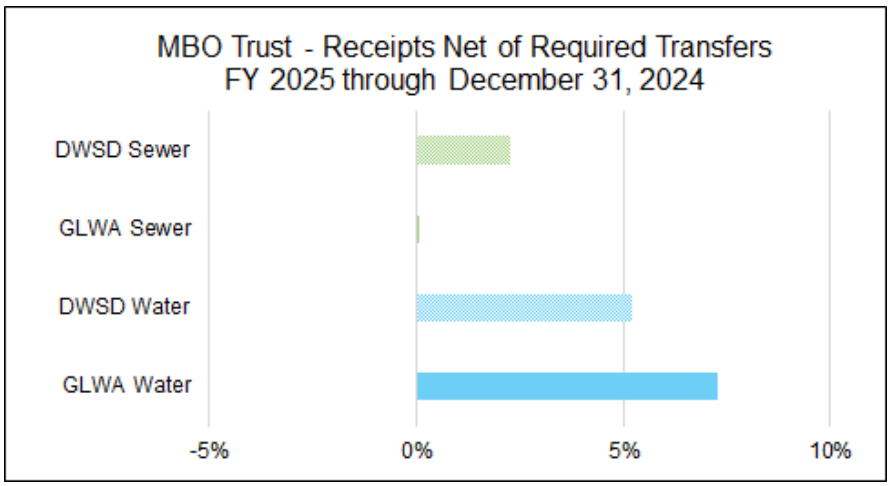
Variances are monitored by the Great Lakes Water Authority (GLWA) management and operating and/or budget priorities are re-evaluated where appropriate. Staff reviews the need for budget amendments quarterly and requests necessary amendments when required based on the most current information available.

For the current year, water and sewer capital spend, and investment earnings 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. FY 2025 investment earnings are in line with FY 2024 earnings, though expectations are for lower interest income in FY 2025 due to the Federal Reserve moving monetary policy to a more neutral level.

As of December 31, 2024					
Metric	FY 2025 Budget	FY 2025 Amended Budget	FY 2025 Actual	Variance from Financial Plan	Report Page Reference
Wholesale Water Billed Revenue ($M)	$181.5	$181.5	$180.3	-1%	41
Wholesale Water Billed Usage (mcf)	7,011,000	7,011,000	6,851,000	-2%	
Wholesale Sewer Billed Revenue ($M)	$143.3	$143.3	$143.3	0%	43
Wholesale Water Operations & Maintenance ($M)	$84.8	$84.8	$88.6	4%	5
Wholesale Sewer Operations & Maintenance ($M)	$114.5	$114.5	$116.9	2%	
Investment Income ($M)	$11.1	$11.1	$26.8	141%	30
Water Prorated Capital Spend w/SRA* ($M)	$103.7	$103.7	$80.8	-22%	21
Sewer Prorated Capital Spend w/SRA* ($M)	$84.6	$84.6	$69.6	-18%	22

*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 45)



Net cash flow receipts remain positive for GLWA Water. 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). GLWA Sewer is at breakeven as of December, but looking ahead to January does being to show growing positive net receipts. DWSD water reports a surplus of $3.3 million and DWSD sewer reports a surplus of $3.5 million of net receipts over disbursements through December 2024.

Budget to Actual Analysis (page 3)

- The total revenue requirements are on target through December 2024.
- The total overall Operations & Maintenance expenses are at 51.6% of budget through December 2024 which is above the pro-rata benchmark of 50.0%. This negative variance equates to a dollar amount of $6.2 million.

Basic Financial Statements (page 9)

- The basic financial statements are prepared on a full accrual basis and reflect preliminary, unaudited results.
- Operating income for December 2024 is $56.4 million for the Water fund (70.8% of total revenues) and $66.1 million for the Sewer fund (74.0% of total revenues).
- Water net position increased by $25.9 million, and sewage disposal net position increased by $26.1 million for the year to date through December 2024.

Capital Improvement Plan Financial Summary (page 27)

- Water system costs incurred to date are below the 100% Capital Spend Ratio assumption.
- Sewer system costs incurred to date are below the 100% Capital Spend Ratio assumption.

Master Bond Ordinance Transfers (page 30)

- For December, transfers of $14.7 million and $19.9 million were completed for the GLWA Water and Sewer funds, respectively.
- Also, for December, transfers of $5.8 million and $7.2 million were completed for the DWSD Water and Sewer funds, respectively.

Cash Balances & Investment Income (page 37)

- Total cash & investments are $569 million for Water and $697 million in the Sewer fund.
- Total, combined, cumulative, FY 2025 investment income through December is $26.8 million.

DWSD Retail Revenues, Receivables & Collections (page 41)

- Water usage through December 31, 2024 is 98.52% and revenues are 98.47% of budget.
- Sewer usage through December 31, 2024 is 96.62% and revenues are 96.80% of budget.
- Combined accounts receivable balances for the Water and Sewer funds report an increase of $50.5 million over the prior year.
- Past dues over 180 days make up of 68.8% the total accounts receivable balance. The current bad debt allowance covers 96.1% of past dues over 60 days.

GLWA Wholesale Billing, Receivables & Collections (page 47)

- GLWA accounts receivable past due balance net of Dearborn is 1.12% of the total accounts receivable balance. Discussions remain underway between GLWA and Dearborn regarding the water balance in dispute.
- Average wholesale water collections for the period of January 2024 through December 2024 are trending above the prior year.
- Average wholesale sewer collections for the period of January 2024 through December 2024 are below the prior year.

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 2025 information presented in these sections does not include the second quarter proposed FY 2025 budget amendments which are currently being prepared prior to presentation to the Audit Committee.

Revenue Requirements Budget Basis Analysis

GLWA's annual revenue requirements represent the basis for calculating Member Partner charges and aligns with the Master Bond Ordinance flow of funds categories. The budget basis is not the same as the full accrual basis used for financial reporting although the revenues and operations and maintenance expenses are largely reported on an accrual basis. The primary difference between the revenue requirements budget basis to the financial reporting basis is the treatment of debt service, legacy pension obligations, and lease related activities. The Revenue Requirements Basis is foundational to GLWA's daily operations, financial plan, and of most interest to key stakeholders.

Table 1A – Water Revenue Requirements Budget and ***Table 1B – Sewer Revenue Requirements Budget*** presents a year-over-year budget to actual performance report. The revenue requirements budget is accounted for in the operations and maintenance fund for each system. Since this report is for December 2024 the pro-rata benchmark is 50.0% (6 of 12 months of the fiscal year).

Items noted below are highlighted in gold on Tables 1A (Water) and 1B (Sewer).

1. ***Revenues***: For *both* systems, total revenues for FY 2025 are above the pro-rata benchmark; the *water* system is at 51.6% while the *sewer* system is at 50.9%. 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 credit issued to the City of Flint for a license to raw water rights under the Flint Raw Water Contract as documented in Appendix A-2 of the Flint Water Agreement. Through December 31, 2024, these payments total $3.0 million for FY 2025.

2. ***Investment Earnings:*** For the water system, investment earnings are above the pro-rata benchmark for FY 2025 the *water* system at 83.6%. The *sewer* system is also above the pro-rata benchmark for FY 2025 at 90.5%. FY 2025 investment earnings are in line with FY 2024 earnings, though expectations are for lower interest income in FY 2025 due to the Federal Reserve moving monetary policy to a more neutral level. 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 expenses[1] for the *water* system are above the pro-rata benchmark for FY 2025 at 52.2%, and the *sewer* system O&M is above the pro-rata benchmark for FY 2025 at 51.1%.
5. ***Debt Service:*** For FY 2025, both systems aligned with the pro-rata benchmark for debt service; the *water* system is at 50.0% while the *sewer* system is at 50.1%. 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.
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 2025, neither the DWSD *water* system nor the DWSD *sewer* system have a budgetary shortfall through December 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 the water system are above the pro-rata benchmark at 50.2%. Total revenue requirements for the sewer system are above the pro-rata benchmark at 50.3%.

[1]The 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)

Water System	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023	Percent Year-to-Date at 6/30/2024	FY 2025 Board Adopted Budget	FY 2025 Amended Budget	FY 2025 Activity Thru 12/31/2024	Percent Year-to-Date at 12/31/2024
Revenues							
Wholesale Charges	$ 328,203	$ 170,781	52.0%	$ 347,758	$ 347,758	$ 176,614	50.8%
Local System Charges	25,537	12,769	50.0%	27,095	27,095	13,547	50.0%
Investment Earnings	18,051	8,542	47.3%	9,874	9,874	8,254	83.6%
Other Revenues	943	613	65.0%	400	400	233	58.2%
Total Revenues	$ 372,734	$ 192,704	51.7%	$ 385,127	$ 385,127	$ 198,648	51.6%
Revenue Requirements							
Operations & Maintenance Expense	$ 168,873	$ 79,635	47.2%	$ 169,625	$ 169,625	$ 88,567	52.2%
Debt Service	162,236	79,741	49.2%	175,301	175,301	87,574	50.0%
General Retirement System Pension	1,506	1,698	112.8%	2,283	2,283	1,142	50.0%
Water Residential Assistance Program Contribution	1,852	926	50.0%	1,948	1,948	974	50.0%
Regional System Lease	22,500	11,250	50.0%	22,500	22,500	11,250	50.0%
Receiving Fund Working Capital Requirement	-	-	0.0%	6,200	6,200	-	0.0%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending	-	-	0.0%	-	-	-	0.0%
Improvement & Extension Fund Transfer Pending	15,768	13,862	87.9%	7,270	7,270	3,635	50.0%
Total Revenue Requirements	$ 372,734	$ 187,112	50.2%	$ 385,127	$ 385,127	$ 193,142	50.2%
Net Difference		$ 5,592				$ 5,506	
Recap of Net Positive Variance							
Revenue Variance		$ 6,337				$ 6,084	
Revenue Requirement Variance		(745)				(579)	
Overall Variance		$ 5,592				$ 5,506	

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

Sewer System	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023	Percent Year-to-Date at 6/30/2024	FY 2025 Board Adopted Budget	FY 2025 Amended Budget	FY 2025 Activity Thru 12/31/2024	Percent Year-to-Date at 12/31/2024
Revenues							
Wholesale Charges	$ 267,879	$ 140,601	52.5%	$ 287,518	$ 287,518	$ 144,030	50.1%
Local System Charges	196,570	98,285	50.0%	205,925	205,925	102,962	50.0%
Industrial Waste Control Charges	8,560	4,361	50.9%	8,719	8,719	4,418	50.7%
Pollutant Surcharges	5,328	2,164	40.6%	5,434	5,434	2,391	44.0%
Investment Earnings	22,882	10,962	47.9%	12,356	12,356	11,184	90.5%
Other Revenues	1,130	521	46.1%	700	700	148	21.2%
Total Revenues	$ 502,349	$ 256,893	51.1%	$ 520,652	$ 520,652	$ 265,133	50.9%
Revenue Requirements							
Operations & Maintenance Expense	$ 224,874	$ 102,772	45.7%	$ 228,934	$ 228,934	$ 116,924	51.1%
Debt Service	230,976	114,164	49.4%	226,279	226,279	113,433	50.1%
General Retirement System Pension	3,097	3,240	104.6%	4,846	4,846	2,423	50.0%
Water Residential Assistance Program Contribution	2,503	1,252	50.0%	2,652	2,652	1,326	50.0%
Regional System Lease	27,500	13,750	50.0%	27,500	27,500	13,750	50.0%
Receiving Fund Working Capital Requirement	-	-	0.0%	2,300	2,300	-	0.0%
Operating Reserve Deposit	-	-	0.0%	-	-	-	0.0%
DWSD Budget Shortfall Pending	-	-	0.0%	-	-	-	0.0%
Improvement & Extension Fund Transfer Pending	13,400	14,338	107.0%	28,141	28,141	14,070	50.0%
Total Revenue Requirements	$ 502,349	$ 249,515	49.7%	$ 520,652	$ 520,652	$ 261,926	50.3%
Net Difference		$ 7,377				$ 3,207	
Recap of Net Positive Variance							
Revenue Variance		$ 5,719				$ 4,807	
Revenue Requirement Variance		1,659				(1,600)	
Overall Variance		$ 7,377				$ 3,207	

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of December 31, 2024, is 50.0% (six months). When comparing FY 2025 to FY 2024 in ***Table 2 – Operations & Maintenance Budget – Major Budget Categories***, the overall spending is higher in FY 2025.

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)**

Service Area	FY 2024 Amended Budget	FY 2024 Activity Thru 12/31/2023	Percent Year-to-Date at 12/31/2023	FY 2025 Board Adopted Budget	FY 2025 Amended Budget	FY 2025 Activity Thru 12/31/2024	Percent Year-to-Date at 12/31/2024
A Water System Operations	$ 90,810	$ 42,683	47.0%	$ 94,670	$ 94,670	$ 47,821	50.5%
B Wastewater System Operations	146,722	68,650	46.8%	147,245	147,245	73,646	50.0%
C Centralized Services	117,468	53,142	45.2%	116,980	116,980	65,514	56.0%
D Administrative & Other Services	38,747	17,932	46.3%	39,664	39,664	18,523	46.7%
Employee Benefits	-	-	0.0%	-	-	(13)	0.0%
Total O&M Budget	$ 393,747	$ 182,408	46.3%	$ 398,559	$ 398,559	$ 205,491	51.6%

Totals may be off due to rounding

Alignment of Operations & Maintenance Budget Priorities – Expense Variance Analysis

The purpose of ***Table 3 – Operations & Maintenance Expense Variance Analysis*** is to evaluate whether the actual spend rate within a natural cost category is in alignment with the budget. Given the effort to develop an accurate budget, a variance is a red flag of a *potential* budget amendment or misalignment of priorities.

Total: In total, the overall O&M expenses are at 51.6% which is above the pro-rata benchmark of 50.0%. This negative variance equates to a dollar amount of $6.2 million. The expense category commentary is provided below for items highlighted on Table 3.

Personnel Costs: The overall category is above the pro-rata benchmark; coming in at 52.8% through December 2024.

Utilities: The overall category is below with the pro-rata benchmark; coming in at 48.8% through December 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 50.3% 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.
- **Gas** is coming in at 42.8% which is below than the benchmark of 50.0%. This category is under review.
- **Sewage service** is lower than the benchmark, coming in at 36.6%. This category is under review.
- **Water service** is lower than the benchmark, coming in at 49.5%. This category is under review.

Chemicals: This category is higher than the benchmark; coming in at 50.7% through December 2024. The FY 2025 budget is being closely monitored to account for rising chemical costs.

Supplies & Other: This category is slightly lower than the pro-rata benchmark; coming in at 49.8% through December 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.

Contractual Services: The overall category is higher than the pro-rata benchmark; coming in at 57.1% through December 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 22.5% through December 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.

Shared Services: This category is lower than the benchmark; coming in at 49.6% through December 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 2025. 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 and activity includes true-up billings from prior years.

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

Expense Categories Entity-wide	FY 2024 AMENDED BUDGET	FY 2024 ACTIVITY THRU 12/31/2023	Percent Year-to-Date at 12/31/2023	FY 2024 ACTIVITY THRU 6/30/2024	Percent Year-to-Date at 6/30/2024	FY 2025 AMENDED BUDGET	FY 2025 PRORATED AMENDED BUDGET (6 MONTHS)	FY 2025 ACTIVITY THRU 12/31/2024	Percent Year-to-Date 12/31/2024	FY 2025 Prorated Amended Budget Less FY 2025 Activity
Salaries & Wages	$ 77,415	$ 38,533	49.8%	$ 77,595	49.7%	$ 81,644	$ 40,822	$ 40,344	49.4%	$ 478
Workforce Development	1,820	943	51.8%	1,949	48.4%	2,105	1,053	974	46.3%	78
Overtime	8,672	4,318	49.8%	9,171	47.1%	8,074	4,037	7,968	98.7%	(3,931)
Employee Benefits	27,869	13,991	50.2%	27,491	50.9%	30,347	15,174	15,501	51.1%	(328)
Transition Services	9,877	4,651	47.1%	9,249	50.3%	8,198	4,099	4,015	49.0%	84
Employee Benefits Fund	-	-	0.0%	-	0.0%	-	-	(13)	0.0%	13
Personnel Costs	*125,653*	*62,436*	49.7%	*125,455*	49.8%	*130,368*	*65,184*	*68,790*	52.8%	*(3,606)*
Electric	50,716	25,692	50.7%	49,805	51.6%	49,021	24,510	24,641	50.3%	(131)
Gas	7,767	2,942	37.9%	7,211	40.8%	7,000	3,500	2,995	42.8%	505
Sewage Service	2,538	1,178	46.4%	2,336	50.4%	2,980	1,490	1,091	36.6%	399
Water Service	12,803	5,865	45.8%	12,586	46.6%	11,602	5,801	5,741	49.5%	60
Utilities	*73,823*	*35,677*	48.3%	*71,939*	49.6%	*70,603*	*35,301*	*34,468*	48.8%	*833*
Chemicals	32,824	13,913	42.4%	31,075	44.8%	34,835	17,417	17,655	50.7%	(237)
Supplies & Other	45,364	17,710	39.0%	43,604	40.6%	43,539	21,769	21,691	49.8%	78
Contractual Services	120,914	55,055	45.5%	116,766	47.1%	113,871	56,935	65,046	57.1%	(8,111)
Capital Program Allocation	(2,624)	(1,185)	45.2%	(2,847)	41.6%	(4,582)	(2,291)	(1,030)	22.5%	(1,261)
Shared Services	(2,207)	(1,198)	54.3%	(2,281)	52.5%	(2,280)	(1,140)	(1,130)	49.6%	(10)
Unallocated Reserve	-	-	0.0%	-	0.0%	12,205	6,103	-	0.0%	6,103
Total Expenses	$ 393,747	$ 182,408	46.3%	$ 383,711	47.5%	$ 398,559	$ 199,280	$ 205,491	51.6%	$ (6,212)

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 2024 comparative amounts shown in the tables below are presented based on final audited figures.

Statement of Net Position – All Funds Combined

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

Table 1 – Statement of Net Position - All Funds Combined
As of December 31, 2024
($000)

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2024
Assets				
Cash - unrestricted (a)	$ 176,541	$ 237,079	$ 413,620	$ 443,799
Cash - restricted (a)	178,264	165,253	343,517	662,614
Investments - unrestricted (a)	130,083	147,803	277,886	175,045
Investments - restricted (a)	73,466	165,969	239,434	108,102
Accounts Receivable	79,522	57,064	136,585	135,263
Due from (to) Other Funds (b)	26,782	(26,782)	-	-
Other Assets (c)	637,098	381,663	1,018,761	1,016,028
Cash held FBO DWSD Advance	-	-	-	-
Capital Assets, net of Depreciation	1,239,961	1,866,931	3,106,892	3,211,032
Land	293,624	126,816	420,440	420,440
Construction Work in Process (e)	489,787	403,148	892,935	752,481
Total assets	3,325,127	3,524,944	6,850,071	6,924,804
Deferred Outflows (f)	28,887	58,062	86,949	89,954
Liabilities			-	
Liabilities - Liabilities-ST	269,790	274,717	544,508	537,600
Due to (from) Other Funds (b)	-	-	-	-
Other Liabilities (h)	2,444	6,181	8,625	7,500
Cash Held FBO DWSD (d)	33,753	40,303	74,056	58,147
Liabilities - Long-Term (i)	3,071,263	3,249,373	6,320,636	6,468,572
Total liabilities	3,377,250	3,570,575	6,947,824	7,071,818
Deferred Inflows (f)	62,011	65,589	127,600	133,364
Total net position (j)	$ (85,247)	$ (53,157)	$ (138,405)	$ (190,425)

Totals may be off due to rounding

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

An ongoing challenge is the Net Position Deficit. The underlying causes took years to build (largely heavy use of debt to finance capital asset investment versus a strategic blend of debt, state revolving funds, and cash). The effect is reflected in GLWA's high debt interest expense. The GLWA is regularly updating the FY 2032 forecast which helps to provide a pathway to a positive Net Position in the future.

Footnotes to Statement of Net Position

a. *Cash and Investments* are reported at market value. Investments at June 30, 2024 are also reported at market value. The December 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 December 2024 Financial Report Binder. Prior year ending balances are provided in the June 30, 2024 column as a reference for comparative purposes. Explanatory notes follow this statement.

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

Table 2 – Statement of Revenues, Expenses and Changes in Net Position – All Funds Combined
For the Six Months ended December 31, 2024
($000)

	Water	Percent of Revenue	Sewage Disposal	Percent of Revenue	Total Business-Type Activities	Comparative June 30, 2024
Revenue						
Wholesale customer charges	$ 179,571	92.9%	$ 144,030	56.7%	$ 323,601	$ 599,569
Local system charges	13,547	7.0%	102,962	40.5%	116,510	222,107
Industrial waste charges	-	0.0%	4,418	1.7%	4,418	8,617
Pollutant surcharges	-	0.0%	2,391	0.9%	2,391	4,089
Other revenues	228	0.1%	148	0.1%	376	1,149
Total Revenues	**193,347**	**100.0%**	**253,949**	**100.0%**	**447,296**	**835,531**
Operating expenses						
Operations and Maintenance	87,828	45.4%	115,941	45.7%	203,769	376,757
Depreciation	46,940	24.3%	71,265	28.1%	118,205	265,044
Amortization of intangible assets	2,198	1.1%	635	0.3%	2,833	4,837
Total operating expenses	**136,966**	**70.8%**	**187,841**	**74.0%**	**324,807**	**646,638**
Operating Income	56,381	29.2%	66,108	26.0%	122,489	188,893
Total Nonoperating (revenue) expense	30,497	15.8%	39,972	15.7%	70,469	147,736
Increase/(Decrease) in Net Position	**25,884**	**13.4%**	**26,136**	**10.3%**	**52,020**	**41,157**
Net Position (deficit), beginning of year	(111,131)		(79,294)		(190,425)	(231,582)
Net position (deficit), end of year	$ (85,247)		$ (53,157)		$(138,405)	$ (190,425)

Totals may be off due to rounding

Water Fund

- ✓ The increase in Water Fund Net Position is $25.9 million.
- ✓ Wholesale water customer charges of $179.6 million account for 92.9% of Water System revenues.
- ✓ Operating expenses of $137.0 million represent 70.8% of total operating revenue. Depreciation is the largest operating expense at $46.9 million or 34.3% of operating expense.
- ✓ Amortization of intangible assets represents activity for raw water rights and subscription-based information technology arrangements (SBITA).
- ✓ Operating income after operating expenses (including depreciation) equals $56.4 million or 29.2% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of $44.6 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 $26.1 million.
- ✓ Wholesale customer charges of $144.0 million account for 56.7% of Sewer System revenues. Wholesale customer charges are billed one-twelfth each month based on an agreed-upon historical average "share" of each customer's historical flows which are formally revisited on a periodic basis. The result is no revenue shortfall or overestimation.
- ✓ Local system (DWSD) charges of $103.0 million account for 40.5% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of $187.8 million represent 74.0% of total operating revenue. Depreciation is the largest operating expense at $71.3 million or 37.9% of total operating expense.
- ✓ Amortization of intangible assets represents activity for a warehouse lease and subscription-based information technology arrangements (SBITA).
- ✓ Operating income after operating expenses (including depreciation) equals $66.1 million or 26.0% of operating revenue.
- ✓ The largest category within nonoperating activities is bonded debt interest expense of $51.7 million (this equates to the bonded debt interest expense less the offset from DWSD contractual obligation income).

Supplemental Schedule of Operations & Maintenance Expenses – All Funds Combined

This Supplemental Schedule of Operations & Maintenance Expenses (O&M) schedule is shown below in Table 3. This accrual basis of operations and maintenance expense may vary from the revenue requirement basis presented in the *Budget to Actual Analysis* section of the December 2024 Financial Report Binder. Explanatory notes follow this schedule.

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

	Water	Percent of Total	Sewage Disposal	Percent of Total	Total Business-Type Activities	Percent of Total
Operating Expenses						
Personnel						
Salaries & Wages	13,780	15.7%	31,554	27.2%	45,334	22.2%
Overtime	5,350	6.1%	2,618	2.3%	7,968	3.9%
Employee Benefits	10,954	12.5%	4,534	3.9%	15,488	7.6%
Total Personnel	$ 30,084	34.3%	$ 38,706	33.4%	$ 68,790	33.8%
Utilities						
Electric	15,752	17.9%	8,889	7.7%	24,641	12.1%
Gas	345	0.4%	2,650	2.3%	2,995	1.5%
Sewage	362	0.4%	730	0.6%	1,091	0.5%
Water	18	0.0%	5,723	4.9%	5,741	2.8%
Total Utilities	$ 16,477	18.8%	$ 17,991	15.5%	$ 34,468	16.9%
Chemicals	7,120	8.1%	10,535	9.1%	17,655	8.7%
Supplies and other	7,291	8.3%	13,870	12.0%	21,160	10.4%
Contractual services	27,827	31.7%	37,168	32.1%	64,995	31.9%
Capital Adjustment	-	0.0%	-	0.0%	-	0.0%
Capital Program allocation	(368)	-0.4%	(662)	-0.6%	(1,030)	-0.5%
Intergovernmental Agreement	178	0.2%	(1,318)	-1.1%	(1,140)	-0.6%
Shared Services allocation	(781)	-0.9%	(350)	-0.3%	(1,130)	-0.6%
Operations and Maintenance Expenses	**$ 87,828**	**100.0%**	**$ 115,941**	**100.0%**	**$ 203,769**	**100.0%**

Totals may be off due to rounding

- ✓ Core expenses for water and sewage disposal systems are utilities (16.9% of total O&M expenses) and chemicals (8.7% of total O&M expenses).
- ✓ Personnel costs (33.8% of total O&M expenses) include all salaries, wages, and benefits for employees as well as staff augmentation contracts that fill a vacant position (contractual transition services).
- ✓ Contractual services (31.9%) includes:
    - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately $3.0 million);
    - Sewage Disposal System costs for the operation and maintenace of the biosolids dryer facility (approximately $8.9 million); and
    - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenace, 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 offets to associated costs in other Operations and Maintenance expense categories.

Supplemental Schedule of Nonoperating Expenses – All Funds Combined

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

Table 4 – Supplemental Schedule of Nonoperating Expenses – All Funds Combined
For the Six Months ended December 31, 2024

	Water	Sewage Disposal	Total Business-type Activities	Comparative June 30, 2024
Nonoperating (Revenue)/Expense				
Interest income contractual obligation	$ (11,609)	$ (7,537)	$ (19,146)	$ (39,855)
Investment earnings	(11,615)	(15,285)	(26,900)	(59,786)
Net (incr) decr in fair value of invstmt	(621)	(1,045)	(1,667)	(2,068)
Other nonoperating revenue	(5)	(1,399)	(1,404)	(9,405)
Interest Expense				
Bonded debt	56,212	59,190	115,402	236,892
Lease obligation	8,181	9,999	18,181	36,780
Other obligations	1,785	816	2,601	5,286
	66,178	70,006	136,184	278,958
Other non-capital expense	-	-	-	-
Memorandum of Understanding	-	-	-	-
Capital Contribution	(1,240)	-	(1,240)	(40,432)
Amortization, issuance costs, debt	(10,784)	(5,038)	(15,822)	4,155
(Gain) loss on disposal of capital assets	(7)	(3)	(10)	2,694
Loss on impairment of capital assets	-	-	-	-
Discontinued Capital Projects	-	-	-	-
Water Residential Assistance Program	201	272	473	6,772
Legacy pension expense	-	-	-	6,703
Total Nonoperating (Revenue)/Expense	**$ 30,497**	**$ 39,972**	**$ 70,469**	**$ 147,736**

Totals may be off due to rounding

- ✓ Interest income on contractual obligation relates to the portion of the total GLWA debt obligation attributable to DWSD. This interest income offsets the total debt interest expense paid by GLWA on behalf of both entities monthly.
- ✓ 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 2023 market value adjustments for Water and Sewer total $1.3 million and $2.6 million, respectively. FY 2024 market value adjustments for Water and Sewer total $621 thousand and $1.0 million, respectively. Any difference is due to realized gain or loss on investments.

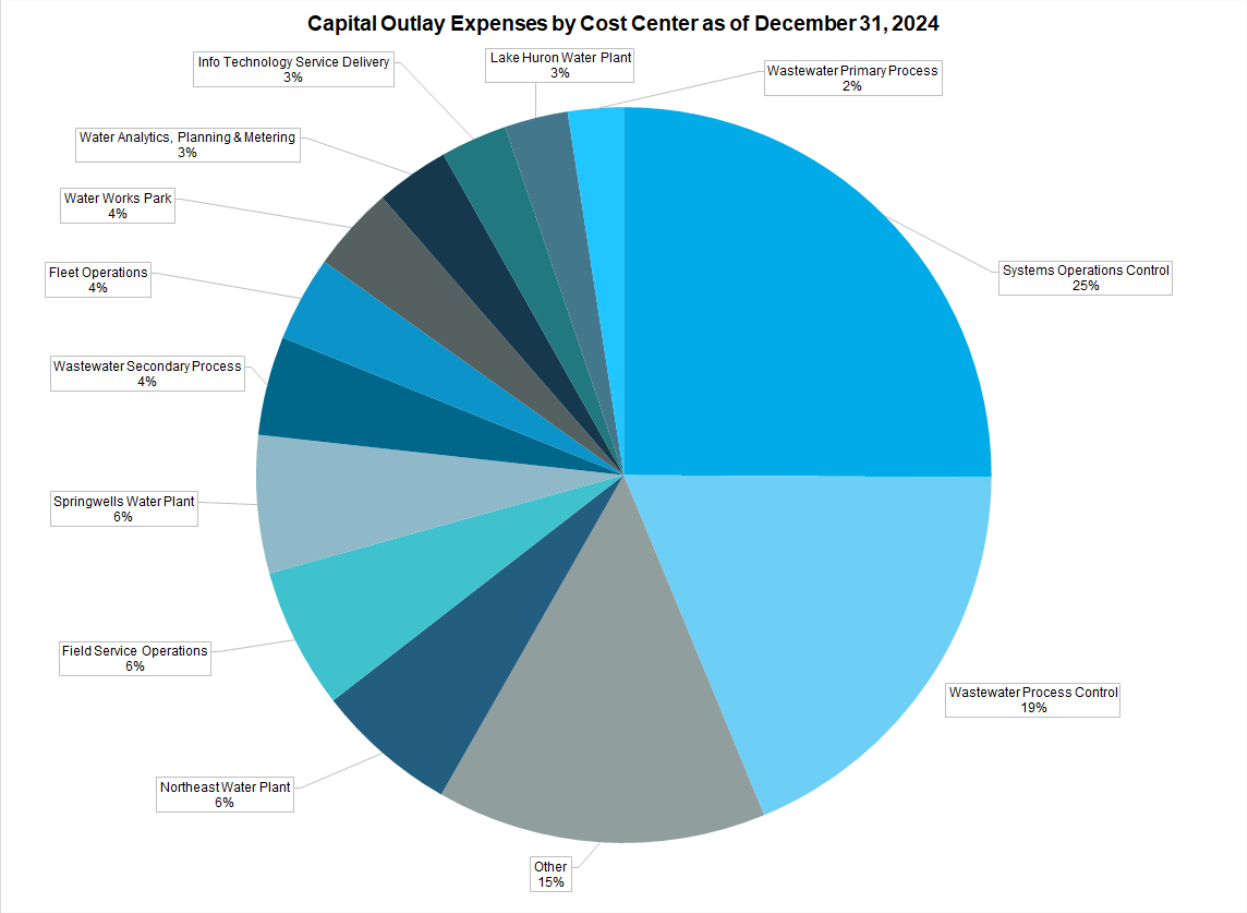
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:
  - Bonded debt;
  - Lease obligation for the regional assets from the City of Detroit; and
  - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to assumed DWSD liabilities; acquisition of raw water rights related to the KWA Pipeline.
- ✓ FY 2025 other non-operating income consists of debt forgiveness for the Sewage Disposal system.
- ✓ FY 2024 other non-operating income consists of grant revenue for the Water and Sewage Disposal systems and debt forgiveness for the Sewage Disposal system.
- ✓ The FY 2025 capital contribution in Nonoperating (revenue) expense represents ARPA ($1.2m) grant revenue for the Water system.
- ✓ The FY 2024 capital contribution in Nonoperating (revenue) expense represents ARPA ($33.9m), FEMA ($1.9m) and other ($3.6m) grant revenue for the Water and Sewage Disposal systems.
- ✓ FY 2024 Water system loss on disposal of capital assets includes sale of Longitudinal Collectors.

Financial Activity Charts

Chart 1 – Capital Outlay – Water and Sewer System Combined

Capital Outlay represents purchases of equipment, software, and small facility improvement projects. It *excludes* any capital investment which is included in the monthly construction work-in-progress report related to the Capital Improvement Program. Some items span several months so the entire cost may not have been incurred yet. In addition, items are capitalized only if they meet GLWA's capitalization policy.

Through December 31, 2024, total capital outlay spend is $10.4 million. Following this chart is a sample list of projects and purchases from the total spend of $10.4 million:



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

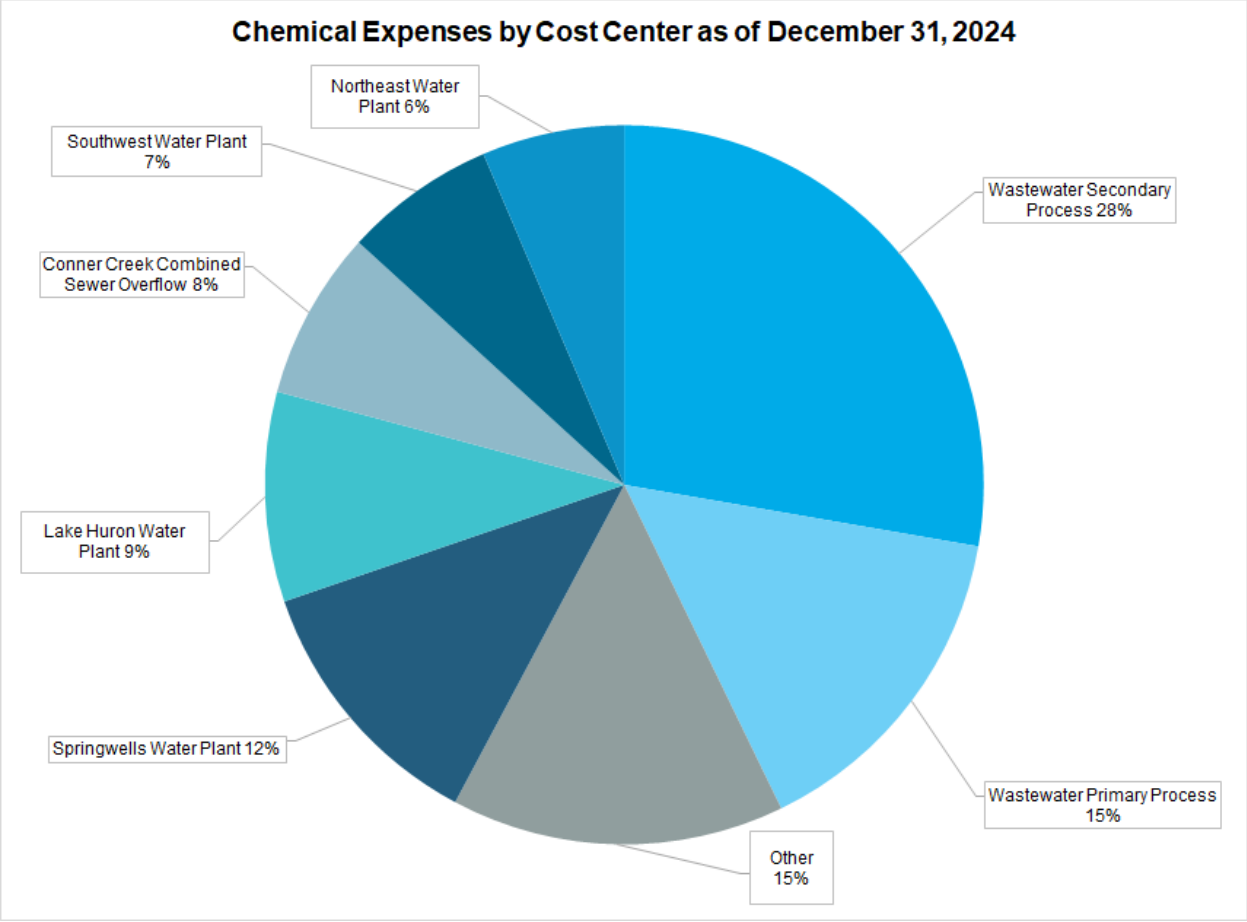
Water Operations: Ovation/power supply upgrade ($512k); ozonation pilot module ($347k); fluid heater ($189k); lead removal and disposal ($185k); granular media filtration pilot plant ($171k); northeast water plant furniture ($92k) and above ground storage tank ($75k).

Wastewater Operations: Ovation upgrade and cabinet replacement ($4.3m); ferric chloride buffering ($453k); Bluehill pump station ovation upgrade ($166k); scum hopper pump ($155k); Fischer pump station ovation upgrade ($153k) and Woodmere elevator modernization.

Centralized & Administrative Facilities: Pump stations ovation upgrade ($619k); trucks and vehicles ($368k); system level sensors ($352k); computer hardware ($306k); sewer meter support ($166k); Water Works Park furniture ($94k); flow meter verification tool ($76k) and database support ($68k).

Chart 2 – Chemical Expenses – Water and Sewer System Combined

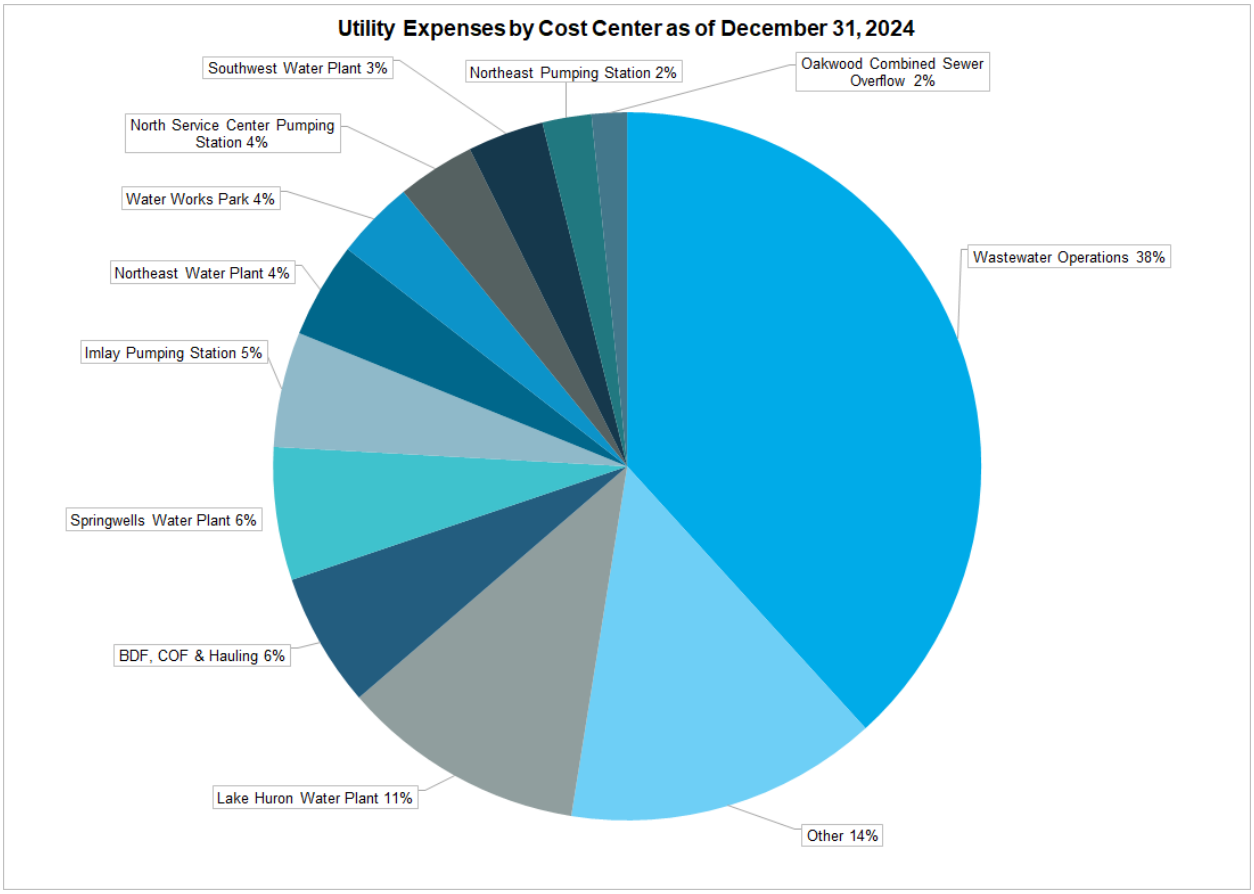
Chemical expenses are $17.7 million through December 31, 2024. The allocation is shown in the chart below and remains consistent with prior periods.



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 $34.5 million through December 31, 2024. The allocation is shown in the chart below and consistent with prior periods.



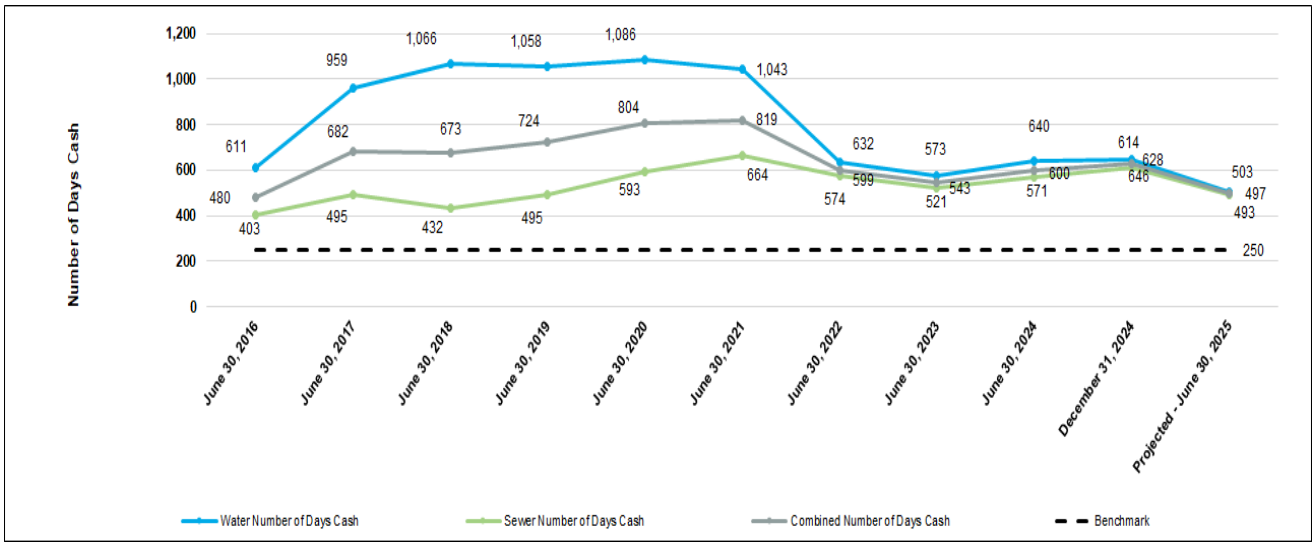
Note: *Due to rounding totals may not equal 100%.*

Financial Operations KPI - 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 646 and Sewer at 614 days cash on hand as of December 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 that replenished the construction bond funds reducing the emphasis on I&E funding. The FY 2025 projection is calculated based on values from the GLWA FY 2025 – 2029 Budget & Five-Year Plan.

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



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

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

	June 30, 2024	December 31, 2024	Projected June 30, 2025
Water Fund			
Cash and Investments - Unrestricted	276,591,000	306,624,000	238,600,000
Operating Expense			
Operating Expense (a)	272,172,000	131,396,000	262,792,000
Less: Depreciation (a)	(110,557,000)	(43,017,000)	(86,033,000)
Less: Amortization of Intangible Asset (a)	(3,982,000)	(1,783,000)	(3,567,000)
Net Operating Expense	157,633,000	86,596,000	173,192,000
Operating Expense per Day	432,000	474,000	474,000
Days Cash			
Number of Days Cash	640	646	503
Sewage Disposal Fund			
Cash and Investments - Unrestricted	342,253,000	384,882,000	309,000,000
Operating Expense			
Operating Expense (a)	374,287,000	186,067,000	372,134,000
Less: Depreciation (a)	(154,486,000)	(71,600,000)	(143,200,000)
Less: Amortization of Intangible Asset (a)	(855,000)	-	-
Net Operating Expense	218,946,000	114,467,000	228,934,000
Operating Expense per Day	600,000	627,000	627,000
Days Cash			
Number of Days Cash	571	614	493
Combined			
Cash and Investments - Unrestricted	618,844,000	691,506,000	547,600,000
Operating Expense			
Operating Expense (a)	646,460,000	317,463,000	634,926,000
Less: Depreciation (a)	(265,044,000)	(114,617,000)	(229,233,000)
Less: Amortization of Intangible Asset (a)	(4,837,000)	(1,783,000)	(3,567,000)
Net Operating Expense	376,579,000	201,063,000	402,126,000
Operating Expense per Day	1,032,000	1,102,000	1,102,000
Days Cash			
Number of Days Cash	600	628	497

Totals may be off due to rounding

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

The monthly Budget to Financial Statements Crosswalk includes the following.

1. Crosswalk Budget Basis to Financial Reporting Basis
2. Explanatory Notes for Crosswalk

Purpose for Crosswalk: The Great Lakes Water Authority establishes a "Revenue Requirements" budget for the purposes of establishing charges for services. The financial report is prepared in accordance with Generally Accepted Accounting Policies for enterprise funds of a local government. Because the budget and the financial statements are prepared using different basis of accounting, the crosswalk reconciles the "Net Difference" to the "Increase/(Decrease) in Net Position" in Table 2 of the Basic Financial Statements in the monthly Financial Report.

The Authority has a Water Master Bond Ordinance and a Sewer Master Bond Ordinance (MBO). The Ordinances provide additional security for payment of the bonds. All revenues of the system are deposited into Revenue Receipts Funds which are held in trust by a trustee. The cash is moved to multiple bank accounts monthly based on 1/12th of the budget as defined in the MBO ("the flow of funds") for all revenue requirements except for the Debt Service monthly transfer. The Debt Service monthly requirement is computed by the trustee, U.S. Bank. The cash transfer for debt is net of investment earnings that remain in the debt service accounts to be used for debt service.

The budget is prepared on a modified cash basis. The revenue requirements are determined based upon the cash needed to meet the financial commitments as required by the Master Bond Ordinance.

- Operation & Maintenance (O&M) expenses based on an accrual basis
- O&M Legacy Pension Allocation (includes administrative fee) and Accelerated Legacy Pension Allocation (includes B&C notes obligation) based on a cash basis
- Debt Service Allocation based on a cash set aside basis to provide the cash for the debt payments on the due dates
- Lease payments based on a cash basis
- Water Residential Assistance Program based on a percentage of budgeted revenue
- Regional System Improvement & Extension Fund Allocation on a cash basis

Budget: In Table 1A and Table 1B of the Budget to Actual Analysis the 'Revenues' section is the accrual basis revenues that are available to meet the 'Revenue Requirements'. The 'Revenue Requirements' section budget column indicates the annual cash transfers to be made.

Financial Reporting: The Authority's financial statements are prepared in conformity with generally accepted accounting principles (GAAP) as applied to government units. The Authority maintains its records on the accrual basis of accounting to conform to GAAP. Revenues from operations, investments and other sources are recorded when earned. Expenses (including depreciation) are recorded when incurred.

Table 1 – Crosswalk Budget Basis to Financial Reporting Basis provides a reconciliation of the "Net Difference" in Table 1A and Table 1B in the Budget to Actual Analysis report to the "Increase/(Decrease) in Net Position" in Table 2 of the Basic Financial Statements in this monthly Financial Report. Explanatory notes follow the Crosswalk shown in Table 1 below.

Table 1 – Crosswalk Budget Basis to Financial Reporting Basis ($000)
For the Six Months Ended December 31, 2024

	Water	Sewer	Total
Net Revenue Requirement Budget Variance (a)	$ 5,506	$ 3,207	$ 8,713
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/payments recorded as deferral (c)	315	564	879
Prior year pension contribution accounted for in current year (d)	-	-	-
Administrative prepaid adjustment (e)	-	-	-
Debt service (f)	42,971	61,780	104,751
Accelerated pension B&C notes obligation portion (g)	502	1,129	1,631
Regional System lease (h)	3,069	3,751	6,820
GASB 87 & GASB 96 adjustments (h)	705	910	1,615
WRAP (i)	773	1,054	1,827
Extraordinary Repair & Replacement Fund transfers (j)	-	-	-
Improvement & Extension Fund transfers (j)	3,635	14,070	17,705
Nonbudgeted financial reporting categories adjustments			
Depreciation and amortization (k)	(49,138)	(71,900)	(121,038)
Amortization - debt related (k)	10,784	5,038	15,822
Other nonoperating income (k)		1,399	1,399
Other nonoperating expense (k)	-		-
Gain(loss) on disposal of capital assets (k)	7	3	10
Raw water rights obligation (l)	1,532	-	1,532
Investment earnings for construction fund (m)	3,362	4,097	7,459
Interest on DWSD note receivable (n)	-	-	-
Investment earnings unrealized gain/loss (o)	621	1,045	1,666
Improvement & extension fund operating expenses (p)	-	(11)	(11)
Capital Contribution (q)	1,240	-	1,240
Net Position Increase/(Decrease) per Financial Statements (b)	$ 25,884	$ 26,136	$ 52,020

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 Extraordinary Repair & Replacement Fund and Improvement & Extension 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.

(q) The FY 2025 capital contribution in Nonoperating (revenue) expense represents ARPA ($1.2m) grant revenue for the Water system. This nonoperating revenue is reported only in the GAAP-basis financial statements.

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. The prorated CIP is calculated by dividing the total fiscal year 2025 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. The capital spend rate adjustment is 100% of the Board approved CIP planned spend for the water fund and 100% of the Board approved CIP planned spend for the sewer fund.

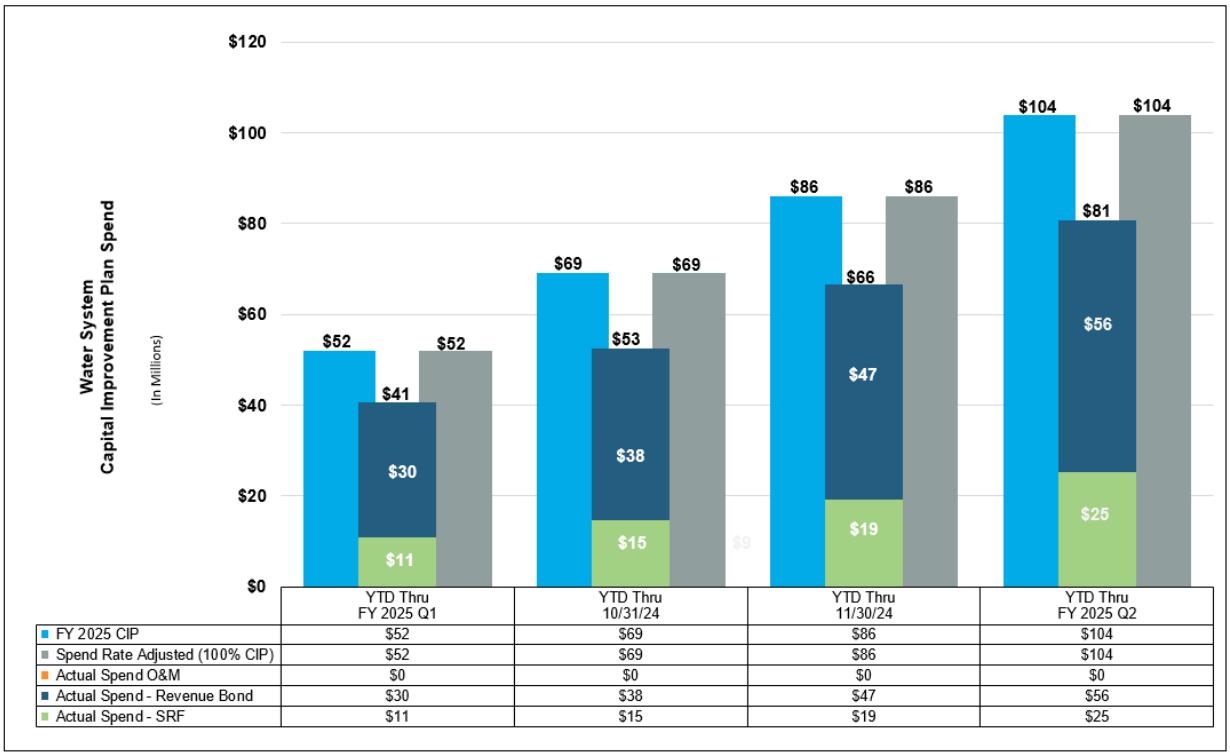
As of December 31, 2024, the State Revolving Fund (SRF) activity reported in Charts 1 and 2 has been revised to reflect changes in approved, GLWA SRF funding.

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

As of December 2024, the water system incurred $81 million of construction costs to date. This spend represents 78% of the original, Board-approved CIP, and 78% of the Board-reviewed spend rate adjustment.

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

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



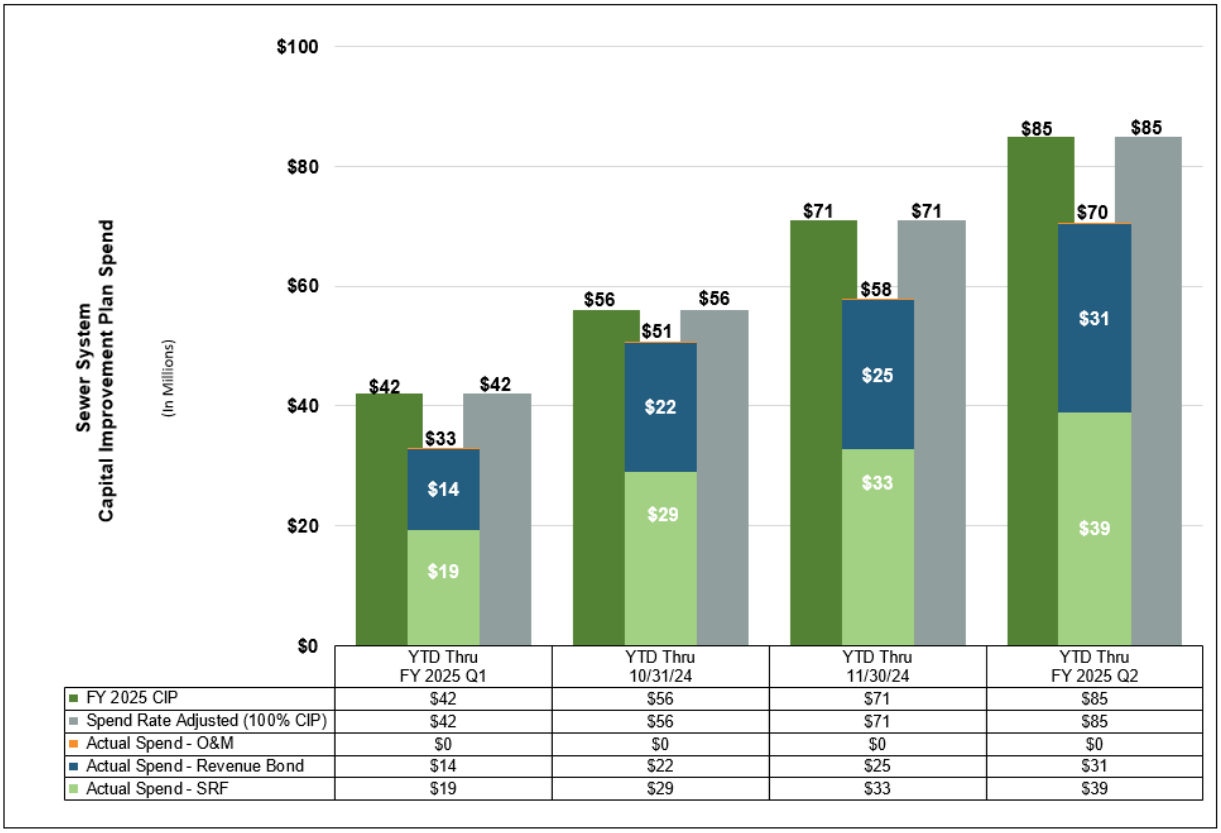
	YTD Thru FY 2025 Q1	YTD Thru 10/31/24	YTD Thru 11/30/24	YTD Thru FY 2025 Q2
FY 2025 CIP	$52	$69	$86	$104
Spend Rate Adjusted (100% CIP)	$52	$69	$86	$104
Actual Spend O&M	$0	$0	$0	$0
Actual Spend - Revenue Bond	$30	$38	$47	$56
Actual Spend - SRF	$11	$15	$19	$25

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

As of December 2024, the Sewer system incurred $70 million of construction costs to date. This spend represents 82% of the original, Board-approved CIP, and 82% of the Board-reviewed spend rate adjustment.

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

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



	YTD Thru FY 2025 Q1	YTD Thru 10/31/24	YTD Thru 11/30/24	YTD Thru FY 2025 Q2
FY 2025 CIP	$42	$56	$71	$85
Spend Rate Adjusted (100% CIP)	$42	$56	$71	$85
Actual Spend - O&M	$0	$0	$0	$0
Actual Spend - Revenue Bond	$14	$22	$25	$31
Actual Spend - SRF	$19	$29	$33	$39

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.

Table 1 – GLWA FY 2025 Water MBO Transfers reflects the required transfers for FY 2025 completed through December 2024. MBO transfers for water totaling $88.2 million have been transferred to GLWA accounts.

Table 2 – GLWA FY 2025 Sewer MBO Transfers reflects the required transfers for FY 2025 completed through December 2024. MBO transfers for sewer totaling $119.5 million have been transferred to GLWA accounts.

Table 3 – GLWA MBO Transfer History reflects historical transfers for FY 2016 through FY 2025 to date.

Table 1 – GLWA FY 2025 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 2025							
July 2024	$ 14,135,417	$ -	$ 324,642	$ 236,359	$ -	$ -	$ 14,696,418
August 2024	14,135,417	-	324,642	236,359	-	-	14,696,418
September 2024	14,135,417	-	324,642	236,359	-	-	14,696,418
October 2024	14,135,417	-	324,642	235,958	-	-	14,696,017
November 2024	14,135,417	-	324,642	235,958	-	-	14,696,017
December 2024	14,135,417	-	324,642	236,560	-	-	14,696,619
January 2025							
February 2025							
March 2025							
April 2025							
May 2025							
June 2025							
Total FY 2025	$ 84,812,502	$ -	$1,947,852	$1,417,553	$ -	$ -	$ 88,177,907

Table 2 – GLWA FY 2025 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 2025							
July 2024	$ 19,077,833	$ -	$ 510,516	$ 332,933	$ -	$ -	$ 19,921,282
August 2024	19,077,833	-	510,516	332,933	-	-	19,921,282
September 2024	19,077,833	-	510,516	332,933	-	-	19,921,282
October 2024	19,077,833	-	510,516	339,168	-	-	19,927,517
November 2024	19,077,833	-	510,516	339,168	-	-	19,927,517
December 2024	19,077,833	-	510,516	329,816	-	-	19,918,165
January 2025							
February 2025							
March 2025							
April 2025							
May 2025							
June 2025							
Total FY 2025	$114,466,998	-	$3,063,096	$2,006,951	$ -	$ -	$ 119,537,045

Table 3 – 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	168,873,100	-	2,568,700	2,710,200	-	2,836,000	176,988,000
Total FY 2025 (year to date)	84,812,502	-	1,947,852	1,417,553	-	-	88,177,907
Life to Date	$ 1,241,391,414	$ 48,362,300	$ 89,285,127	$ 21,702,057	$ 2,686,900	$ 5,642,000	$ 1,409,069,798

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	224,873,500	-	3,914,500	3,836,402	-	-	232,624,402
Total FY 2025 (year to date)	114,466,998	-	3,063,096	2,006,951	-	-	119,537,045
Life to Date	$ 1,758,476,590	$ 86,620,800	$ 123,155,005	$ 30,847,049	$ 8,246,100	$ 779,600	$ 2,008,125,144

MBO Required and Lease Payment Transfers to DWSD

DWSD Transfers: The GLWA Treasury team completes the required MBO transfers on the first business day of each month. These transfers are completed in accordance with the GLWA and DWSD budgets as approved and adopted by the GLWA Board of Directors and DWSD Board of Water Commissioners annually. Transfers are coordinated with other areas of GLWA Financial Services in advance of the first business day of each month. GLWA Treasury sends confirmation of transfers made to DWSD Treasury.

Monthly transfers for O&M and O&M Pension are one-twelfth of the annual, budgeted amount. The annual lease payment, as stated in the Water and Sewer Lease Agreements, is $22,500,000 for Water and $27,500,000 for Sewer. The monthly lease transfer is one-twelfth of the amount as stated in the Lease agreements unless otherwise designated by DWSD. Per Section 3.5 of the Lease, the Lease payment may be used for (a) bond principal and interest for Local System Improvements, (b) bond principal and interest for the City's share of common-to-all System Improvements, and (c) Local System improvements.

Table 4 – DWSD FY 2025 Water MBO Transfers reflects the required transfers for FY 2025 completed through December 2024. MBO transfers for Water totaling $35.1 million have been transferred to accounts held by DWSD.

Table 5 – DWSD FY 2025 Sewer MBO Transfers reflects the required transfers for FY 2025 completed through December 2024. MBO transfers for Sewer totaling $43.1 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 2025 to date.

Table 7 – DWSD Sewer MBO and Lease Payment Transfer History reflects historical transfers for FY 2016 through FY 2025 to date.

Table 4 – DWSD FY 2025 Water MBO Transfers

WATER				
	Operations & Maintenance	Pension	Lease Payment (I&E Fund)	Total Water
FY 2025				
July 2024	$ 3,970,517	$ -	$ 1,875,000	$ 5,845,517
August 2024	3,970,517	-	1,875,000	5,845,517
September 2024	3,970,517	-	1,875,000	5,845,517
October 2024	3,970,517	-	1,875,000	5,845,517
November 2024	3,970,517	-	1,875,000	5,845,517
December 2024	3,970,517	-	1,875,000	5,845,517
January 2025				
February 2025				
March 2025				
April 2025				
May 2025				
June 2025				
Total FY 2025	$ 23,823,102	-	$ 11,250,000	$ 35,073,102

Table 5 – DWSD FY 2025 Sewer MBO Transfers

SEWER				
	Operations & Maintenance	Pension	Lease Payment (I&E Fund)	Total Sewer
FY 2025				
July 2024	$ 4,889,950	$ -	$ 2,291,667	$ 7,181,617
August 2024	4,889,950	-	2,291,667	7,181,617
September 2024	4,889,950	-	2,291,667	7,181,617
October 2024	4,889,950	-	2,291,667	7,181,617
November 2024	4,889,950	-	2,291,667	7,181,617
December 2024	4,889,950	-	2,291,667	7,181,617
January 2025				
February 2025				
March 2025				
April 2025				
May 2025				
June 2025				
Total FY 2025	$ 29,339,700	-	$ 13,750,002	$ 43,089,702

Table 6 – DWSD Water MBO and Lease Payment Transfer History

	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)
Total 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	-	-	-	-
Total 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)
Total 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)
Total 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)
Total 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)
Total 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)
Total 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)
Total MBO Transfer	42,581,600	4,272,000	19,577,900	66,431,500
FY 2024				
MBO/Lease Requirement	44,776,800	-	22,500,000	67,276,800
Offset to Debt Service	-	-	-	-
Total MBO Transfer	44,776,800	-	22,500,000	67,276,800
FY 2025 (year to date)				
MBO/Lease Requirement	23,823,102	-	11,250,000	35,073,102
Offset to Debt Service	-	-	-	-
Total MBO Transfer	23,823,102	-	11,250,000	35,073,102
Life-to-Date				
MBO/Lease Requirement	318,169,704	34,157,100	202,500,000	554,826,804
Offsets	-	-	(31,847,900)	(31,847,900)
Total Water	**$ 341,992,806**	**$ 34,157,100**	**$ 181,902,100**	**$ 558,052,006**

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				
MBO/Lease Requirement	55,705,700	-	27,500,004	83,205,704
Offset to Debt Service	-	-	-	-
Total MBO Transfer	55,705,700	-	27,500,004	83,205,704
FY 2025 (year to date)				
MBO/Lease Requirement	29,339,700	-	13,750,002	43,089,702
Offset to Debt Service	-	-	-	-
Total MBO Transfer	29,339,700	-	13,750,002	43,089,702
Life-to-Date				
MBO/Lease Requirement	508,597,812	22,859,800	261,250,006	791,786,071
Offsets	(7,100,000)	-	(51,780,661)	(57,959,114)
Total Sewer	**$ 501,497,812**	**$ 22,859,800**	**$ 209,469,345**	**$ 733,826,957**

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

This report includes the following:

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

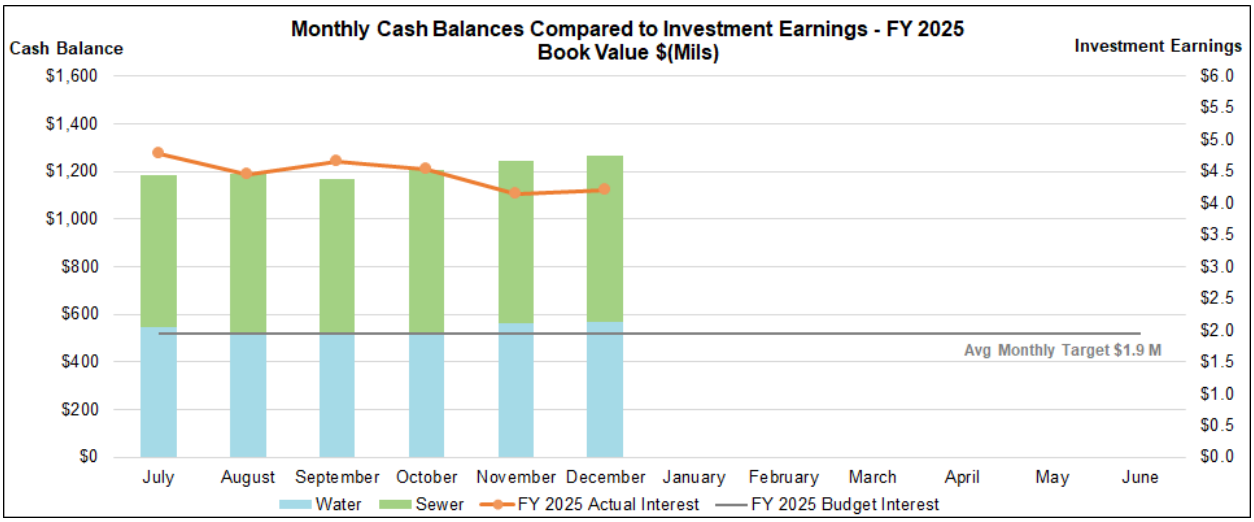
Monthly Cash Balances Compared to Investment Income

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

Cash and investment balances change each month based on Master Bond Ordinance (MBO) funding requirements, operational needs, capital spending pace, and mandatory debt payments. Investment income fluctuates monthly based on cash and investment balances as well as market conditions and investment strategy. For the month of December 2024, GLWA earned investment income of $4.2 million and cumulative FY 2025 earnings through December 2024 of $26.8 million. Total investment income reported includes earnings from revenue requirement funds as well as construction bond funds.

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

Chart 1 – Monthly Cash Balances Compared to Investment Income – Through December 2024



$(Mils)	July	August	September	October	November	December	January	February	March	April	May	June
Water	549	527	527	526	566	569	-	-	-	-	-	-
Sewer	638	662	644	681	680	697	-	-	-	-	-	-
Total	1,187	1,189	1,171	1,207	1,246	1,267	-	-	-	-	-	-
Investment Income	4.8	4.4	4.7	4.5	4.2	4.2	-	-	-	-	-	-

Cash Balance Detail

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

Funds Held Within Trust:

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

Funds Held Outside Trust:

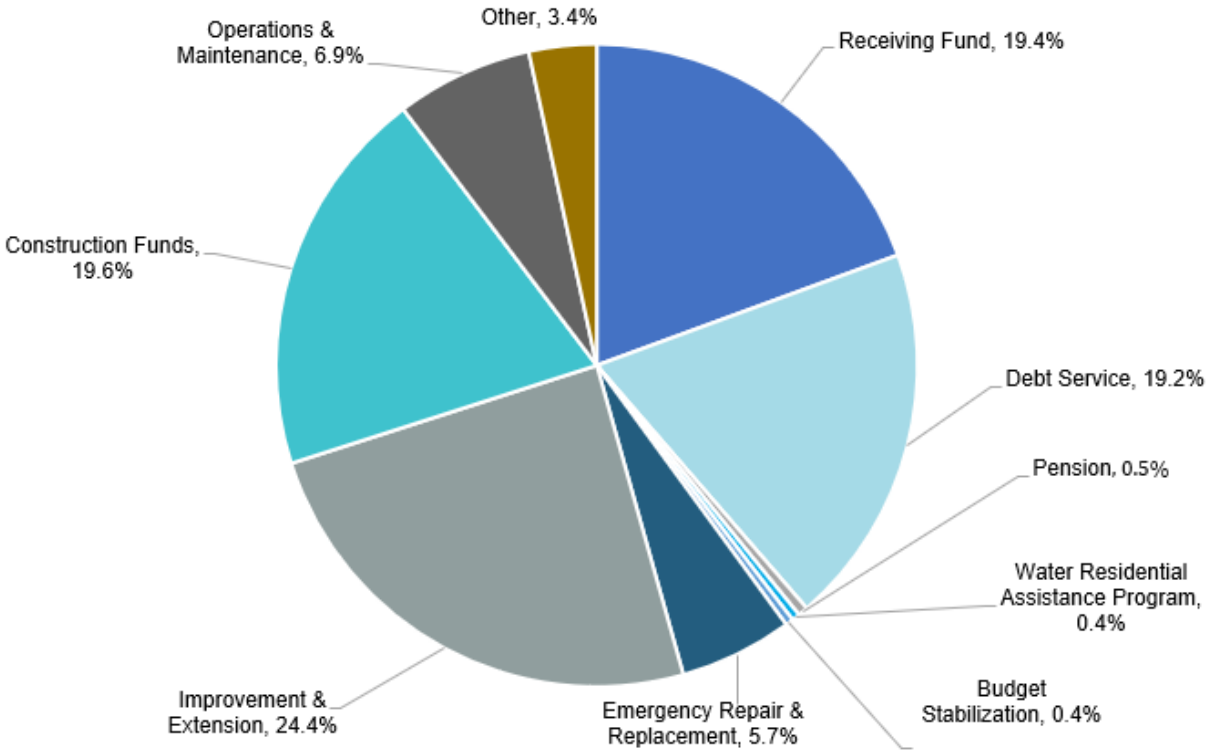
- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors and security deposit funds held on behalf of the City of Flint, 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 2024 - Shows the allocation of the balance among the different categories defined in the section above. The total cash balance for Water Funds as of December 31, 2024 is $569 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 currently supporting the capital program as GLWA evaluates future funding needs.

Chart 2 – Cash Balances - Water Funds as of December 2024

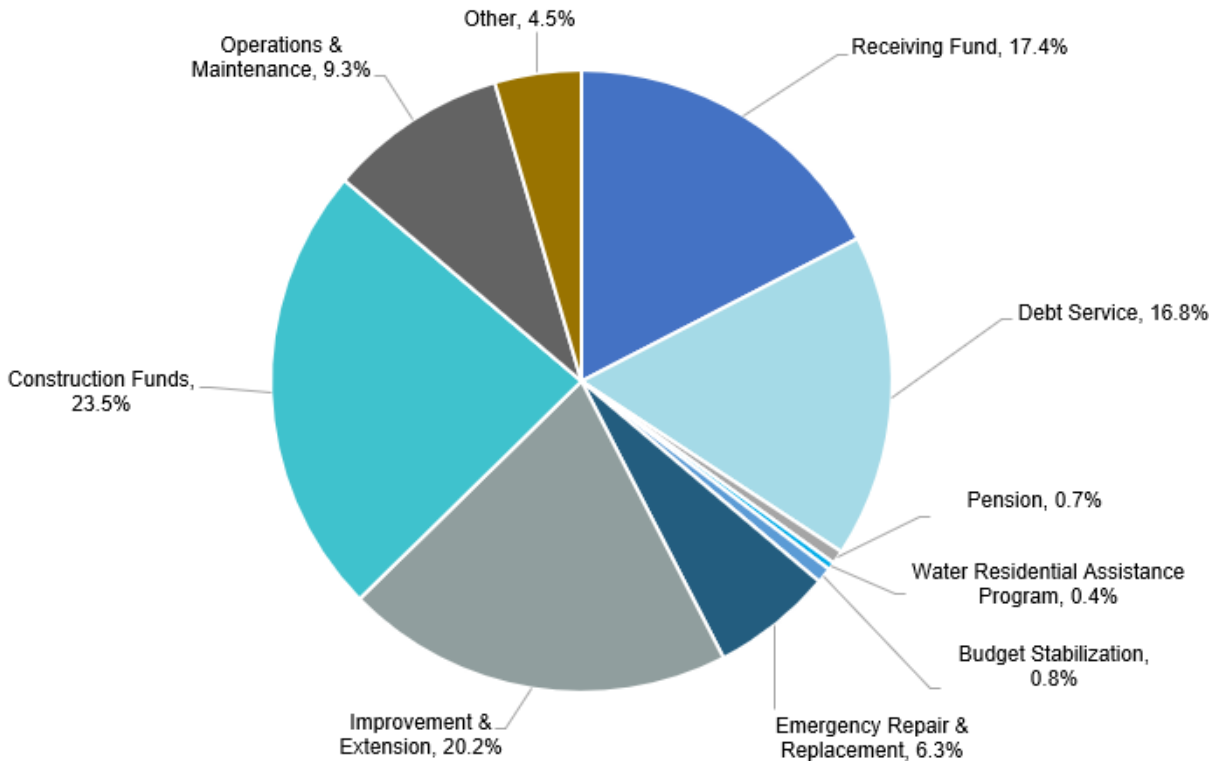


Note: *Due to rounding totals may not equal 100%.*

Chart 3 – Cash Balances - Sewer Funds as of December 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 December 31, 2024 is $697 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 supporting the capital program as GLWA evaluates future funding needs.

Chart 3 – Cash Balances - Sewer Funds as of December 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 and 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 2025 water usage and billed revenue which are provided by DWSD staff. As of December 31, 2024, the DWSD usage was at 98.52% of the budget and billed revenue was at 98.47% 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								
	FY 2025 - Original Budget		FY 2025 - Actual		FY 2025 - Variance		FY 2024 - Actuals	
Month (1)	Volume	Revenue	Volume	Revenue (2)	Volume	Revenue	Volume	Revenue
	Mcf	*$*	*Mcf*	*$*	*Mcf*	*$*	Mcf	*$*
July	241,000	12,395,932	226,703	11,590,136	(14,297)	(805,796)	248,307	12,606,397
August	261,000	13,459,400	240,621	12,171,324	(20,379)	(1,288,076)	255,079	12,913,867
September	248,000	12,773,235	238,868	12,205,143	(9,132)	(568,092)	214,796	11,119,261
October	212,000	10,944,671	216,527	11,222,004	4,527	277,333	222,909	11,409,427
November	208,000	10,711,071	212,832	11,115,046	4,832	403,975	210,687	10,898,684
December	198,000	10,200,009	212,252	11,100,382	14,252	900,373	214,139	11,246,818
January	195,000	10,077,416					224,414	11,263,184
February	207,000	10,656,080					225,042	11,774,408
March	201,000	10,347,960					206,204	11,096,805
April	203,000	10,437,186					213,950	10,552,343
May	193,000	9,948,001					214,474	10,667,783
June	211,000	10,879,139					226,703	10,637,883
Total	2,578,000	132,830,100	1,347,803	69,404,035	(20,197)	(1,080,283)	2,676,703	136,186,859
Subtotals ytd	*1,368,000*	*70,484,318*	*1,347,803*	*69,404,035*	*(20,197)*	*(1,080,283)*		
Achievement of Budget			*98.52%*	*98.47%*				

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

(2) Retail revenues include miscellaneous revenues and penalties

Table 2 – DWSD Retail Water Collections

Water				
Month	**Current Year**	**Prior Year**	**Variance**	**Ratio**
January	8,506,008	8,857,268	(351,261)	-3.97%
February	8,996,740	8,244,713	752,027	9.12%
March	15,842,538	10,417,832	5,424,705	52.07%
April	13,840,518	9,417,449	4,423,069	46.97%
May	5,960,146	12,162,719	(6,202,573)	-51.00%
June	9,045,195	13,467,858	(4,422,663)	-32.84%
July	12,645,121	5,943,286	6,701,835	112.76%
August	10,203,737	11,794,131	(1,590,394)	-13.48%
September	10,837,378	9,790,065	1,047,313	10.70%
October	12,110,080	9,884,937	2,225,143	22.51%
November	8,572,356	10,499,606	(1,927,250)	-18.36%
December	10,277,979	13,663,688	(3,385,709)	-24.78%
Rolling, 12-Month Total	126,837,795	124,143,551		
Rolling, 12-Month Average	10,569,816	10,345,296		

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 2025 sewer billed revenue which are provided by DWSD staff. As of December 31, 2024, the DWSD usage was at 96.62% of the budget and billed revenue was at 96.80% 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								
	FY 2025 - Original Budget		FY 2025 - Actual		FY 2025 - Variance		FY 2024 - Actuals	
Month (1)	Volume	Revenue	Volume (2)	Revenue (3)	Volume	Revenue	Volume	Revenue
	Mcf	*$*	*Mcf*	*$*	*Mcf*	*$*	Mcf	*$*
July	214,000	30,316,100	173,084	26,350,527	(40,916)	(3,965,573)	207,574	29,192,723
August	196,000	29,206,000	195,207	28,301,325	(793)	(904,675)	211,503	29,278,720
September	215,000	30,359,800	198,474	28,536,169	(16,526)	(1,823,631)	178,576	27,476,376
October	180,000	28,256,800	181,932	28,141,699	1,932	(115,101)	184,382	27,700,094
November	181,000	28,322,800	171,499	28,166,266	(9,501)	(156,534)	175,498	26,939,338
December	166,000	27,436,800	192,915	28,831,326	26,915	1,394,526	156,168	26,546,712
January	160,000	27,139,500					182,643	26,882,316
February	177,000	28,085,500					179,551	27,455,737
March	166,000	27,448,400					165,992	26,725,597
April	169,000	27,639,700					179,514	26,737,898
May	166,000	27,458,600					170,754	26,225,089
June	175,000	27,995,600					173,084	26,149,588
Total	2,165,000	339,665,600	1,113,112	168,327,312	(38,888)	(5,570,988)	2,165,240	327,310,189
Subtotals ytd	*1,152,000*	*173,898,300*	*1,113,112*	*168,327,312*	*(38,888)*	*(5,570,988)*		
Achievement of Budget/Goal			*96.62%*	*96.80%*				

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

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

(3) Retail revenues include miscellaneous revenues and penalties

Table 4 – DWSD Retail Sewer Collections

Sewer				
Month	**Current Year**	**Prior Year**	**Variance**	**Ratio**
January	26,248,512	23,760,629	2,487,883	10.47%
February	24,230,304	23,867,073	363,230	1.52%
March	26,438,687	30,697,464	(4,258,777)	-13.87%
April	23,532,381	21,542,671	1,989,710	9.24%
May	22,487,372	24,419,561	(1,932,189)	-7.91%
June	20,945,929	23,769,626	(2,823,696)	-11.88%
July	36,297,569	32,379,222	3,918,346	12.10%
August	22,591,511	25,391,891	(2,800,380)	-11.03%
September	22,367,425	23,489,448	(1,122,023)	-4.78%
October	25,231,098	21,610,149	3,620,949	16.76%
November	23,609,169	25,951,736	(2,342,568)	-9.03%
December	23,914,649	23,249,973	664,676	2.86%
Rolling 12-Month Total	297,894,605	300,129,444		
Rolling, 12-Month Average	24,824,550	25,010,787		

DWSD Retail Water and Sewer Accounts Receivable Aging Report

The DWSD detailed accounts receivable aging is categorized by customer category.

Table 5 is a summary of the monthly sales, total receivables, bad debt allowance and net water and sewer receivables as of December 31, 2024 with comparative totals from June 30, 2024, June 30, 2023 and June 30, 2022. This table does not include past due accounts that have been transferred to the City of Detroit for collection as tax liens.

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

Table 6 is a summary of the total, current and non-current Water and Sewer receivables by category as of December 31, 2024 with comparative totals from December 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 December 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					
		Receivables			
Period Ending	Monthly Sales	Total	Allowance	Net	Days in AR (1)
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
June 30, 2024	38,352,000	324,867,000	(249,922,000)	74,944,000	59
Dec 31, 2024 (2)	40,127,000	346,497,000	(280,600,000)	65,897,000	49

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 $25,890,000 was made in October 2024.

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

	Avg. Balance	Current	> 30 Days	> 60 Days	> 180 Days	A/R Balance
Residential	955.55	14,169,000	10,420,000	37,191,000	150,396,000	212,177,000
		6.7%	*4.9%*	*17.5%*	*70.9%*	*100.0%*
Commercial	1,185.34	6,416,000	2,798,000	6,154,000	10,055,000	25,423,000
		25.2%	*11.0%*	*24.2%*	*39.6%*	*100.0%*
Industrial	3,295.77	4,525,000	871,000	2,246,000	4,440,000	12,082,000
		37.5%	*7.2%*	*18.6%*	*36.7%*	*100.0%*
Tax Exempt	658.83	535,000	216,000	598,000	1,166,000	2,515,000
		21.3%	*8.6%*	*23.8%*	*46.4%*	*100.0%*
Government	555.01	7,749,000	3,208,000	1,790,000	10,499,000	23,245,000
		33.3%	*13.8%*	*7.7%*	*45.2%*	*100.0%*
Drainage	591.92	2,124,000	1,238,000	4,151,000	18,948,000	26,462,000
		8.0%	*4.7%*	*15.7%*	*71.6%*	*100.0%*
Subtotal - Active Accounts	**894.36**	**35,519,000**	**18,751,000**	**52,130,000**	**195,505,000**	**301,905,000**
		11.8%	*6.2%*	*17.3%*	*64.8%*	*100.0%*
Inactive Accounts	118.28	60,000	182,000	1,472,000	42,879,000	44,592,000
		0.1%	*0.4%*	*3.3%*	*96.2%*	*100.0%*
Total	**484.89**	**35,578,000**	**18,933,000**	**53,603,000**	**238,383,000**	**346,497,000**
% of Total A/R		*10.3%*	*5.5%*	*15.5%*	*68.8%*	*100.0%*
Water Fund	105.93	9,799,000	5,546,000	13,712,000	46,637,000	75,695,000
Sewer Fund	378.97	25,779,000	13,387,000	39,890,000	191,746,000	270,803,000
Total Dec 2024 (a)	**484.89**	**35,578,000**	**18,933,000**	**53,603,000**	**238,383,000**	**346,497,000**
Water Fund- Allowance						(54,723,000)
Sewer Fund- Allowance						(225,878,000)
Total Bad Debt Allowance						**(280,600,000)**
Comparative - Dec 2023 (b)	**706.38**	**31,476,000**	**18,068,000**	**52,225,000**	**194,262,000**	**296,031,000**
Difference (a) - (b)		**4,102,000**	**865,000**	**1,377,000**	**44,122,000**	**50,466,000**

The Monthly Wholesale Billings, Receivables, and Collections Report includes the following.

1. Wholesale Water Billings and Collections
2. Wholesale Sewer Billings and Collections
3. Wholesale Water & Sewer Accounts Receivable Aging Reports

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	85
Emergency	0
Older Contracts	2
Total	87

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 2025 water billed usage and revenues. As of December 31, 2024, the billed usage was at 97.71% of the original plan and billed revenue at 99.37% of the original plan. Billings and usage from the City of Flint *are* included as they were assumed in the FY 2025 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 December 31, 2024.

Table 1 – FY 2025 Wholesale Water Billings Report

WHOLESALE WATER CHARGES								
	FY 2025 Charges (2)		FY 2025 - Actual		FY 2025 - Variance		FY 2024 - Actuals	
Month (1)	Volume	Revenue	Volume	Revenue (3)	Volume	Revenue	Volume	Revenue
	Mcf	*$*	*Mcf*	*$*	*Mcf*	*$*	Mcf	$
1 July	1,471,701	33,806,600	1,347,527	32,449,201	(124,174)	(1,357,399)	1,396,012	31,956,320
2 August	1,378,066	32,779,600	1,297,169	31,977,986	(80,897)	(801,614)	1,295,617	30,947,078
3 September	1,252,529	31,226,000	1,315,030	32,104,405	62,501	878,405	1,212,814	29,862,077
4 October	1,040,750	28,617,400	1,051,234	28,946,404	10,484	329,004	1,043,901	27,856,141
5 November	902,080	27,224,500	872,926	26,975,632	(29,154)	(248,868)	899,934	26,481,380
6 December	965,968	27,817,100	966,671	27,877,869	703	60,769	947,841	26,904,465
7 January	979,263	27,960,900					984,406	27,231,881
8 February	869,226	26,840,000					877,428	26,143,840
9 March	946,913	27,587,200					930,938	26,675,356
10 April	904,594	27,235,000					886,646	26,342,756
11 May	1,122,987	29,809,800					1,101,158	28,684,891
12 June	1,440,113	33,505,700					1,313,310	31,043,002
Total	13,274,190	354,409,800	6,850,557	180,331,497	(160,537)	(1,139,703)	12,890,005	340,129,187
Subtotals ytd	*7,011,094*	*181,471,200*	*6,850,557*	*180,331,497*	*(160,537)*	*(1,139,703)*		
Achievement of Original Plan			*97.71%*	*99.37%*				

(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 2025 water supply system charge schedule.

(3) 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

Table 2 - Wholesale Water Collections

Water				
Month	**Current Year**	**Prior Year**	**Variance**	**Ratio**
January	24,448,936	19,182,054	5,266,882	27.46%
February	29,100,065	26,553,529	2,546,536	9.59%
March	24,740,554	26,074,213	(1,333,659)	-5.11%
April	26,856,179	20,940,451	5,915,728	28.25%
May	25,838,255	29,265,308	(3,427,053)	-11.71%
June	24,182,036	29,370,704	(5,188,669)	-17.67%
July	30,278,936	22,645,008	7,633,928	33.71%
August	25,054,796	36,275,672	(11,220,876)	-30.93%
September	31,569,804	29,955,755	1,614,049	5.39%
October	29,858,946	26,617,271	3,241,675	12.18%
November	29,728,772	35,490,010	(5,761,238)	-16.23%
December	33,080,276	28,246,829	4,833,447	17.11%
Rolling 12-Month Total	334,737,555	330,616,805		
Rolling, 12-Month Average	27,894,796	27,551,400		

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	14
Emergency	0
Older Contracts	4
Total	18

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 2025 sewer billed revenue. As of December 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 below the twelve-month period ending December 31, 2024.

Table 3 – FY 2025 Wholesale Sewer Billings Report

WHOLESALE SEWER CHARGES								
	FY 2025 Charges		FY 2025 - Actual		FY 2025 - Variance		FY 2024 - Actuals	
Month (1)	Volume (2)	Revenue	Volume (2)	Revenue	Volume (2)	Revenue	Volume	Revenue
	Mcf	*$*	*Mcf*	*$*	*Mcf*	*$*	*Mcf*	*$*
1 July	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
2 August	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
3 September	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
4 October	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
5 November	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
6 December	N/A	23,883,900	N/A	23,883,900	N/A	-	N/A	23,494,800
7 January	N/A	23,883,900	N/A		N/A		N/A	23,494,800
8 February	N/A	23,883,900	N/A		N/A		N/A	23,494,800
9 March	N/A	23,883,900	N/A		N/A		N/A	23,494,800
10 April	N/A	23,883,900	N/A		N/A		N/A	23,494,800
11 May	N/A	23,883,900	N/A		N/A		N/A	23,494,800
12 June	N/A	23,883,900	N/A		N/A		N/A	23,494,800
Total		286,606,800		143,303,400		-		281,937,600
Subtotals ytd		143,303,400		143,303,400		-		
Achievement of Original Plan				*100.00%*				

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.
(2) Not tracked as part of the wholesale sewer charges.

Table 4 - Wholesale Sewer Collections

Sewer				
Month	**Current Year**	**Prior Year**	**Variance**	**Ratio**
January	21,117,470	17,636,972	3,480,498	19.73%
February	27,856,400	33,102,769	(5,246,369)	-15.85%
March	23,460,900	23,746,469	(285,569)	-1.20%
April	18,685,600	17,769,710	915,890	5.15%
May	28,363,300	18,213,966	10,149,334	55.72%
June	23,300,100	38,287,549	(14,987,449)	-39.14%
July	18,438,961	22,331,831	(3,892,870)	-17.43%
August	13,987,797	22,377,366	(8,389,569)	-37.49%
September	25,450,281	18,770,419	6,679,862	35.59%
October	13,037,715	23,107,016	(10,069,301)	-43.58%
November	33,933,304	27,958,885	5,974,419	21.37%
December	23,958,644	21,351,498	2,607,146	12.21%
Rolling 12-Month Total	271,590,472	284,654,450		
Rolling, 12-Month Average	22,632,539	23,721,204		

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 5 - Wholesale Accounts Receivable Aging Report Summary is a summary of the total, current and non-current receivables by category as of December 31, 2024.

Table 6 - Wholesale Accounts Receivable Aging Report, Net Dearborn is the same summary *without* the past due balances for the Dearborn. Four water accounts comprise the past due balances reported. Three accounts reflect a combined past due balance of $315,000 which was fully paid in January. The remaining past due account of $121,000 made progress toward their past due balance in February. GLWA staff continues to work with the community to become current with their balance.

The Sewer accounts reported during this period are current. The IWC past due balances includes one account with upcoming anticipated payment and $23,000 in past due amounts that were fully paid by February. The Pollutant Surcharge past due balance consists of smaller account holders that GLWA staff continue to communicate with.

Table 5 - Wholesale Accounts Receivable Aging Report Summary

	Total	Current	1-45 Days	46-74 Days	75-104 Days	>105 Days
Water	41,272,277	33,167,945	453,594	64,167	68,738	7,517,832
Sewer	14,066,261	14,066,261	-	-	-	-
IWC	558,002	528,181	9,258	1,767	7,464	11,332
Pollutant	298,450	232,497	41,401	12,050	2,004	10,498
Total	56,194,990	47,994,884	504,253	77,983	78,207	7,539,662
	100.00%	85.41%	0.90%	0.14%	0.14%	13.42%

Table 6 - Wholesale Accounts Receivable Aging Report, Net of Dearborn

	Total	Current	1-45 Days	46-74 Days	75-104 Days	>105 Days
Water	32,786,942	32,350,656	389,428	-	4,572	42,286
Sewer	14,066,261	14,066,261	-	-	-	-
IWC	558,002	528,181	9,258	1,767	7,464	11,332
Pollutant	298,450	232,497	41,401	12,050	2,004	10,498
Total	47,709,655	47,177,595	440,087	13,817	14,040	64,116
	100.00%	98.88%	0.92%	0.03%	0.03%	0.13%

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 and Receipts
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 2025 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 8% through December 31, 2024 compared to the four-year historical average ratio of required receipts exceeding disbursements by 7% since July 1, 2020.

Sewer fund receipts were at a breakeven status through December 31, 2024 compared to the four-year historical average ratio of required receipts exceeding disbursements by 5% since July 1, 2020.

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 years. 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 years. The black line at the zero highlights the minimum goal for net receipts.

Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements

		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 Thru December 31
	Water					
1	Receipts	336,642,021	338,117,694	363,335,474	374,252,221	200,313,171
2	MOU Adjustments	-	-	-	-	-
3	Adjusted Receipts	336,642,021	338,117,694	363,335,474	374,252,221	200,313,171
4	Disbursements	(308,713,407)	(316,495,360)	(349,186,375)	(353,639,121)	(185,752,474)
5	Receipts Net of Required Transfers	27,928,614	21,622,334	14,149,099	20,613,100	14,560,697
6	I&E Transfer	(31,991,687)	(26,622,862)	(9,898,100)	(28,618,500)	-
7	Net Receipts	(4,063,073)	(5,000,528)	4,250,999	(8,005,400)	14,560,697
8	*Ratio of Receipts to Required Disbursements (Line 3/Line 4)*	*109%*	*107%*	*104%*	*106%*	*108%*
	Sewer					
9	Receipts	472,871,853	471,979,297	498,888,416	506,731,576	245,539,450
10	MOU Adjustments	-	-	-	-	-
11	Adjusted Receipts	472,871,853	471,979,297	498,888,416	506,731,576	245,539,450
12	Disbursements	(436,600,883)	(450,701,751)	(473,516,238)	(477,450,794)	(245,398,595)
13	Receipts Net of Required Transfers	36,270,970	21,277,546	25,372,178	29,280,782	140,855
14	I&E Transfer	(40,504,727)	(37,651,788)	(26,766,200)	(12,468,000)	-
15	DWSD Shortfall Advance	-	-	-	-	-
16	Shortfall Repayment (principal)	18,206,431	8,296,578	-	-	-
17	Net Receipts	13,972,674	(8,077,664)	(1,394,022)	16,812,782	140,855
18	*Ratio of Receipts to Required Disbursements (Line 11/Line 12)*	*108%*	*105%*	*105%*	*106%*	*100%*
	Combined					
19	Receipts	809,513,874	810,096,991	862,223,890	880,983,797	445,852,620
20	MOU Adjustments	-	-	-	-	-
21	Adjusted Receipts	809,513,874	810,096,991	862,223,890	880,983,797	445,852,620
22	Disbursements	(745,314,290)	(767,197,111)	(822,702,613)	(831,089,915)	(431,151,069)
23	Receipts Net of Required Transfers	64,199,584	42,899,880	39,521,277	49,893,882	14,701,551
24	I&E Transfer	(72,496,414)	(64,274,650)	(36,664,300)	(41,086,500)	-
25	Shortfall Advance	-	-	-	-	-
26	Shortfall Repayment	18,206,431	8,296,578	-	-	-
27	Net Receipts	9,909,601	(13,078,192)	2,856,977	8,807,382	14,701,551
28	*Ratio of Receipts to Required Disbursements (Line 21/Line 22)*	*109%*	*106%*	*105%*	*106%*	*103%*

Chart 1 – GLWA 12-Month Net Receipts – Water

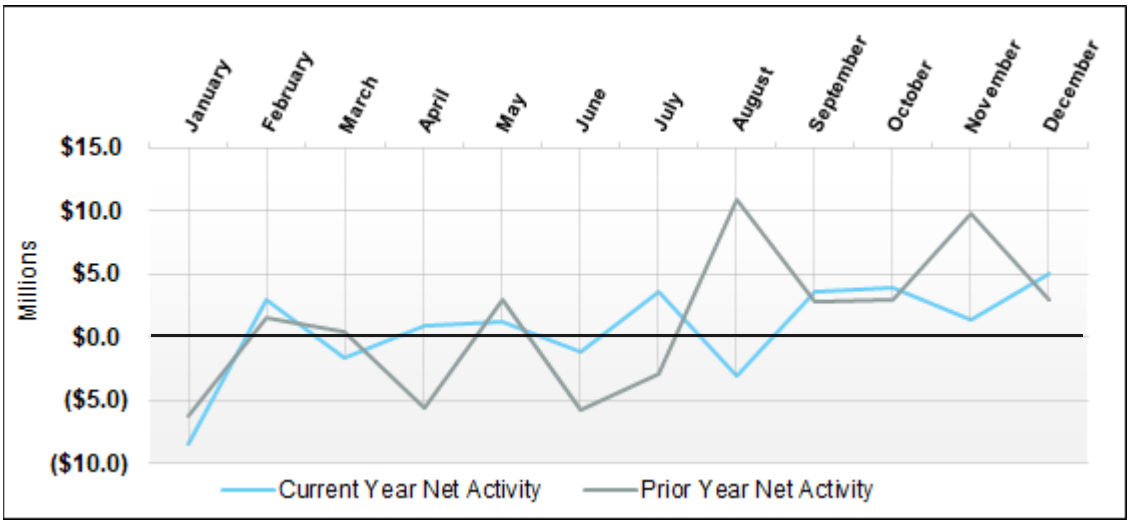
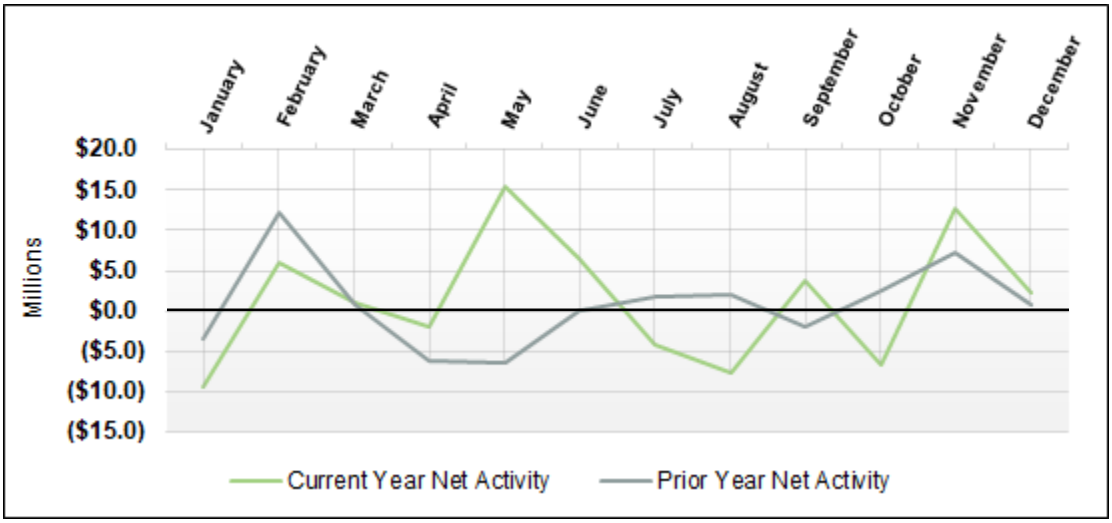


Chart 2 – GLWA 12-Month Net Receipts – Sewer



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 2025 reflects six months of activity to date.

Water fund receipts exceeded required disbursements by 6% through December 31, 2024 compared to the four-year historical average ratio of required receipts exceeding disbursements by 5% since July 1, 2020.

Sewer fund receipts exceeded required disbursements by 2% through December 31, 2024 compared to the four-year historical average of required receipts exceeding disbursements by 3% since July 1, 2020.

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

		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 Thru December 31
	Water					
1	Receipts	102,067,423	101,964,963	123,766,624	123,818,287	64,680,690
2	MOU Adjustments	-	-		-	-
3	Adjusted Receipts	102,067,423	101,964,963	123,766,624	123,818,287	64,680,690
4	Disbursements	(100,707,200)	(94,495,601)	(117,666,100)	(117,290,591)	(61,297,857)
5	Receipts Net of Required Transfers	1,360,223	7,469,362	6,100,524	6,527,696	3,382,833
6	I&E Transfer	-	-	-	-	-
7	Net Receipts	1,360,223	7,469,362	6,100,524	6,527,696	3,382,833
8	*Ratio of Receipts to Required Disbursements (Line 3/Line 4)*	*101%*	*108%*	*105%*	*106%*	*106%*
	Sewer					
9	Receipts	308,210,767	291,280,896	298,896,942	296,088,194	154,056,234
10	MOU Adjustments	-	-	-	-	-
11	Adjusted Receipts	308,210,767	291,280,896	298,896,942	296,088,194	154,056,234
12	Disbursements	(295,100,771)	(285,256,000)	(283,095,100)	(288,119,517)	(150,553,522)
13	Receipts Net of Required Transfers	13,109,996	6,024,896	15,801,842	7,968,677	3,502,712
14	I&E Transfer	-	-	-	-	-
15	Shortfall Advance from GLWA	-	-	-	-	-
16	Net Receipts	13,109,996	6,024,896	15,801,842	7,968,677	3,502,712
17	*Ratio of Receipts to Required Disbursements (Line 11/Line 12)*	*104%*	*102%*	*106%*	*103%*	*102%*
	Combined					
18	Receipts	410,278,190	393,245,859	422,663,566	419,906,481	218,736,924
19	MOU Adjustments	-	-	-	-	-
20	Adjusted Receipts	410,278,190	393,245,859	422,663,566	419,906,481	218,736,924
21	Disbursements	(395,807,971)	(379,751,601)	(400,761,200)	(405,410,108)	(211,851,379)
22	Receipts Net of Required Transfers	14,470,219	13,494,258	21,902,366	14,496,373	6,885,545
23	I&E Transfer	-	-	-	-	-
24	Shortfall Advance from GLWA	-	-	-	-	-
25	Net Receipts	14,470,219	13,494,258	21,902,366	14,496,373	6,885,545
26	*Ratio of Receipts to Required Disbursements (Line 20/Line 21)*	*104%*	*104%*	*105%*	*104%*	*103%*

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

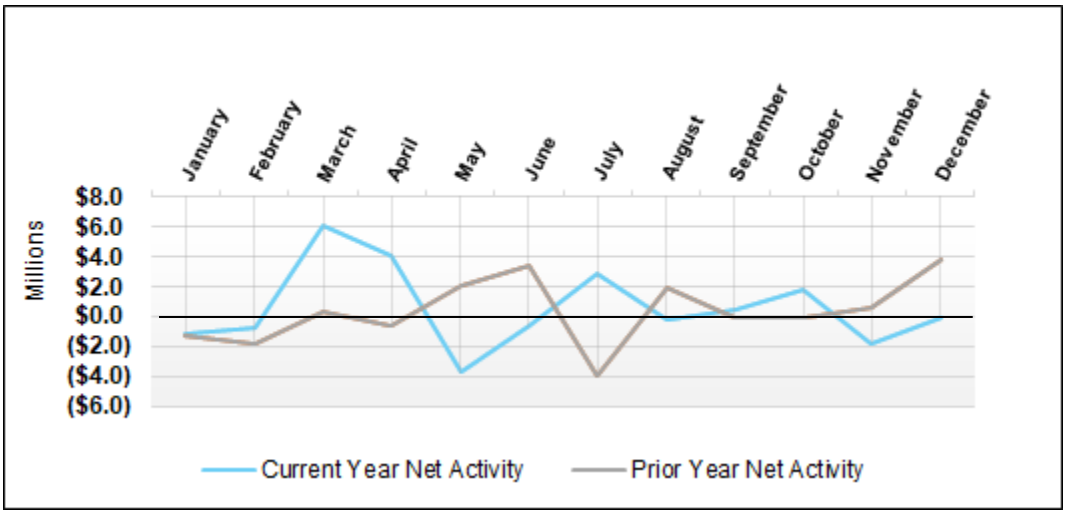
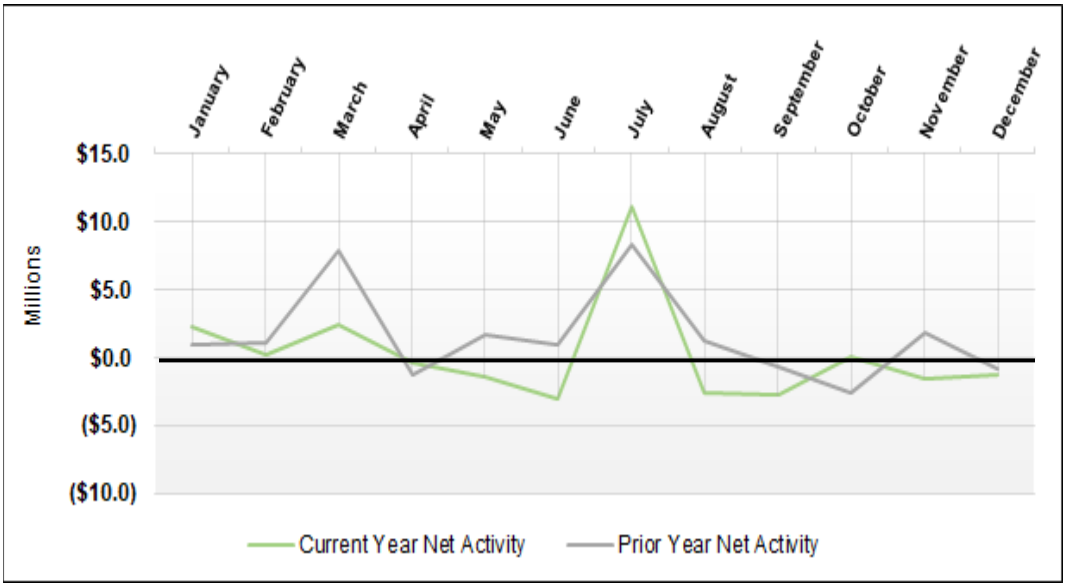


Chart 4 – DWSD 12-Month Net Receipts – Sewer



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 2025 reflects six months of activity to date.

Water fund net receipts exceeded required disbursements by 7% through December 31, 2024 in line with the four-year historical average ratio of required receipts exceeding disbursements by 6% since July 1, 2020.

Sewer fund receipts exceeded required disbursements by 1% through December 31, 2024 compared to the four-year historical average ratio of required receipts exceeding disbursements by 4% since July 1, 2020.

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

		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 Thru December 31
	Water					
1	Receipts	438,709,444	440,082,657	487,102,098	498,070,508	264,993,861
2	MOU Adjustments	-	-	-	-	-
3	Adjusted Receipts	438,709,444	440,082,657	487,102,098	498,070,508	264,993,861
4	Disbursements	(409,420,607)	(410,990,961)	(466,852,475)	(470,929,712)	(247,050,331)
5	Receipts Net of Required Transfers	29,288,837	29,091,696	20,249,623	27,140,796	17,943,530
6	I&E Transfer	(31,991,687)	(26,622,862)	(9,898,100)	(28,618,500)	-
7	Net Receipts	(2,702,850)	2,468,834	10,351,523	(1,477,704)	17,943,530
8	*Ratio of Receipts to Required Disbursements (Line 3/Line 4)*	*107%*	*107%*	*104%*	*106%*	*107%*
	Sewer					
9	Receipts	781,082,620	763,260,193	797,785,358	802,819,770	399,595,683
10	MOU Adjustments	-	-	-	-	-
11	Adjusted Receipts	781,082,620	763,260,193	797,785,358	802,819,770	399,595,683
12	Disbursements	(731,701,654)	(735,957,751)	(756,611,338)	(765,570,311)	(395,952,117)
13	Receipts Net of Required Transfers	49,380,966	27,302,442	41,174,020	37,249,459	3,643,566
14	I&E Transfer	(40,504,727)	(37,651,788)	(26,766,200)	(12,468,000)	-
15	Shortfall Advance	-	-	-	-	-
16	Shortfall Repayment (principal)	18,206,431	8,296,578	-	-	-
17	Net Receipts	27,082,670	(2,052,768)	14,407,820	24,781,459	3,643,566
18	*Ratio of Receipts to Required Disbursements (Line 11/Line 12)*	*107%*	*104%*	*105%*	*105%*	*101%*
	Combined					
19	Receipts	1,219,792,064	1,203,342,850	1,284,887,456	1,300,890,278	664,589,544
20	MOU Adjustments	-	-	-	-	-
21	Adjusted Receipts	1,219,792,064	1,203,342,850	1,284,887,456	1,300,890,278	664,589,544
22	Disbursements	(1,141,122,261)	(1,146,948,712)	(1,223,463,813)	(1,236,500,023)	(643,002,448)
23	Receipts Net of Required Transfers	78,669,803	56,394,138	61,423,643	64,390,255	21,587,096
24	I&E Transfer	(72,496,414)	(64,274,650)	(36,664,300)	(41,086,500)	-
25	Shortfall Advance	-	-	-	-	-
26	Shortfall Repayment	18,206,431	8,296,578	-	-	-
27	Net Receipts	24,379,820	416,066	24,759,343	23,303,755	21,587,096
28	*Ratio of Receipts to Required Disbursements (Line 21/Line 22)*	*107%*	*105%*	*105%*	*105%*	*103%*

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: Haran Stanley, Affordability & Assistance Management Professional

Re: Affordability & Assistance FY25 Q2 report

The Quarterly WRAP Report

The Water Residential Assistance Program (WRAP) provides sustainable funding for qualifying households served by the Great Lakes Water Authority (GLWA) member partners. GLWA funds the program at an amount equal to 0.5 percent of budgeted revenues for the Regional System and not less than 0.5 percent but not greater than 1.0 percent of budgeted revenues for the Detroit Water and Sewerage Department (DWSD) Local System. The budgeted WRAP funding for FY 2025 is $6.7 million for water and sewer services combined.

The approved guidelines include funding for a) payment assistance, b) water audit, and c) healthy home and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut-off can receive assistance with paying down arrears and receive a monthly bill credit unique to their household. Bill credits are calculated so that the credit applied leaves that household expected to pay approximately 3% or less of their household income toward the monthly water bill. To participate in WRAP, an applicant must have a household gross income at or below 200% of the federal poverty income threshold.

GLWA works with three WRAP service delivery partners that offer other support services to households enrolled in the program, such as financial coaching and energy-conserving resources. Currently, GLWA has three community action agencies (CAA) and nonprofit organizations working as SDPs and administering the WRAP program across five WRAP service areas. Macomb Community Agency (MCA) services Macomb County, Lapeer County, and St. Clair County. Wayne Metropolitan Community Action Agency (Wayne Metro) services the City of Detroit (Lifeline Plan), the City of Flint, Monroe County, Washtenaw County, and Wayne County. United Way for Southeastern Michigan (UWSEM) services Oakland County.

This report provides the enrollment, inflow, and spending data for the first six months of fiscal year 2025 across these WRAP service areas.

Proposed Action: Receive and file this report.



WRAP Enrollment, Inflow, and Spend Data (FY2022 – FY2025)

Presented to the Great Lakes Water Authority Audit Committee

On March 28, 2025

WRAP
Water Residential Assistance Program

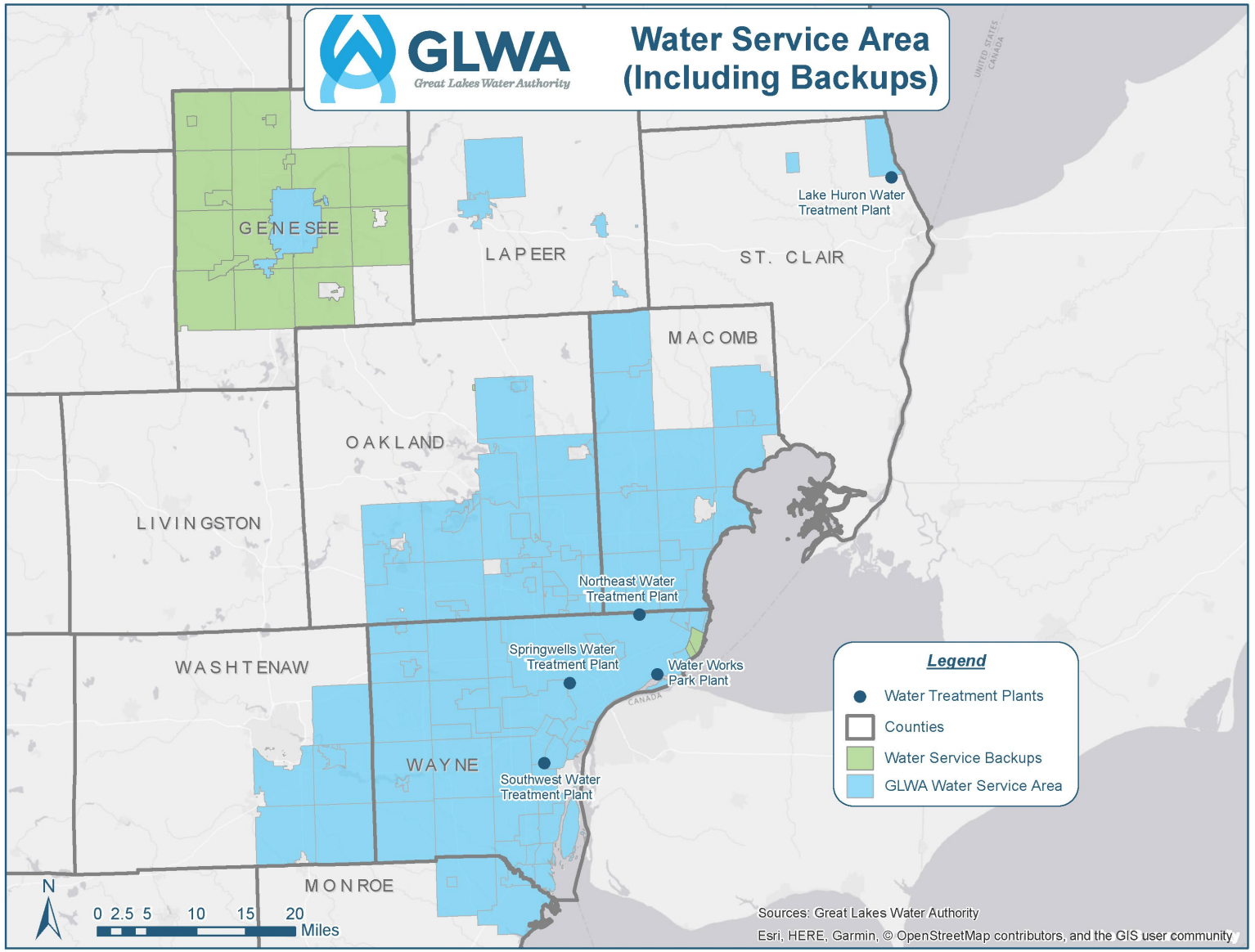
Background

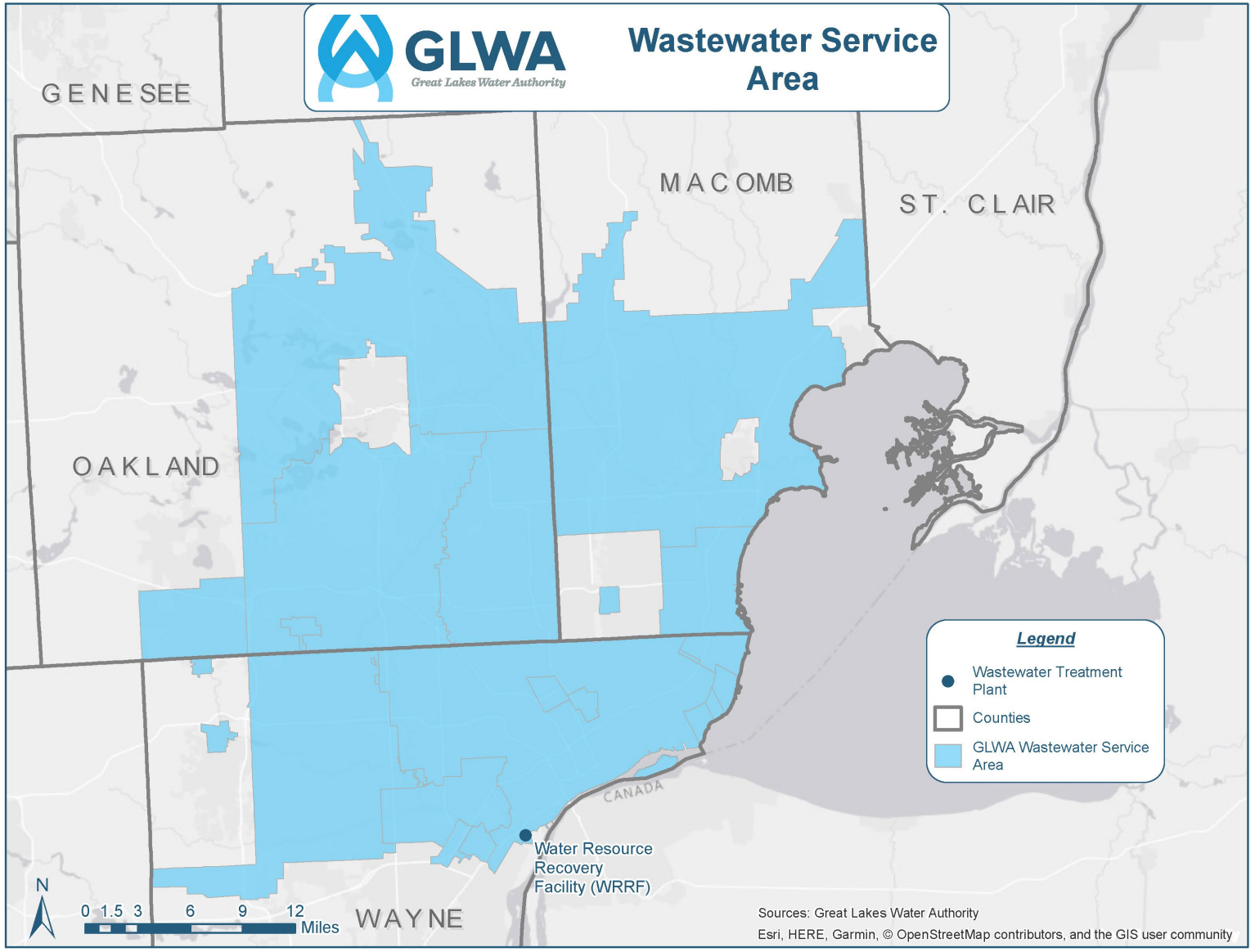
WRAP, a first-of-its-kind program in the country offering households water and sewer services in the GLWA service area bill credits, arrearage assistance, as well as measures to help maintain a healthy home with conservation repairs. GLWA partners with agencies such as Macomb Community Action (MCA), United Way for Southeastern Michigan (United Way), and Wayne Metropolitan Community Action Agency (Wayne Metro) to serve as service delivery partners, delivering WRAP services to residents.

GLWA WRAP Service Areas

- ✓ **Area 1** – The City of Detroit – Data for Detroit is not included in this quarterly report analysis because the Detroit Water and Sewerage Department (DWSD) water affordability program for Detroit households, referred to as the Lifeline Plan, is reported on separately by DWSD
- ✓ **Area 2** - The City of Flint
- ✓ **Area 3** – Wayne County (not including Detroit), Monroe, and Washtenaw Counties
- ✓ **Area 4** – Oakland County
- ✓ **Area 5** – Macomb, Lapeer, and St. Clair Counties

GLWA
Great Lakes Water Authority


GLWA
Great Lakes Water Authority
Water Service Area
(Including Backups)
GENESEE
LAPEER
ST. CLAIR
MACOMB
OAKLAND
LIVINGSTON
WASHTENAW
WAYNE
MONROE
Lake Huron Water Treatment Plant
Northeast Water Treatment Plant
Springwells Water Treatment Plant
Water Works Park Plant
Southwest Water Treatment Plant
Legend
Water Treatment Plants
Counties
Water Service Backups
GLWA Water Service Area
N
0 2.5 5 10 15 20
Miles
Sources: Great Lakes Water Authority
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community


GLWA
Great Lakes Water Authority
Wastewater Service Area
GENESEE
MACOMB
ST. CLAIR
OAKLAND
WAYNE
CANADA
Legend
Wastewater Treatment Plant
Counties
GLWA Wastewater Service Area
Water Resource Recovery Facility (WRRF)
N
0 1.5 3 6 9 12
Miles
Sources: Great Lakes Water Authority
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Direct Client Assistance

Bill Credits

- Bill credit amount is unique to each household and is based on their annual income and bill amount
- Targeting that after the bill credit is applied, the bill amount the household is expected to pay is ~3% of the household income
- Rapid Assistance is available for participants who can't pay their portion of their bill
- For households who qualify, WRAPfinity is available beyond Year Two of WRAP



Arrearage Assistance

- Eligible households that have a past due balance are eligible to receive up to $1,200 in arrearage assistance upon enrollment
- Additionally, households may be eligible to receive an additional amount of up to $1,200 in Year Two of WRAP



Other Program Benefits

- Empowers service delivery partners to work with clients directly to review progress in making payments
- Removes the need for communities to verify on-time payments
- Reduces reporting burden at the community level
- A household does not need to have a past due balance or be in shutoff status to enroll in WRAP



GLWA
Great Lakes Water Authority

Healthy Home Conservation Measures & Limited Home Repairs

Conservation Measures

- Up to $2,000 in services
- Home Water Audit
- Evaluation of equipment flaws or damages that would create an unintentional increase in water use
- Educational information regarding water usage



Limited Home Repairs

- Toilet and associated plumbing
- Shower or bath-associated plumbing
- Bath & Kitchen faucet and associated plumbing
- Water piping in households, including shut-offs valves and supply lines.
- Utility tub faucet and controls repair/replacement
- Plumbing repairs to address leaks and reduce usage
- Water heater
- Repairs to boilers to address leaks

Heathy Home Program Benefits

- An emphasis on creating a healthy home allows for repairs of leaking or nonfunctioning plumbing and other water fixtures to create a safe and livable home
- Replace lead-based fixtures in the kitchen, bathroom, and utility room



GLWA
Great Lakes Water Authority

WRAP Funding Terms

Budgeted Funding

- This is calculated one half of one percent or 0.05% of GLWA revenue allocated for WRAP each fiscal year
- The amount the GLWA Board of Directors approves as part of the annual budget

Carryforward

- The budgeted funds remaining from the prior fiscal year
- This amount is confirmed with the service delivery partner as part of the program year closing process

Total Inflows

- Empowers service delivery partners to work with clients directly to review progress in making payments
- Removes the need for communities to verify on-time payments
- Reduces reporting burden at the community level
- A household does not need to have a past due balance or be in shutoff status to enroll in WRAP

Spending

- Empowers service delivery partners to work with clients directly to review progress in making payments
- Removes the need for communities to verify on-time payments
- Reduces reporting burden at the community level
- A household does not need to have a past due balance or be in shutoff status to enroll in WRAP

Carryforward = Prior Year Budgeted Funding – Prior Year Spending
Total Inflows = Budgeted Funding + Carryforward

GLWA Great Lakes Water Authority

How Does GLWA Fund WRAP?

WRAP resources are allocated among service areas based on the WRAP funding provided by that service area.

Table 2 - FY 2025 Water Residential Assistance Program Funding - Regional & Local Funding

Service Area	Direct Assistance	Conservation	Administration	Lifeline	Total WRAP Allocation
Area 1 - City of Detroit	**$ -**	**$ -**	**$ -**	**$ 3,573,400**	**$ 3,573,400**
Local	-	-	-	2,249,500	2,249,500
Regional	-	-	-	1,323,900	1,323,900
Area 2 - City of Flint	**37,264**	**9,316**	**8,220**		**54,800**
Regional	37,264	9,316	8,220		54,800
Area 3 - Wayne (Not Including Detroit), Washtenaw, Monroe Counties	**827,016**	**206,754**	**182,430**		**1,216,200**
Regional	827,016	206,754	182,430		1,216,200
Area 4 - Oakland County	**684,148**	**171,037**	**150,915**		**1,006,100**
Regional	684,148	171,037	150,915		1,006,100
Area 5 - Macomb, St. Clair, Lapeer Counties	**539,220**	**130,720**	**147,060**		**817,000**
Regional	539,220	130,720	147,060		817,000
Grand Total	**$ 2,087,648**	**$ 517,827**	**$ 488,625**	**$ 3,573,400**	**$ 6,667,500**

Local funding = DWSD funding collected from DWSD customers that is used solely for DWSD Lifeline households

Regional funding = GLWA funding collected from GLWA customers that are used for households in their respective counties

Source: 6A2 WRAP Funding Report August 23, 2024 Audit Committee Document, PDF page 8

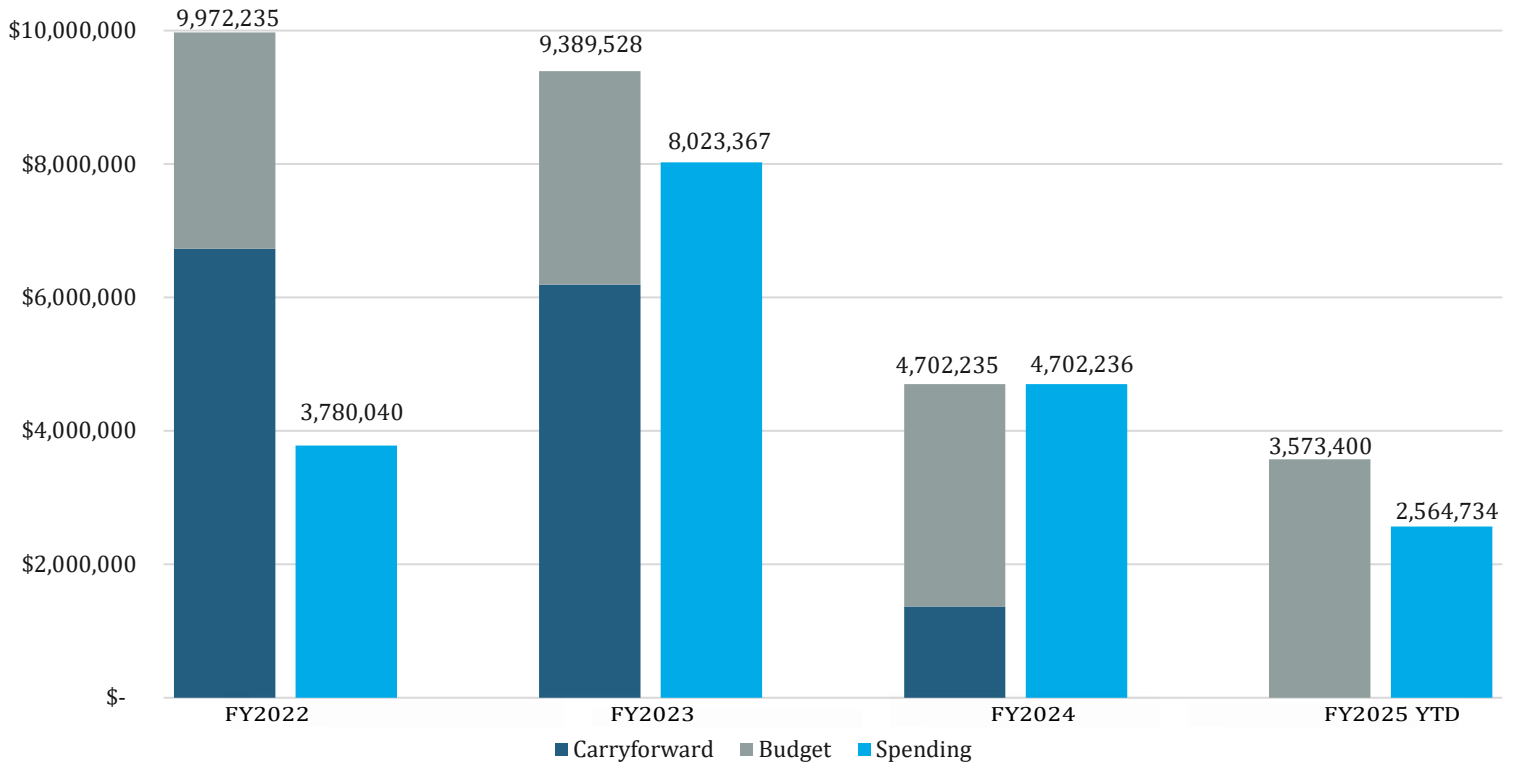
GLWA Great Lakes Water Authority



Area 1 (City of Detroit)

Service Delivery Partner Wayne Metropolitan Community Action Agency provides Lifeline services to residents throughout the City of Detroit. WRAP is one of multiple funding sources for the Lifeline Program.

Area 1 - WRAP Inflows and Uses FY 2022 through December 31, 2024

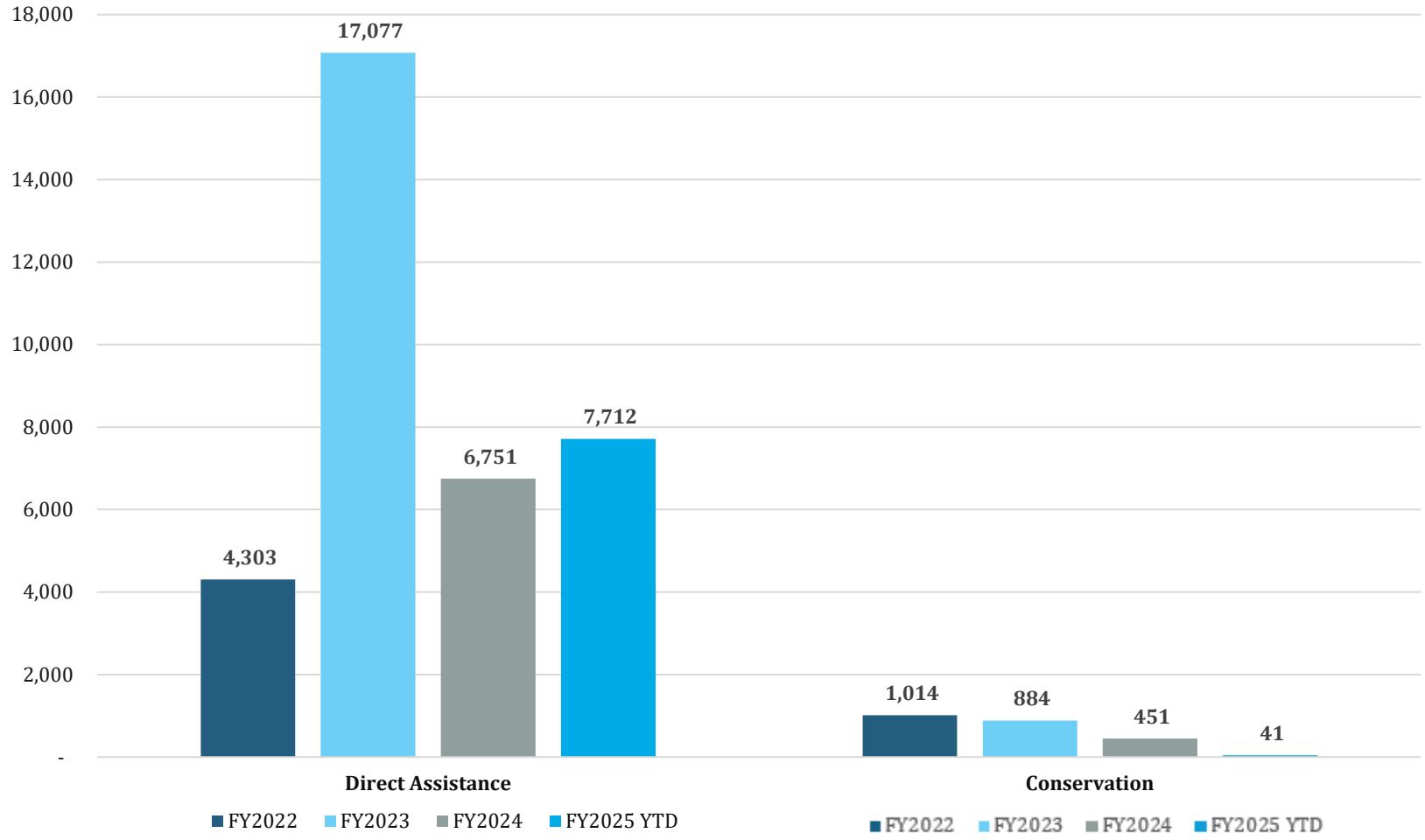


	FY2022		FY2023		FY2024		FY2025 YTD	
Carryforward Balance	$6,728,566		$6,192,195		$1,366,161		$0	
Current Year Budget	$3,243,669		$3,197,333		$3,336,074		$3,573,400	
Total Inflows	$9,972,235		$9,389,528		$4,702,235		$3,573,400	
Current Year Spending		$3,780,040		$8,023,367		$4,702,236		$2,564,734

- WRAP is one of the multiple funding sources used for the Detroit Water & Sewerage Department's Lifeline Program.
- Total Inflows = Budgeted Funding + Carryforward
- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of the households' income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024)

GLWA Great Lakes Water Authority

Area 1 - WRAP Household Enrollments by GLWA Fiscal Year (July-June)



- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY2025 (July 2024 - December 2024).

GLWA Great Lakes Water Authority



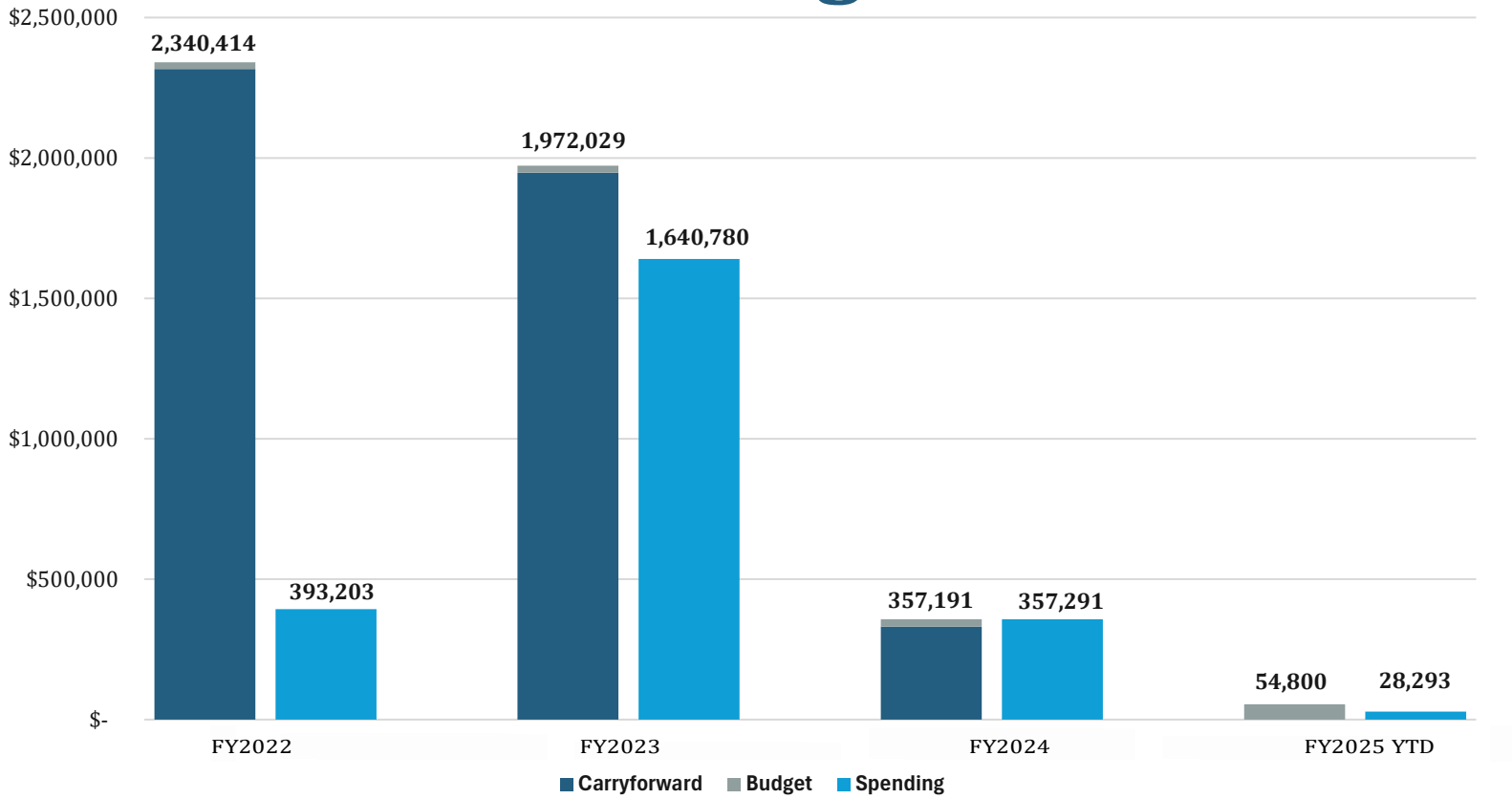
Area 2 (City of Flint)

WRAP
Water Residential Assistance Program
GLWA

Service Delivery Partner Wayne Metropolitan Community Action Agency provides WRAP services to residents throughout the City of Flint.

Wayne Metropolitan
Community Action Agency
Established 1971

Area 2 - WRAP Inflows and Uses FY 2022 through December 31, 2024

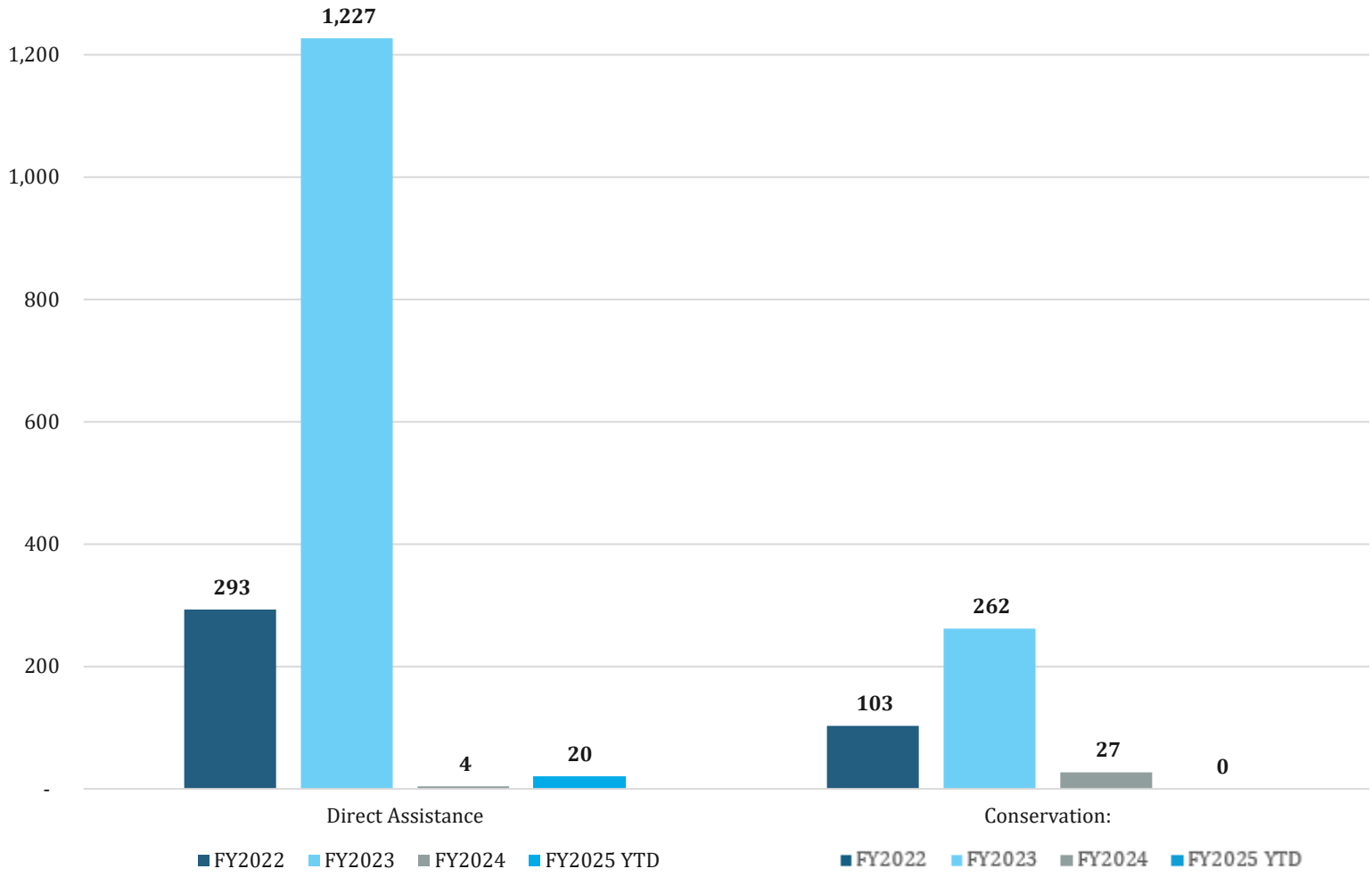


	FY2022		FY2023		FY2024		FY2025 YTD	
Carryforward Balance	$2,317,015		$1,947,211		$331,349		$0	
Current Year Budget	$23,399		$24,818		$25,942		$54,800	
Total Inflows	$2,340,414		$1,972,029		$357,291		$54,800	
Current Year Spending		$393,203		$1,640,780		$357,291		$28,293

- Total Inflows = Budgeted Funding + Carryforward
- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024)

GLWA Great Lakes Water Authority

Area 2 - WRAP Household Enrollments by GLWA Fiscal Year (July-June)



- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024).

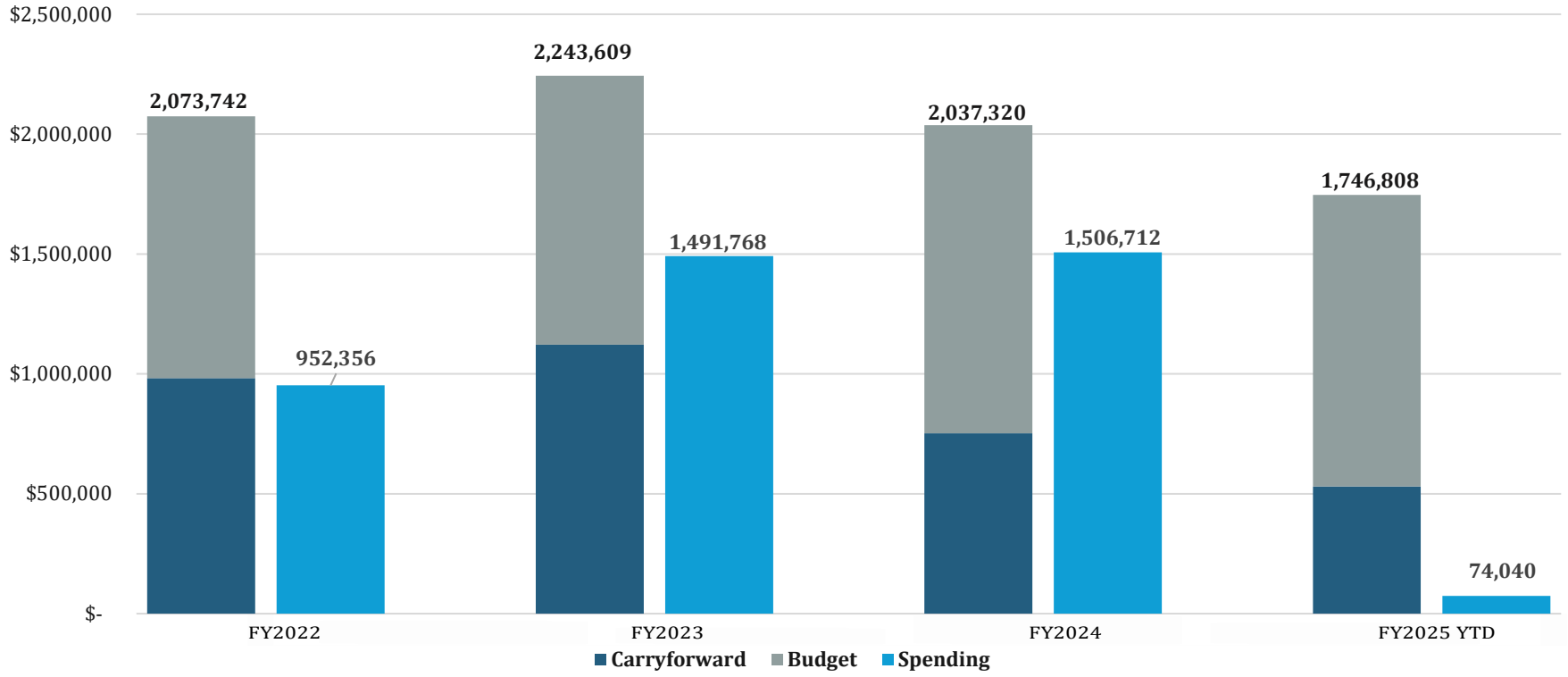
GLWA Great Lakes Water Authority



Area 3 (Wayne, Washtenaw, and Monroe Counties)

Service Delivery Partner Wayne Metropolitan Community Action Agency provides WRAP services to residents throughout Wayne County and portions of Washtenaw and Monroe Counties.

Area 3 - WRAP Inflows and Uses FY 2022 through December 31, 2024

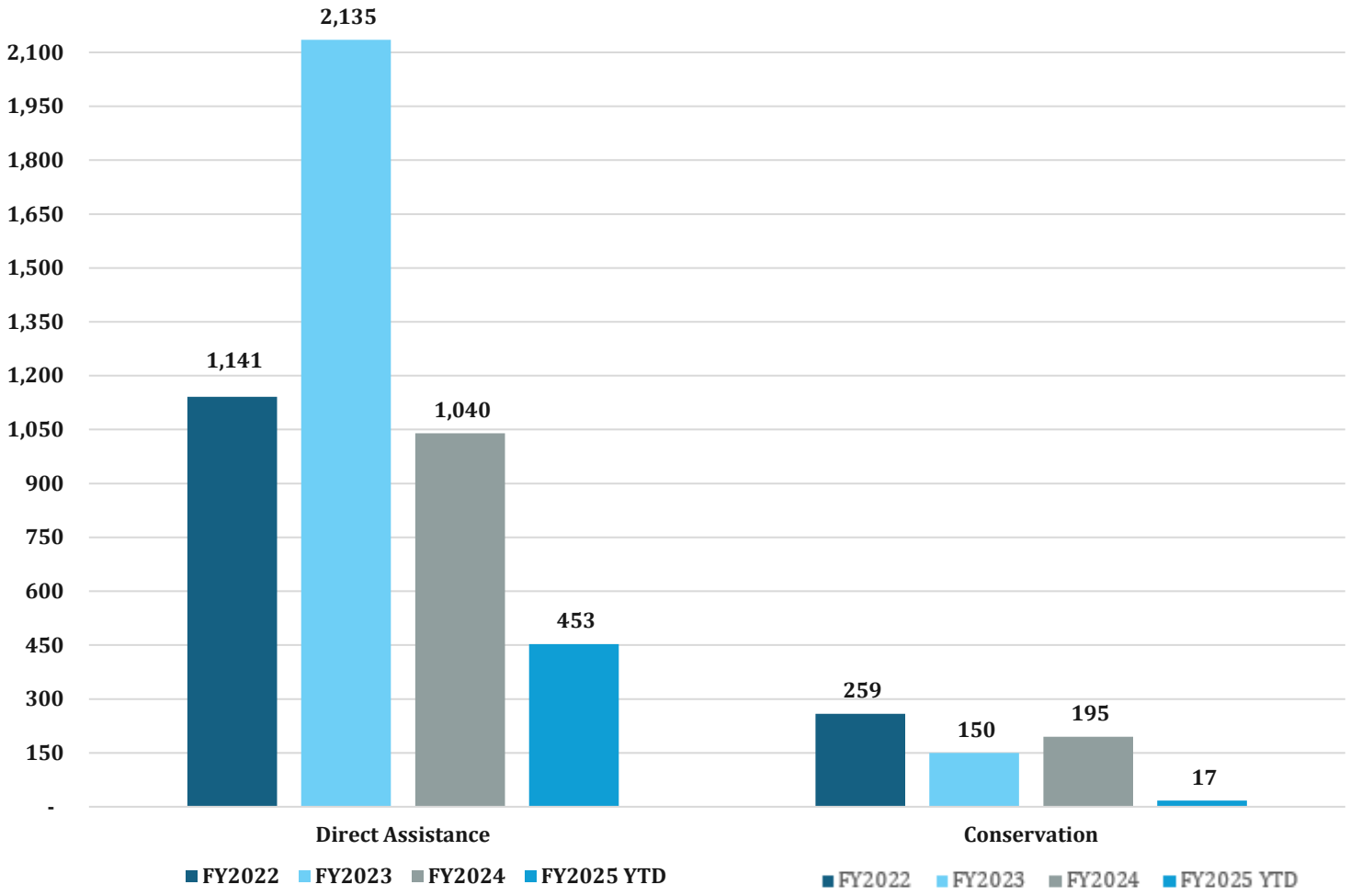


	FY2022		FY2023		FY2024		FY2025 YTD	
Carryforward Balance	$982,464		$1,121,386		$751,841		$530,608	
Current Year Budget	$1,091,278		$1,122,223		$1,285,479		$1,216,200	
Total Inflows	$2,073,742		$2,243,609		$2,037,320		$1,746,808	
Current Year Spending		$952,356		$1,491,768		$1,506,712		$74,040

- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- Total Inflows = Budgeted Funding + Carryforward
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024).

GLWA Great Lakes Water Authority

Area 3 - WRAP Household Enrollments by GLWA Fiscal Year (July-June)



- FY 2022 – Beginning balance includes significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024).

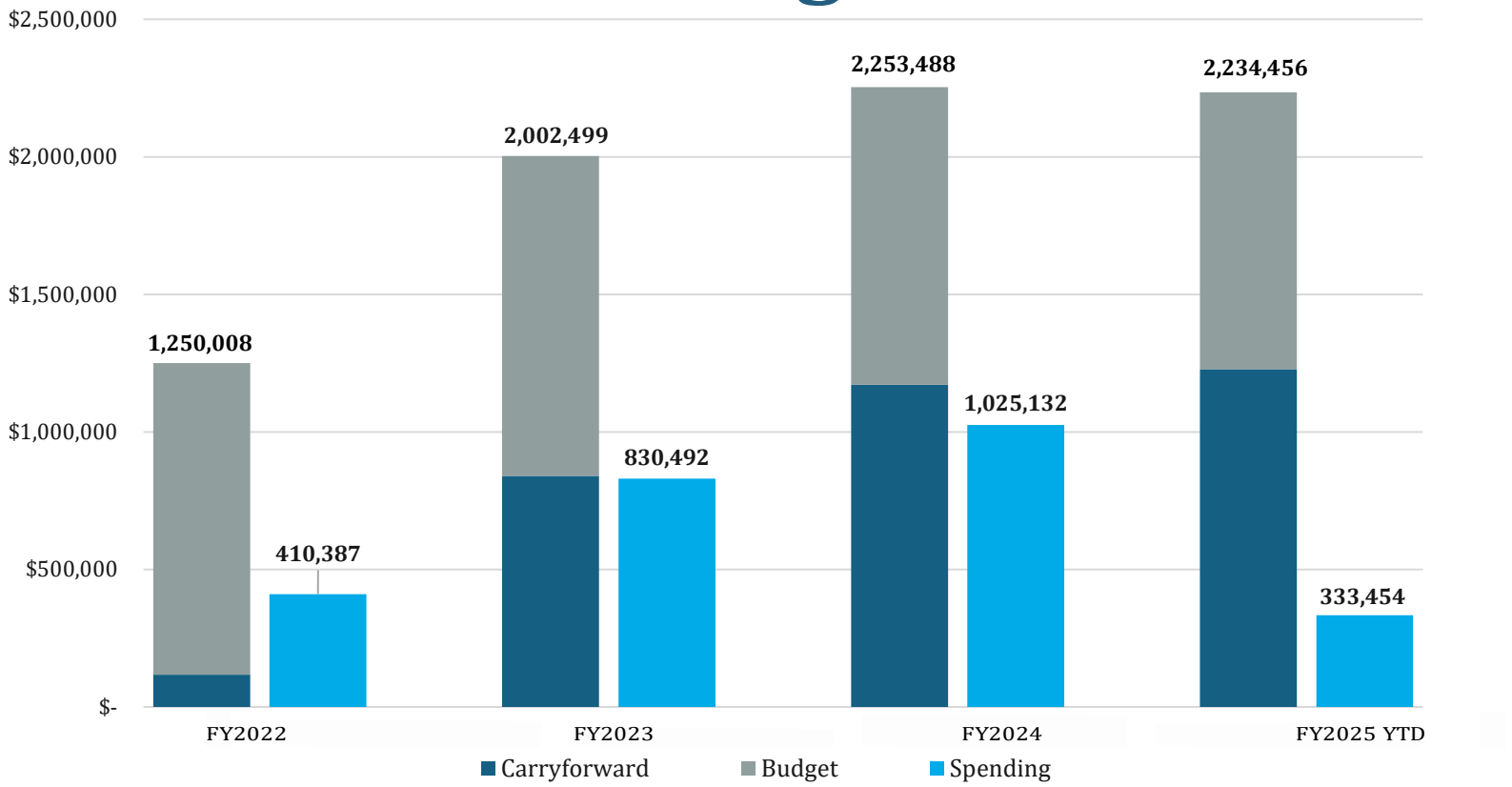
GLWA Great Lakes Water Authority



Area 4 (Oakland County)

Service Delivery Partner United Way for Southeastern Michigan provides WRAP services to residents throughout Oakland County.

Area 4 - WRAP Inflows and Uses FY 2022 through December 31, 2024

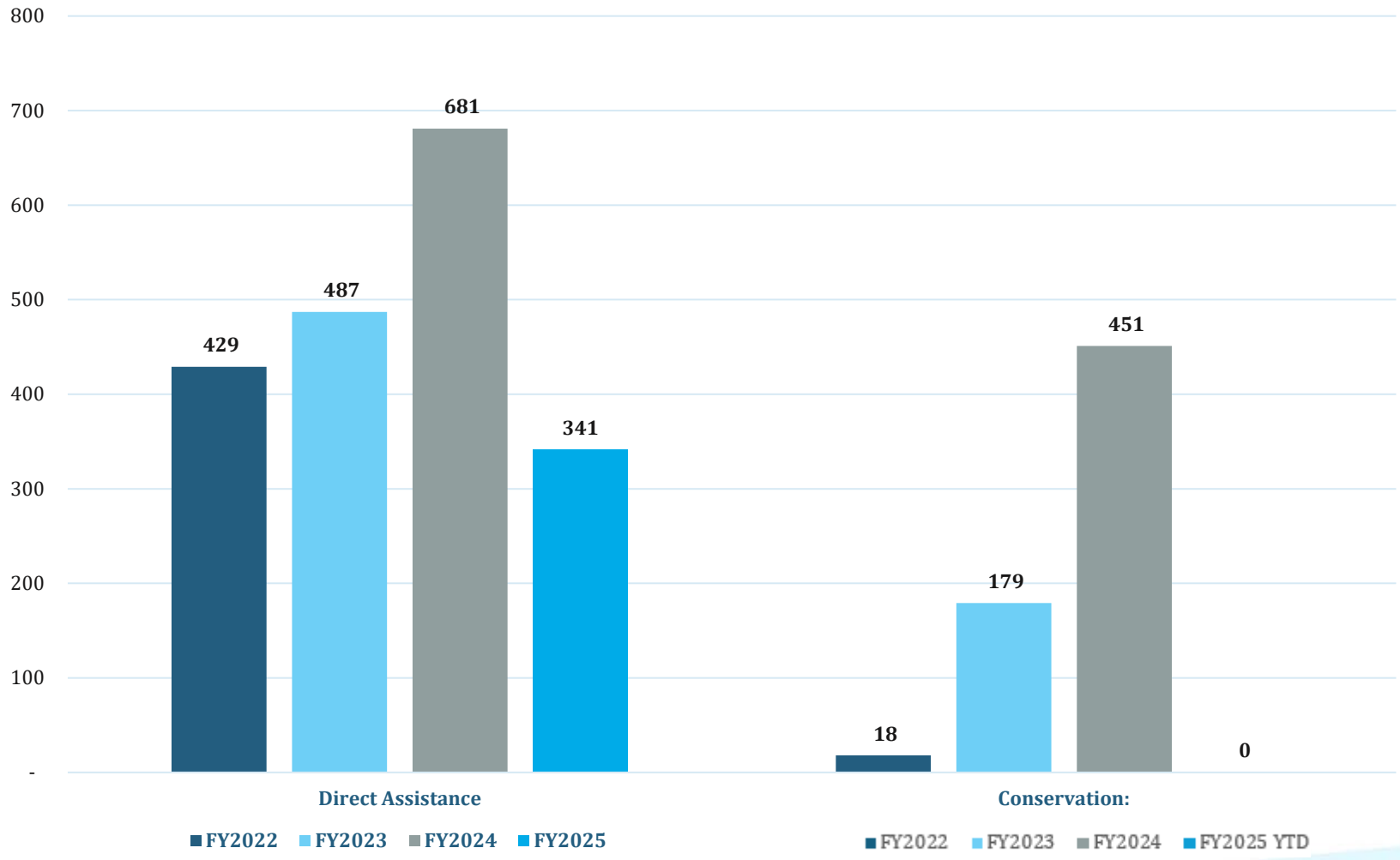


	FY2022		FY2023		FY2024		FY2025 YTD	
Carryforward Balance	$116,948		$839,621		$1,172,007		$1,228,356	
Current Year Budget	$1,133,060		$1,162,878		$1,081,481		$1,006,100	
Total Inflows	$1,250,008		$2,002,499		$2,253,488		$2,234,456	
Current Year Spending		$410,387		$830,492		$1,025,132		$333,454

- FY 2022 – The last year for significant reallocations of WRAP funds underutilized in other service areas in previous years.
- Total Inflows = Budgeted Funding + Carryforward
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of the households' income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024).

GLWA Great Lakes Water Authority

Area 4 - WRAP Household Enrollments by GLWA Fiscal Year (July-June)



- Conservation FY2025 YTD has not been reported as of the time of this report.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024). Conservation not reported.

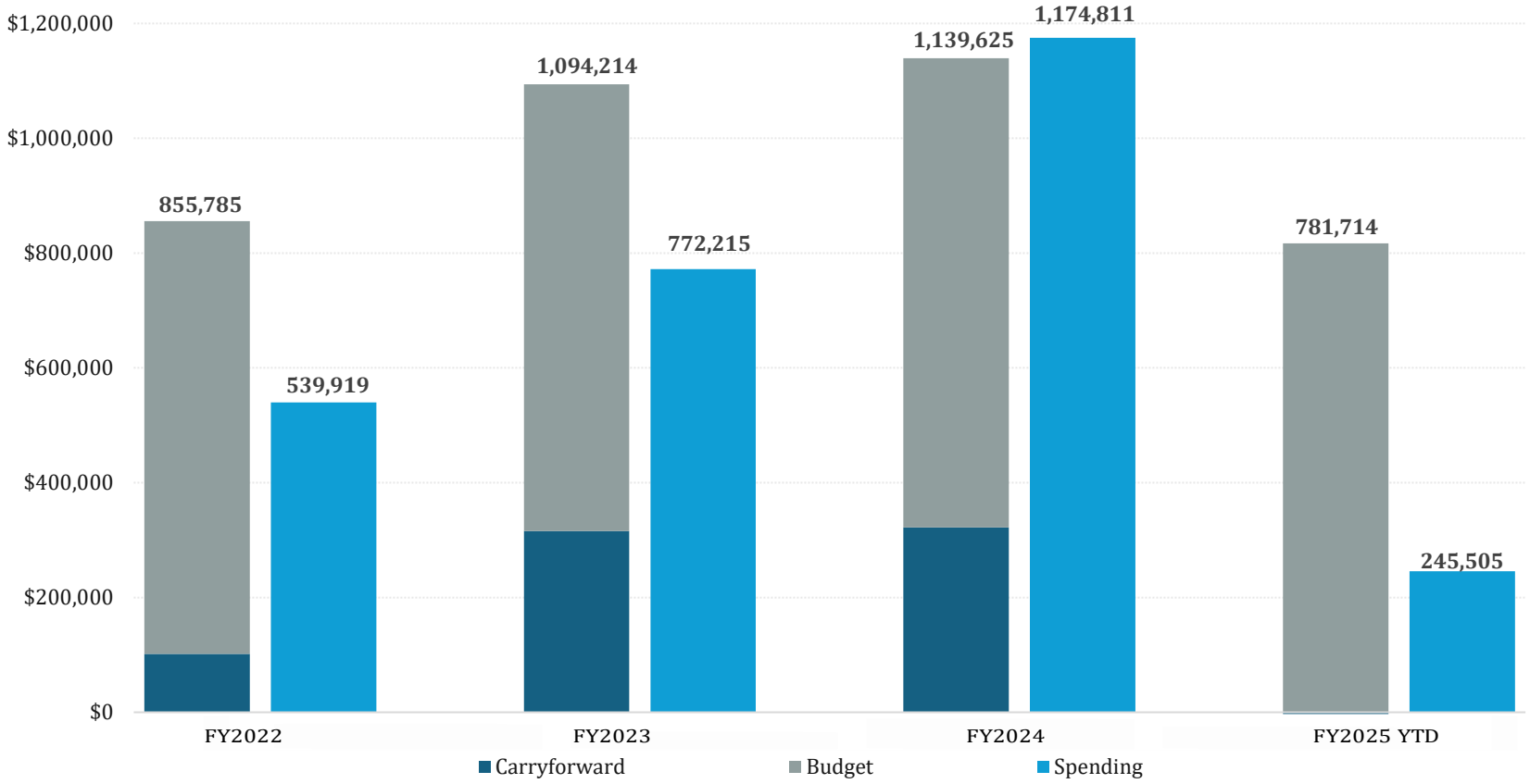
GLWA Great Lakes Water Authority



Area 5 (Macomb, Lapeer, and St. Clair Counties)

Service Delivery Partner Macomb Community Action provides WRAP services to residents throughout Macomb County and portions of St. Clair and Lapeer Counties.

Area 5 - WRAP Inflows and Uses FY 2022 through December 31, 2024

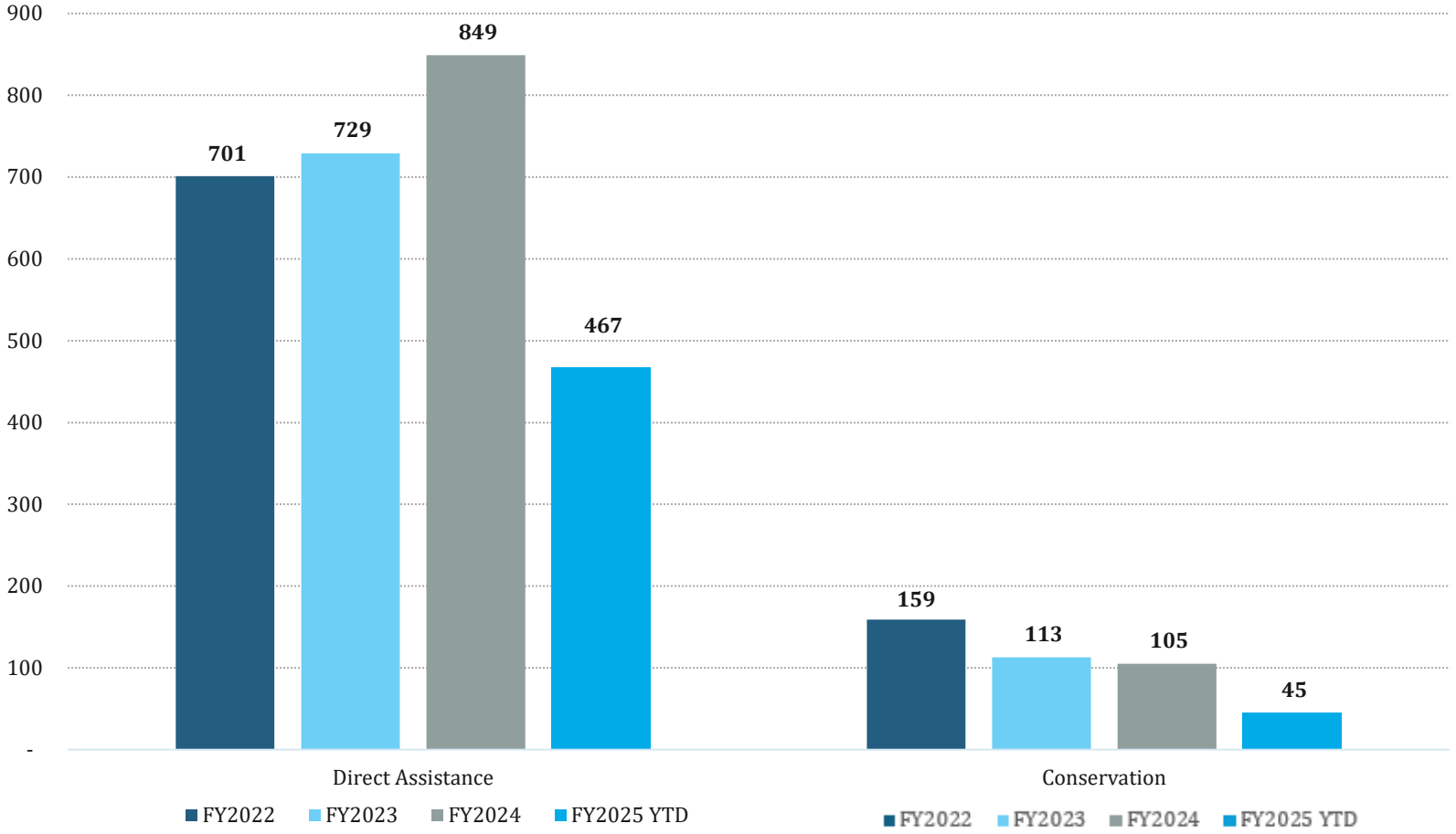


	FY2022		FY2023		FY2024		FY2025 YTD	
Carryforward Balance	$ 101,890		$ 315,866		$ 321,999		$ (35,286)	
Current Year Budget	$ 753,895		$ 778,348		$ 817,626		$ 817,000	
Total Inflows	$ 855,785		$ 1,094,214		$ 1,139,625		$ 781,714	
Current Year Spending		$ 539,919		$ 772,215		$ 1,174,811		$ 245,505

- Total Inflows = Budgeted Funding + Carryforward
- FY 2022 – The last year for significant reallocations of WRAP funds underutilized in other service areas in previous years.
- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of household income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024).

GLWA Great Lakes Water Authority

Area 5 - WRAP Household Enrollments by GLWA Fiscal Year (July-June)

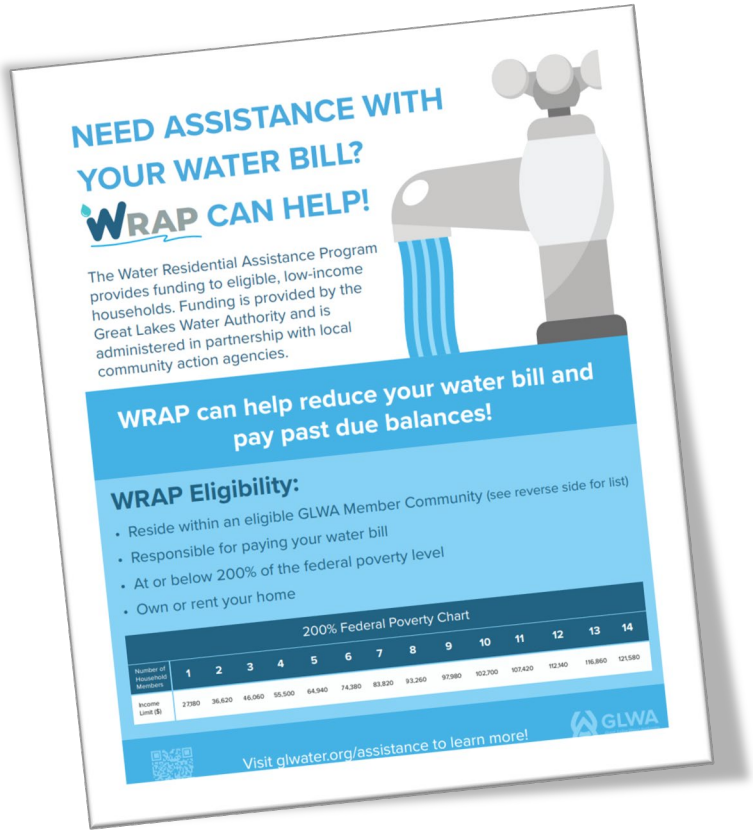


- FY 2023 - First full year of WRAP Income Based Plan - making household responsibility for bill payments ~3% of the households' income.
- FY 2024 – Service Delivery Partners began utilizing a series of State of Michigan funds, appropriated for water assistance through Michigan Department of Health and Human Services grants, in addition to WRAP funding.
- FY 2025 - First six months of FY 2025 (July 2024 - December 2024)

GLWA Great Lakes Water Authority

WRAP Toolbox

- Visit www.glwater.org/assistance
- Email WRAP@glwater.org
- WRAP Materials:
  - Service Delivery Partner Information
  - Flyers
  - Frequently Asked Questions
  - Infographics
  - Service Delivery Partner Information





GLWA Great Lakes Water Authority

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: Alicia Schwartz, Grants Manager

Re: Grants, Gifts, and Other Resources Report Through February 28, 2025

Highlights: Key activities to note in this month's report through February 28, 2025 include the following.

- ✓ **American Rescue Plan – Northwest Interceptor to Oakwood CSO Sewer (CIP Project 222001)** – Grant added to tracking file, received reimbursement of $2,664,876.
- ✓ **Scale up of Hydrothermal Liquefaction with Supercritical Water Oxidation in an Integrated Biorefinery** – Great Lakes Water Authority will be a subrecipient on this assistance agreement between Department of Energy and MicroBio Engineering. GLWA will be providing $250,000 towards the cost share portion of this assistance agreement. The contract is currently under review.
- ✓ 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).

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.

The **programs not awarded or programs that GLWA will not continue to pursue** is a table that reflects programs that GLWA was not awarded, or alternatively, programs that will not continue to be pursued by GLWA.

Items of note related to each table include the following.

> ***Table 1 – Pre-Award Programs*** reflects open submissions for FY 2023, FY 2024 and FY 2025 to date. The summarized activity below identifies four earmarked EPA Community Grants, one BRIC Grant, two applications for Cybersecurity Grants, 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, and a subrecipient grant for scale up of the hydrothermal liquefaction process.
>
> ***Table 2 - Awarded Programs*** reflects all open, awarded grants from FY 2021 through FY 2025. Current month summarized activity below includes two awards for local nonprofit apprenticeship grants, six reimbursement requests submitted for six associated FEMA Flood projects, two SRF ARPA funded projects, the Department of Energy grant, a Building Resilient Infrastructure and Communities (BRIC) Grant, and a flood study grant where we are required to track costs incurred by GLWA.
>
> ***Table 3 – Post Award Programs*** Three FEMA Flood projects are fully received and in the process of being closed out.

Table 4 –Programs not awarded or Programs that GLWA will not continue to pursue is a table that reflects programs that GLWA was not awarded, or alternatively, programs that will not continue to be pursued by GLWA – no new activity was identified in February.

Table 1 – Pre-Award Programs reflects open submissions for FY 2023, FY 2024 and FY 2025 to date. The programs listed under this section do not have a grant agreement between the awarding agency and GLWA at this time, but an application has been submitted or the funds have been identified in legislation (i.e. earmarks). The summarized activity below identifies four earmarked EPA Community Grants, one BRIC Grant, two Cybersecurity Grants, 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, and a subrecipient grant for scale up of the hydrothermal liquefaction process.

Table 1 – Pre-Award Programs

Reference Number	Date Originally Awarded or Requested	Program Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status
2023-002	3/15/2022	FY2022 Environmental Protection Agency Community Grant – Detroit River Interceptor (CIP Project 222002)	Federal Grant (Reimbursement Basis)	$2,000,000	Federal Audit Requirements	Earmark (20% Cost Share)
2023-003	12/19/2022	FY2023 Environmental Protection Agency Community Grant – PFAS Compounds remediations project	Federal Grant (Reimbursement Basis)	$3,452,972	Federal Audit Requirements	Earmark (20% Cost Share)
2023-023	8/30/2023	I-94 Modernization Project (CIP Project 270001)	MDOT Federal pass-through State (Reimbursement Basis)	$34,400,000	Federal Audit Requirements	NEPA Review with the State of Michigan
2024-009	3/9/2024	FY2024 Environmental Protection Agency Community Grant – Conveyance System Infrastructure Improvements (CIP Project 260701)	Federal Grant (Reimbursement Basis)	$959,752	Federal Audit Requirements	Earmark (20% Cost Share)

Reference Number	Date Originally Awarded or Requested	Program Description	Type of Activity	Amount to be Provided	Compliance and/or Performance Requirements	Status
2024-009b	3/9/2024	FY2024 Environmental Protection Agency Community Grant – Oakwood District Intercommunity Relief Sewer Modifications (CIP Project 222001)	Federal Grant (Reimbursement Basis)	$959,752	Federal Audit Requirements	Earmark (20% Cost Share)
2025-001	12/19/2024	State and Local Cybersecurity Grant Program (SLCGP) - Cybersecurity Assessments	Federal Grant (Reimbursement Basis)	$80,000	Federal Audit Requirements	Application Submitted by GLWA
2025-002	12/19/2024	State and Local Cybersecurity Grant Program (SLCGP) - Cybersecurity Professional Training for IT/Security Staff	Federal Grant (Reimbursement Basis)	$191,194	Federal Audit Requirements	Application Submitted by GLWA
2025-003	11/14/2024	Fiscal Year 2024 Building Resilient Infrastructure and Communities (BRIC) Grant - Dedicated Microgrid-Critical Water Infrastructure for Flood Prevention project – construction	Federal Grant (Reimbursement Basis)	$14,000,000	Federal Audit Requirements	Application submitted by GLWA
2025-004	9/19/2024	Scale-up of Hydrothermal Liquefaction with Supercritical Water Oxidation in an Integrated Biorefinery	Federal Grant (Cost Share)	$0	Federal Audit Requirements	Application Submitted by GLWA as a subrecipient, GLWA cost share of $250,000

Table 2 Awarded Programs reflects all open, awarded grants from FY 2021 through FY 2025. Current month summarized activity below includes two awards for local nonprofit apprenticeship grants, six reimbursement requests submitted for six associated FEMA Flood projects, two SRF ARPA funded projects, the Department of Energy grant, a BRIC scoping grant, and a flood study grant where we are required to track costs incurred by GLWA.

Table 2 – Awarded Programs

Reference Number	Date Originally Awarded or Requested	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
2023-005	3/28/2023	Department of Energy – Hydrothermal Liquefaction Project	Federal Grant (Reimbursement Basis)	$1,000,000	Federal Audit Requirements	Reimbursement Requests of $315,678 received through January 2025
2023-009	03/27/2023	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	Reimbursement Request of $80,129 submitted in May 2024
2023-010	3/30/2023	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	Reimbursement Request of $180,000 submitted in May 2024
2023-012	3/30/2023	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 660110 – Obligated $319,911 Fairview PS (CIP Project 232001)	Federal pass-through State (Reimbursement Basis)	$319,911	Federal Audit Requirements	Reimbursement Request of $319,911 submitted in May 2024
2023-013	8/31/2024	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 714729 Outfalls (CIP Project 260201)	Federal pass-through State (Reimbursement Basis)	$1,332,235	Federal Audit Requirements	Reimbursement Request of $275,167 submitted in February 2024
2023-014	8/23/2023	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 664811 Conner Creek Sewer System (CIP Project 260204)	Federal pass-through State (Reimbursement Basis)	$8,888,277	Federal Audit Requirements	Reimbursement Request of $1,805,600 submitted in February 2024
2023-015	9/26/2024	Federal Emergency Management Agency (FEMA), June 25-26 Flood, DR-4607 Project 670521	Federal pass-through State (Reimbursement Basis)	$90,541	Federal Audit Requirements	Reimbursement Request of $90,541 submitted in November

Reference Number	Date Originally Awarded or Requested	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
		CAT-Z – Allocation of Management Costs				
2023-016	07/07/2023	Detroit Employment Solutions Corp (DESC) Apprentices $5,000 per (9) Total	DESC (Nonprofit)	$45,000	None	Grantor obtained additional funds, Grant re-opened. $2,000 reimbursement received
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 (CIP Project 122004)	Federal pass-through State (Reimbursement Basis)	$11,751,730	Federal Audit Requirements	Reimbursement Request of $608,583.37 submitted J@anuary 29th
2024-005	12/15/2023	Fiscal Year 2023 Building Resilient Infrastructure and Communities (BRIC) Project Scoping/Feasibility Study (design and engineering only – no construction)	Federal pass-through State (Reimbursement Basis)	$856,000	Federal Audit Requirements	$856,000 Grant awarded 1/16/2025
2024-011	7/10/2024	Southeast Michigan Flood Study	Federal (Cost Share Only)	0	Federal Audit Requirements	Cost Share Agreement – GLWA share $1,500,000
2024-014	06/07/2023	Focus Hope – Michigan Industry Cluster Approach (MICA 4.0)	Focus Hope (Nonprofit)	$43,000	None	Reimbursement Requests of $16,000 submitted November 2024
2025-005	09/06/2024	American Rescue Plan Northwest Interceptor to Oakwood CSO Sewer (CIP Project 222001)	Federal pass-through State (Reimbursement Basis)	$20,000,000	Federal Audit Requirements	Reimbursement Request of $2,664,876 received in January

Table 3 – Post Award Programs the below awards were closed. GLWA reimbursement has been received in full and the programs are in the process of being closed out, including any closeout reporting requirements.

Reference Number	Date Originally Awarded or Requested	Program Description	Type of Activity	Grant Amount	Compliance and/or Performance Requirements	Status
2023-006	2/21/2023	FEMA June Flood DR-4607 Project 660138 Seven Mile CSO	Federal pass through-State (Reimbursement Basis)	$46,996	Federal Audit Requirements	Working with MSP to close out grant
2023-007	3/27/2023	FEMA June Flood DR-4607 Project 660076 Springwell Water Treatment Plant	Federal pass through-State (Reimbursement Basis)	$180,000	Federal Audit Requirements	Working with MSP to close out grant
2023-008	3/30/2023	FEMA June Flood DR-4607 Project 668336 Fairview PS Protective Measures (CIP Project 232001)	Federal pass through-State (Reimbursement Basis)	$180,000	Federal Audit Requirements	Working with MSP to close out grant

Table 4 –Programs not awarded or Programs that GLWA will not continue to pursue is a table that reflects programs that GLWA was not awarded, or alternatively, programs that will not continue to be pursued by GLWA – no new activity identified for February.

Proposed Action: Receive and file this report.

Grant Activity Overview

The Federal Emergency Management Agency (FEMA) awarded GLWA a Building Resilient Infrastructure and Communities (BRIC) scoping project grant during its FY 2023 funding period. This scoping grant will allow GLWA to complete a study in preparation for the full $14 million construction grant described below. This project and related study provide an opportunity to further harden the electrical reliability at the GLWA East Side facilities of Freud, Conner, and Conner Combined Sewer Overflow (CSO).

Proposed Project Scoping/Advance Assistance Activity

The Power Resiliency Project GLWA proposed use of this grant funding will provide support to the following critical facilities:

1. *Conner Creek Pump Station:* This facility lifts a capacity of 2.2 billion Gallons Per Day (BGD) and is responsible for managing both sanitary and combine stormwater flows from two 14-foot diameter sewers. It houses eight storm pumps, four sanitary pumps.
2. *Freud Pump Station:* With a capacity also at 2.2 BGD, the Freud Pump Station operates eight storm pumps, two sanitary pumps. It serves as a key node for receiving combine sewer flow through the 16-foot diameter Fox Creek and Ashland relief sewers.
3. *Conner Creek Combined Sewer Overflow Facility:* This facility, with a treatment capacity of 8 BGD, has been operational since 2005. It plays a critical role in collecting Combined Sewer Overflows (CSOs) from the Conner Creek and Freud Pump Stations, as well as the Conner Creek Enclosure. Treatment is carried out through bar screens and sodium hypochlorite for disinfection, ensuring compliance with environmental regulations.

The proposed project entails the installation of a dedicated microgrid, strategically positioned to support these three critical facilities. In partnership with electrical supplier, DTE, we have identified a prime location for a new substation, adjacent to the facilities referenced above. This substation will receive a robust transmission supply of 120 Kilovolt (kV), considered as the most reliable power source in the area, which will then be efficiently distributed to meet the varied power demands of each facility, ranging from 4,800 kV to 480 kV. This energy will be channeled through dedicated cabling, guaranteeing uninterrupted power supply to the Conner Creek and Freud Pump Stations, as well as the Conner Creek Combined Sewer Overflow Facility.

Currently, GLWA relies on DTE's commercial power supply from the Essex substation, which leaves GLWA vulnerable to interruptions stemming from other commercial customers. By implementing this dedicated microgrid, we will significantly reduce the risk of power disruptions to these life-sustaining and safety-critical facilities. This, in turn, will ensure the reliable provision of essential services, ultimately safeguarding the well-being of the southeast Michigan communities we serve.

GLWA will also explore green infrastructure components during the scoping process, and the final design will comply with the local stormwater ordinance. GLWA will review and consider opportunities to incorporate green infrastructure into any future design and construction associated with this project. It is possible that the final design will involve subsurface utility assets which may not be ideal locations for green infrastructure installation. GLWA continues to support the City of Detroit and the rest of our Member Partner communities in southeast Michigan who seek opportunities to advance Green Infrastructure. This scoping grant will be used to outline this project and complete a Cost Benefit Explanation (CBE) for use as the basis of a full BRIC grant.

GLWA
Great Lakes Water Authority

Financial Services
Audit Committee Communication

Date: March 28, 2025

To: Great Lakes Water Authority Audit Committee

From: William Baker, Financial Management Professional, Construction Accounting & Reporting

Re: FY 2025 Q2 Construction Work-in-Progress Report through December 31, 2024 (Unaudited)

Background: The quarterly construction work-in-progress (CWIP) provides information and analysis related to the execution of the Great Lakes Water Authority capital improvement program (CIP).

Analysis: The attached documents summarize the FY 2025 Q2 CWIP positions and provides a detailed snapshot to inform decision makers and stakeholders.

Proposed Action: Receive and file this report.

Construction Work-in-Progress Quarterly Report
(Unaudited)

As of December 31, 2024

Presented to the
Great Lakes Water Authority
Audit Committee on March 28, 2025

For questions, please contact:

William Baker
Construction Accounting and Reporting
Phone: 313.378.9760
Email: william.baker@glwater.org

GLWA Great Lakes Water Authority

Table of Contents

Introduction 1

Capital Delivery - Cost Summaries and Analysis 3

Capital Delivery - Executive Summaries 3

Construction Work-in-Progress 5

A1 - Water - Summary Construction Work-in-Progress Rollforward by Jurisdiction 6

A2 - Wastewater - Summary Construction Work-in-Progress Rollforward by Jurisdiction 7

B1 - Water – Summary Construction Work-in-Progress Rollforward 9

B2 - Wastewater - Summary Construction Work-in-Progress Rollforward 10

B3 - Water - Detailed Construction Work-in-Progress Rollforward 11

B4 - Wastewater - Detailed Construction Work-in-Progress Rollforward 15

C1 - Water - Project Amendment Summary 20

C2 - Wastewater - Project Amendment Summary 21

GLWA Great Lakes Water Authority

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

March 28, 2025

To Our Stakeholders:

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of December 31, 2024. The information in this report presents a detailed snapshot and is important as we track the execution of the FY 2025–2029 Capital Improvement Plan (CIP) and look to inform decision makers as we evaluate the FY 2026–2030 CIP.

As we continue to refine this report to better communicate pertinent information to inform decision makers and stakeholders, content and formatting may be changed. With the summary of active projects now regularly being reported to the Capital Planning Committee the project highlights previously being reported have been removed from this report.

Report Contents and Organization

Construction Work-in-Progress (CWIP) Appendices: Includes breakdown by jurisdiction which provides a summary of the planned and actual project activity by the jurisdictions identified within the FY 2025 – 2029 Board Approved CIP Plan, detailed CWIP rollforward, which lists all projects in the CIP along with financial activity. These tables may be used to revisit priorities, workload, and phasing. In addition, this section contains project amendment summaries which consider the award of CIP contracts and the related execution thereof may result in deviations from the amount and timing of project activity. Project amendments are prepared to fund the related increase or decrease with either an adjustment to Capital Reserve or Program / Allowance accounts to amend the board approved fiscal year CIP accordingly and to inform decision makers in the development of future Capital Improvement Plans.

Financial Information

All project amounts are unaudited. This means that direct contractor costs are generally included in these totals with most pay estimates entered through December 31, 2024. There may, however, be some pay estimates that lag. The totals do not include indirect overhead.

Budget vs. Plan

Generally, GLWA's CIP projects span two or more fiscal years. The GLWA Board of Directors adopts a biennial "budget" and a five-year capital improvement "plan".

- ✓ The adopted **budget** relates to operations and maintenance expense, annual fixed commitments such as debt service, and incremental adjustments to reserves. The budget provides authority to spend within defined amounts. The budget is also referred to as the "revenue requirement" for the utility.
- ✓ After contracts are awarded at amounts variant from the CIP plan and more reliable anticipated spend data becomes available, the amended budget for the current fiscal year may increase or decrease by way of "Capital Reserve" budget amendments.
- ✓ The five-year capital improvement **plan** is a rolling plan that is updated at an administrative tracking level as projects move from estimated to actual bid numbers. An updated mid-cycle CIP would be presented to the Board for approval if the prioritization strategy was revised and/or the plan was in need of material revisions.
- ✓ In addition, the Board of Directors adopts a capital spending ratio assumption (SRA) which allows the realities of capital program delivery to align with the financial plan. The SRA is an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for nonbudgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established.

GLWA Great Lakes Water Authority

Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2025-2029 and related CIP Plan for FY 2025 were based on anticipation of FY 2025 activity resulting in 100% of planned spend for the Water system and 100% of planned spend for the Wastewater system.

The Water System spend for the period ending December 31, 2024, is 78.0% of the FY 2024 board approved CIP, 77.0% of the FY 2024 board approved CIP with project amendments, 78.0% of the FY 2024 Approved Capital Spending Rate Assumption (SRA) and 78.0% of the FY 2024 Adjusted Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2024 Board Approved CIP was amended from $207.3M to $209.8M is provided in the subsequent Project Amendment Summary appendix of this report.

Water System Projects	FY 2024	FY 2024 Activity	FY 2024 Percentage	FY 2025	FY 2025 Prorated (Six Months)	FY 2025 Activity (Unaudited)	FY 2025 Percentage
(in millions)							
FY 2024 Board Approved CIP	$ 239.3	$ 177.6	74.2%				
FY 2024 Board Approved CIP With Project Amendments	200.7	177.6	88.5%				
FY 2024 Capital Spend Rate Assumption (SRA) - Approved	239.3	177.6	74.2%				
FY 2024 Capital Spend Rate Assumption (SRA) - Adjusted	190.0	177.6	93.5%				
FY 2025 Board Approved CIP				$ 207.3	$ 103.7	$ 80.8	78.0%
FY 2025 Board Approved CIP With Project Amendments				209.8	$ 104.9	80.8	77.0%
FY 2025 Capital Spend Rate Assumption (SRA) - Approved				207.3	$ 103.7	80.8	78.0%
FY 2025 Capital Spend Rate Assumption (SRA) - Adjusted				207.3	$ 103.7	80.8	78.0%

GLWA Great Lakes Water Authority

Executive Summary (Continued)

The Wastewater System spend for the period ending December 31, 2024, is 82.3% of the FY 2024 board approved CIP, 77.5% of the FY 2025 board approved CIP with project amendments, 82.3% of the FY 2025 Approved Capital Spending Rate Assumption (SRA) and 82.3% of the FY 2025 Adjusted Capital Spending Rate Assumption (SRA). Detailed analysis of the projects for which FY 2025 Board Approved CIP was amended from $169.2M to $179.5M is provided in the subsequent Project Amendment Summary appendix of this report.

Wastewater System Projects	FY 2024	FY 2024 Activity	FY 2024 Percentage	FY 2025	FY 2025 Prorated (Six Months)	FY 2025 Activity (Unaudited)	FY 2025 Percentage
(in millions)							
FY 2024 Board Approved CIP	$ 199.0	$ 136.4	68.5%				
FY 2024 Board Approved CIP With Project Amendments	206.6	136.4	66.0%				
FY 2024 Capital Spend Rate Assumption (SRA) - Approved	199.0	136.4	68.5%				
FY 2024 Capital Spend Rate Assumption (SRA) - Adjusted	139.9	136.4	97.5%				
FY 2025 Board Approved CIP				$ 169.2	$ 84.6	$ 69.6	82.3%
FY 2025 Board Approved CIP With Project Amendments				179.5	$ 89.8	69.6	77.5%
FY 2025 Capital Spend Rate Assumption (SRA) - Approved				169.2	$ 84.6	69.6	82.3%
FY 2025 Capital Spend Rate Assumption (SRA) - Adjusted				169.2	$ 84.6	69.6	82.3%

Appendix A - Construction Work-in-Progress Rollforward Summaries by Jurisdiction

The purpose of the construction work-in-progress (CWIP) summary rollforward by jurisdiction is to provide a high-level overview of the financial status of the projects identified within the current board approved CIP by their jurisdiction. Within the FY 2025 – 2029 Board Approved CIP Plan, projects are identified and categorized as either City of Detroit, Wayne County - Outside Detroit, Lapeer County, Macomb County, Oakland County, Saint Clair County or Multiple Counties and reflected accordingly in this report.

$489.3 million is in CWIP as of December 31, 2024 as shown for the Water System in A1 - Water - CWIP Rollforward by Jurisdiction

$402.5 million is in CWIP as of December 31, 2024 as show for the Wastewater System in A2 - Wastewater - CWIP Rollforward by Jurisdiction

The order of these appendices on the subsequent pages are in ascending by jurisdiction alphabetically.

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority

A1 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward Summary By Jurisdiction

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024

Jurisdiction	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	CWIP Balance December 31, 2024
City of Detroit	$ 507,502,995	$ 66,649,664	$ 59,589,941	$ 59,589,941	$ 14,175,576	$ 76,751,095
Lapeer County	137,740,664	5,537,987	-	-	156	5,538,144
Mutiple Counties	609,139,627	119,221,792	57,270,219	58,315,819	28,125,392	147,347,184
Oakland County	359,499,129	137,210,012	4,855,489	4,855,489	7,067,787	144,277,799
Saint Clair County	295,118,528	20,481,055	27,217,339	27,454,401	6,571,298	27,052,354
Wayne County - Outside Detroit	985,724,849	63,531,051	58,399,537	59,606,037	24,829,780	88,360,831
Grand Total	**$ 2,894,725,791**	**$ 412,631,562**	**$ 207,332,526**	**$ 209,821,688**	**$ 80,769,989**	**$ 489,327,406**

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority

A2 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward Summary By Jurisdiction

Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024

Jurisdiction	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	CWIP Balance December 31, 2024
City of Detroit	$ 1,946,757,924	$ 196,051,594	$ 117,840,771	$ 126,344,995	$ 48,699,677	$ 242,474,531
Mutiple Counties	1,319,856,726	136,709,069	48,316,404	50,102,159	19,537,422	156,246,491
Wayne County - Outside Detroit	135,181,862	2,509,110	3,031,807	3,031,807	1,314,338	3,823,448
Grand Total	**$ 3,401,796,513**	**$ 335,269,773**	**$ 169,188,982**	**$ 179,478,961**	**$ 69,551,438**	**$ 402,544,471**

Appendix B - Construction Work-in-Progress Rollforwards

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

As part of our project life cycle review the Construction Accounting team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service.

No projects reached completion or readiness for use in Q2 FY2025.

$489.3 million is in CWIP as of December 31, 2024, as shown for the Water System in B1 - Water - Detailed CWIP Rollforward

$402.5 million is in CWIP as of December 31, 2024, as shown for the Wastewater System in B2 - Wastewater - Detailed CWIP Rollforward

The order of these appendices on the subsequent pages are in ascending order by Project Category followed by CIP project number.

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B1 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP with Budget Amendments	FY 2025 Activity through December 31, 2024	FY 2025 Capitalizations and Other Activity through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations and Other Activity	Life to Date Activity through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Engineering	0	0	0	0	0	0	0	780	780	0%
Field Services - Water	284,557	189,805	67,721	68,494	25,581	0	215,385	148,473	363,859	128%
General Purpose - Water	0	0	0	0	0	0	0	330	330	0%
Programs - Water	454,485	38,520	31,652	31,926	9,299	0	47,818	83,444	131,262	29%
Security	0	0	0	0	0	0	0	10,358	10,358	0%
Systems Control Center	670,966	57,469	4,056	5,262	2,959	0	60,429	6,778	67,207	10%
Water Treatment Plants & Facilities	1,454,592	126,838	103,898	104,135	42,931	4,074	165,695	315,646	481,341	33%
Programs - Centralized Services	30,125	0	5	5	0	0	0	0	0	0%
Grand Total	2,894,726	412,632	207,333	209,822	80,770	4,074	489,327	565,809	1,055,137	36%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B2 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	FY 2025 Capitalizations And Other Activity Through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
CSO Facilities	196,591	14,847	10,916	10,916	6,036	0	20,883	737	21,621	11%
Engineering	0	0	0	0	0	0	0	1,186	1,186	0%
Facilities	0	0	0	0	0	0	0	1,123	1,123	0%
Field Services - Wastewater	135,802	62,830	12,706	14,492	10,133	0	72,963	0	72,963	54%
Programs	1,366,654	161,965	59,392	59,691	27,692	2,277	187,380	94,592	281,972	21%
Programs - Water	0	258	0	0	0	0	258	83	341	0%
Security	0	0	0	0	0	0	0	3,201	3,201	0%
Systems Control Center	521,473	16,608	21,068	21,068	2,147	0	18,755	52,343	71,097	14%
Water Resource Recovery Facility	1,181,276	78,762	65,107	73,312	23,544	0	102,305	356,931	459,237	39%
Grand Total	3,401,797	335,270	169,189	179,479	69,551	2,277	402,544	510,196	912,741	27%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B3 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP with Budget Amendments	FY 2025 Activity through December 31, 2024	Capitalizations and Other Activity through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations and Other Activity	Life to Date Activity through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Engineering	361001	Consolidated Process Control System Upgrades	0	0	0	0	0	0	0	313	313	0%
	361003	SCADA Radio Network Upgrade	0	0	0	0	0	0	0	467	467	0%
Engineering Total			0	0	0	0	0	0	0	780	780	0%
Field Services - Water	122001	Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	0	0	0	0	0	0	0	33,242	33,242	0%
	122002	Replacement of Five (5) PRV Pits of Treated Water Transmission System	0	0	0	0	0	0	0	2,785	2,785	0%
	122003	New Waterworks Park to Northeast Transmission Main	0	0	0	0	0	0	0	29,790	29,790	0%
	122004	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	153,253	90,719	32,074	32,846	20,662	0	111,381	149	111,529	73%
	122005	Replacement Schoolcraft Watermain	0	0	0	0	0	0	0	16,947	16,947	0%
	122006	Transmission System Water Main Work-Wick Road Parallel Water Main	0	5,500	0	0	0	0	5,500	20,751	26,251	0%
	122007	Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Ch	26,209	0	0	0	0	0	0	0	0	0%
	122009	Water System Improvements in Joy Road from Southfield Road to Trinity	0	0	0	0	0	0	0	107	107	0%
	122011	Park-Merriman Water Main-Final Phase	0	0	0	0	0	0	0	6,835	6,835	0%
	122012	36-inch Water Main in Telegraph Road	0	0	0	0	0	0	0	9,986	9,986	0%
	122013	Lyon Township Transmission Main Extension Project	800	89,246	800	800	4,607	0	93,853	17,511	111,364	13925%
	122014	48-Inch Water Main Installation at Vining and Wick Roads in Romulus	0	0	0	0	0	0	0	4,011	4,011	0%
	122015	30-Inch Water Main	0	0	0	0	0	0	0	2,461	2,461	0%
	122016	Downriver Transmission Loop	64,273	3,054	15,131	15,131	224	0	3,277	0	3,277	5%
	122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	1,019	0	216	216	0	0	0	3,898	3,898	383%
	122019	Jefferson Main Replacement	39,002	1,286	19,501	19,501	88	0	1,374	0	1,374	4%
Field Services - Water Total			284,557	189,805	67,721	68,494	25,581	0	215,385	148,473	363,859	128%
General Purpose - Water	161001	Comprehensive Water Master Plan Update	0	0	0	0	0	0	0	330	330	0%
General Purpose - Water Total			0	0	0	0	0	0	0	330	330	0%
Programs - Water	170011	Miscellaneous Heating Improvements Southwest WTP	0	0	0	0	0	0	0	604	604	0%
	170102	Water Production Plant Flow Mettering Improvements at NE, SP & SW WTP	0	0	0	0	0	0	0	374	374	0%
	170103	Belle Isle Water Supply Intake and Ice Boom Improvements	0	0	0	0	0	0	0	287	287	0%
	170104	Orion and Newburgh Pumping Stations Improvements	0	0	0	0	0	0	0	2,086	2,086	0%
	170105	Phosphoric Acid and Heating System and NE-WTP	0	0	0	0	0	0	0	1,936	1,936	0%
	170107	Intake Lagoon	0	0	0	0	0	0	0	298	298	0%
	170117	Instrument Air Compressor Systems Replacement at NE-WTP	0	0	0	0	0	0	0	226	226	0%
	170118	1958 Sedimentation Basin	0	0	0	0	0	0	0	859	859	0%
	170120	Phsphoric Acid Feed System Improvements at Southwest WTP	0	0	0	0	0	0	0	635	635	0%
	170300	Water Treatment Plant Automation Program	23,317	0	0	0	0	0	0	0	0	0%
	170302	SW WTP SCADA Improvements	3,037	7,922	3,037	3,037	782	0	8,704	0	8,704	287%
	170303	WWP WTP Power Monitioring Installation	0	0	0	0	0	0	0	1,811	1,811	0%
	170304	WWP WTP SCADA Upgrade	0	651	0	0	0	0	651	0	651	0%
	170305	WWP SCADA Network Upgrade	7,542	0	0	0	0	0	0	0	0	0%
	170306	SPW SCADA PLC Network Upgrade	6,780	0	2,245	2,245	0	0	0	0	0	0%
	170400	Water Transmission Improvement Program	32,175	0	0	0	0	0	0	0	0	0%
	170401	Emergency Bypass Around Ypsilanti Station	0	0	0	0	0	0	0	2,633	2,633	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B3 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP with Budget Amendments	FY 2025 Activity through December 31, 2024	Capitalizations and Other Activity through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations and Other Activity	Life to Date Activity through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Programs - Water	170500	Transmission System Valve Assessment and Rehabilitation/Replacement Program	59,285	0	18	18	0	0	0	0	0	0%
	170502	Transmission System Valve Assessment and Rehabilitation/Replacement A	0	0	0	0	0	0	0	7,690	7,690	0%
	170503	Transmission System Valve Assessment and Rehabilitation/Replacement B	537	2,073	417	417	22	0	2,094	14,054	16,148	3005%
	170504	Repair of WTM, Valves, & Priority Repair	6,735	9,813	2,965	2,965	207	0	10,021	0	10,021	149%
	170506	Water Transmission Main, Valves, & Other	15,000	0	2,744	2,744	339	0	339	0	339	2%
	170600	Water Transmission Main Asset Assessment Program	77,870	0	4,138	4,138	0	0	0	0	0	0%
	170601	Linear System Integrity Program	21,686	106	20	20	0	0	106	0	106	0%
	170602	36" 24 Mile Rd. Transmission Main Condit	972	2,538	0	273	1,170	0	3,708	0	3,708	381%
	170701	Booster Station & Reservoirs Program Management	0	0	0	0	0	0	0	12,977	12,977	0%
	170800	Reservoir Inspection, Design and Rehabilitation	0	0	0	0	0	0	0	0	0	0%
	170801	Reservoir Inspection, Design and Rehabilitation	295	10	295	295	4	0	14	25,247	25,261	8574%
	170802	Reservoir Inspection, Design	38,477	9,256	9,608	9,608	5,722	0	14,978	661	15,639	41%
	170803	Reservoir Inspection, Design, and Construction Mangement Services Phase III	94,432	0	0	0	0	0	0	0	0	0%
	170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement Program	33,108	0	2,523	2,523	0	0	0	0	0	0%
	170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	0	4,708	0	0	0	0	4,708	7,703	12,411	0%
	170904	Phase II Wholesale Water Meter Pit Rehab	14,579	1,444	3,642	3,642	1,053	0	2,497	7	2,504	17%
	171500	Roof Replacement - Var Facilities Program	15,948	0	0	0	0	0	0	0	0	0%
	171501	Roof Replacements - Var Facilities Program	0	0	0	0	0	0	0	3,355	3,355	0%
	171502	Lake Huron and Southwest Roof Replacement	2,710	0	0	0	0	0	0	0	0	0%
Programs - Water Total			454,485	38,520	31,652	31,926	9,299	0	47,818	83,444	131,262	29%
Security	341001	Security Infrastructure Improvements	0	0	0	0	0	0	0	10,358	10,358	0%
Security Total			0	0	0	0	0	0	0	10,358	10,358	0%
Systems Control Center	132001	Wick Road Station Rehabilitation	0	0	0	0	0	0	0	135	135	0%
	132002	Replacement of Switchgear at Joy Road Pumping Station	0	0	0	0	0	0	0	669	669	0%
	132003	Isolation Gate Valves for Line Pumps for West Service Center Pumping Station	0	0	0	0	0	0	0	1,742	1,742	0%
	132006	Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chica	0	0	0	0	0	0	0	3,226	3,226	0%
	132007	Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station	0	5,268	0	0	0	0	5,268	0	5,268	0%
	132010	West Service Center/Duval Rd Division Valve Upgrades	1,524	45,612	1,524	1,524	756	0	46,368	0	46,368	3043%
	132012	Ypsilanti PS Improvements	40,241	2,572	0	0	0	0	2,572	0	2,572	6%
	132014	Adams Road Booster Pumping Improvements	61,675	102	0	0	0	0	102	0	102	0%
	132015	Newburgh BPS	45,133	1,331	0	1,207	499	0	1,830	30	1,860	4%
	132016	North Service Center BPS Improvements	234,676	2,155	2,532	2,532	1,704	0	3,859	0	3,859	2%
	132018	Schoolcraft BPS	24,643	0	0	0	0	0	0	0	0	0%
	132019	Wick Road BPS - Switchgear	24,723	65	0	0	0	0	65	0	65	0%
	132020	Franklin BPS - Isolation Gate Valves	60,825	95	0	0	0	0	95	0	95	0%
	132021	Imlay BPS - Replace VFDs, Pumps & Motors	137,741	270	0	0	0	0	270	0	270	0%
	132022	Joy Road BPS - Replace Reservoir Pumps	39,786	0	0	0	0	0	0	0	0	0%
	132026	Franklin Pumping Station Valve Replacement	0	0	0	0	0	0	0	975	975	0%
Systems Control Center Total			670,966	57,469	4,056	5,262	2,959	0	60,429	6,778	67,207	10%
Water Treatment Plants & Facilities	111001	Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements	135,539	4,712	1,674	1,674	908	0	5,620	0	5,620	4%
	111002	LHWTP Backflow Replacement	0	0	0	0	0	0	0	8,718	8,718	0%
	111004	Electrical Tunnel Rehabilitation at Lake Huron WTP	0	0	0	0	0	0	0	3,892	3,892	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B3 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP with Budget Amendments	FY 2025 Activity through December 31, 2024	Capitalizations and Other Activity through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations and Other Activity	Life to Date Activity through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Water Treatment Plants & Facilities	111005	Miscellaneous Concrete Improvements at the Lake Huron WTP	0	0	0	0	0	0	0	757	757	0%
	111006	Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake	35,751	4,129	2,981	2,981	1,799	0	5,928	0	5,928	17%
	111007	Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	0	0	0	0	0	0	0	8,867	8,867	0%
	111008	LHWTP Architectural Programming - Lab	782	0	0	0	0	0	0	0	0	0%
	111009	Lake Huron WTP-35 MGD HLP, Flow Meters	10,153	10,507	10,125	10,362	3,634	0	14,141	0	14,141	139%
	111010	Lake Huron Water Treatment Plant -Filtration and Pretreatment Improvements	58,639	0	0	0	0	0	0	0	0	0%
	111011	Lake Huron WTP Pilot Plant	0	4	0	0	0	0	4	3,076	3,080	0%
	111012	LHWTP-Flocculation Improvements	44,204	1,125	12,437	12,437	230	0	1,355	0	1,355	3%
	111013	LH WTP Fireloop & Plant Water Improvements	10,051	4	0	0	0	0	4	0	4	0%
	112002	Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP	0	0	0	0	0	0	0	1,170	1,170	0%
	112003	NE WTP High Lift Pumping Electrical	171,118	561	0	0	0	0	561	0	561	0%
	112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits	0	0	0	0	0	0	0	938	938	0%
	112006	Northeast Water Treatment Plant Flocculator Replacements	6,837	6,167	2,519	2,519	839	0	7,006	0	7,006	102%
	112007	NE WTP Structural Repair of Slab and Bea	6,383	239	2,124	2,124	2	0	241	0	241	4%
	112008	Northeast WTP Filter Replacement	85,550	102	3,507	3,507	33	0	135	0	135	0%
	113001	Southwest Water Treatment Plant, Sludge Treatment & Waste Wash water Treatment Facilit	0	0	0	0	0	0	0	171	171	0%
	113002	High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP	0	0	0	0	0	0	0	5,799	5,799	0%
	113003	Replacement of Butterfly Valves	162,110	0	0	0	0	0	0	0	0	0%
	113004	Residual Handling Facility's Decant Flow Modifications at Southwest WTP	0	0	0	0	0	0	0	4,286	4,286	0%
	113006	SW WTP Chloring Scrubber	0	0	0	0	0	0	0	6,108	6,108	0%
	113007	Architectural and Building Mechanical	8,641	4	0	0	0	0	4	0	4	0%
	113009	SW WTP Flight and Chain Upgrades	2,717	3,099	2,717	2,717	48	0	3,147	0	3,147	116%
	113010	SW WTP Flocculation Improvements	22,225	16	0	0	12	0	28	0	28	0%
	114001	Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities	0	0	0	0	0	0	0	99,765	99,765	0%
	114002	Springwells Water Treatment Plant - Low Lift and High Lift Pump Station	270,070	25,819	28,225	28,225	17,678	0	43,497	17,553	61,050	23%
	114003	Water Production Flow Metering Improvements at NE, SW, and SPW WTP	0	0	0	0	0	0	0	8,168	8,168	0%
	114004	Miscellaneous Concrete Improvements at Springwells WTP	0	0	0	0	0	0	0	494	494	0%
	114005	Springwells WTP Admin Building Improvements	5,818	1,321	0	0	0	0	1,321	0	1,321	23%
	114006	Replacement of Rapid Mix Units at Springwells WTP 1958 Process Train	0	0	0	0	0	0	0	1,021	1,021	0%
	114008	1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP	0	1	0	0	0	0	1	13,202	13,202	0%
	114010	Yard Piping Improvements	216,807	1,808	0	0	0	0	1,808	0	1,808	1%
	114011	Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP	0	2,333	0	0	10	0	2,343	24,356	26,699	0%
	114012	Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement	0	0	0	0	0	0	0	3,911	3,911	0%
	114013	Springwells Reservoir Fill Line Improvements	0	0	0	0	0	0	0	4,707	4,707	0%
	114015	Emergency Grating Replacement at Springwells WTP	0	0	0	0	0	0	0	3,366	3,366	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B3 - Water System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP with Budget Amendments	FY 2025 Activity through December 31, 2024	Capitalizations and Other Activity through December 31, 2024	CWIP Balance December 31, 2024	Life to Date Capitalizations and Other Activity	Life to Date Activity through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Water Treatment Plants & Facilities	114016	Springwells Water Treatment Plant 1958 Settled Water Conduits Concrete Pavement Replacement	0	0	0	0	0	0	0	1,566	1,566	0%
	114017	Springwells Water Treatment Plant Flocculator Drive Replacement	20,170	8,688	7,045	7,045	5,578	0	14,266	0	14,266	71%
	114018	Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements	2,341	0	0	0	0	0	0	0	0	0%
	115001	Yard Piping, Valves and Venturi Meters Replacement at Water Works Park	16,688	42,228	9,986	9,986	5,793	4,074	43,947	4,074	48,021	288%
	115002	Miscellaneous Concrete and Road Improvements at Waterworks Park WTP	0	0	0	0	0	0	0	1,984	1,984	0%
	115004	Water Works Park WTP Chlorine System Upgrade	0	0	0	0	0	0	0	6,967	6,967	0%
	115005	WWP WTP Building Ventilation Improvements	4,504	12,933	3,868	3,868	2,241	0	15,174	0	15,174	337%
	115006	Water Works Park Site/Civil Improvements	5,896	0	0	0	0	0	0	0	0	0%
	115007	Water Works Park High Lift Pumping Station Modernization	115,090	0	0	0	0	0	0	0	0	0%
	115009	Water Works Park Sedimentation Basins Structural Upgrades	16,846	0	0	0	0	0	0	0	0	0%
	116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on	12,689	327	12,689	12,689	2,758	0	3,085	80,730	83,814	661%
	116005	Belle Isle Seawall Rehabilitation	1,539	713	1,539	1,539	1,369	0	2,081	0	2,081	135%
	116006	Belle Isle Intake System Rehabilitation and Improvements	2,222	0	0	0	0	0	0	0	0	0%
	116007	System Electrical Power Improvements	3,214	0	2,462	2,462	0	0	0	0	0	0%
Water Treatment Plants & Facilities Total			1,454,592	126,838	103,898	104,135	42,931	4,074	165,695	315,646	481,341	33%
Programs - Centralized Services	380700	As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services Allowance	0	0	0	0	0	0	0	0	0	0%
	381000	Energy Management: Electric Metering Improvement Program	5,125	0	5	5	0	0	0	0	0	0%
	383300	Masonry Replacement and Rehabilitation Program	25,000	0	0	0	0	0	0	0	0	0%
Programs - Centralized Services Total			30,125	0	5	5	0	0	0	0	0	0%
Grand Total			2,894,726	412,632	207,333	209,822	80,770	4,074	489,327	565,809	1,055,137	36%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	Capitalizations And Other Activity Through December 31,	CWIP Balance December 31, 2024	Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
CSO Facilities	270001	Pilot CSO Netting Facility	37,874	21	0	0	50	0	71	0	71	0%
	270002	Meldrum Sewer Diversion and VR-15 Improvements	6,401	0	0	0	0	0	0	0	0	0%
	270003	Long Term CSO Control Plan	1,587	0	1,587	1,587	161	0	161	0	161	10%
	270004	Oakwood Lieb CSO Facility Improvement	38,368	4,952	1,394	1,394	1,035	0	5,988	0	5,988	16%
	270006	Control System Upgrades - Baby Creek/Belle	18,331	2,533	1,056	1,056	649	0	3,182	0	3,182	17%
	270007	Disinfection System Improvements at CSO	8,320	48	206	206	12	0	60	0	60	1%
	270008	Flushing System Improvements at Conner Creek and St. Aubin CSO Facilities	7,070	0	0	0	0	0	0	0	0	0%
	270009	Site Improvements at St. Aubin, Belle Isle, and Baby Creek CSO Facilities	1,390	0	0	0	0	0	0	0	0	0%
	270010	HVAC Improvements at Puritan Fenkell and Seven Mile CSO Facilities	1,506	21	88	88	2	0	23	0	23	2%
	270011	HVAC Improvements at Conner Creek and Belle Isle CSO Facilities	418	0	0	0	0	0	0	0	0	0%
	270012	Control System Upgrades at Conner Creek, Oakwood, and Puritan Fenkell CSO Facilities	5,975	0	0	0	0	0	0	0	0	0%
	270013	Facility Improvements at Puritan Fenkell and Seven Mile CSO Facilities	902	0	0	0	0	0	0	0	0	0%
	270014	Convert to Complete Capture Basin CSO Fa	4,482	0	0	0	0	0	0	0	0	0%
	273001	Hubbell Southfield CSO Facility Improvement	52,060	2,509	3,032	3,032	1,314	0	3,823	0	3,823	7%
	273002	CSO Hubbell Southfield VR-8 Gate Improvements	1,786	0	0	0	0	0	0	0	0	0%
	276002	Replacement Make-up Air Unit at CON	0	0	0	0	0	0	0	348	348	0%
	277001	Baby Creek Outfall Improvements Project	9,376	4,763	3,554	3,554	2,812	0	7,575	389	7,964	85%
	277002	Baby Creek CSO Facility Influent Flushing System	745	0	0	0	0	0	0	0	0	0%
CSO Facilities Total			196,591	14,847	10,916	10,916	6,036	0	20,883	737	21,621	11%
Engineering	361001	Consolidated Process Control System Upgrades	0	0	0	0	0	0	0	316	316	0%
	361002	Data Center Reliability/Availability Improvements	0	0	0	0	0	0	0	17	17	0%
	361003	SCADA Radio Network Upgrade	0	0	0	0	0	0	0	853	853	0%
Engineering Total			0	0	0	0	0	0	0	1,186	1,186	0%
Facilities	331002	Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	0	0	0	0	0	0	0	1,123	1,123	0%
Facilities Total			0	0	0	0	0	0	0	1,123	1,123	0%
Field Services - Wastewater	222001	Intercommunity Relief Sewer Modifications in Detroit Oakwood District	78,792	2,977	0	1,786	786	0	3,764	0	3,764	5%
	222002	Detroit River Interceptor Evaluation and Rehabilitation	54,761	57,689	11,581	11,581	9,260	0	66,949	0	66,949	122%
	222008	North Interceptor East Arm (NIEA)	2,250	2,164	1,125	1,125	86	0	2,250	0	2,250	100%
Field Services - Wastewater Total			135,802	62,830	12,706	14,492	10,133	0	72,963	0	72,963	54%
Programs	260101	Plant-Wide Replacement of Emergency Lighting	0	0	0	0	0	0	0	1,246	1,246	0%
	260102	Replace Stairs - WWTP	0	0	0	0	0	0	0	109	109	0%
	260103	Replace 4 DS-706 Centrifuges WWTP	0	0	0	0	0	0	0	779	779	0%
	260104	Pur Installation of EB-25 Unit WWTP	0	0	0	0	0	0	0	21	21	0%
	260105	Replace Various Air Distribution Equip	0	0	0	0	0	0	0	868	868	0%
	260108	Sanitary Meter Replacement: Neff Road	0	0	0	0	0	0	0	377	377	0%
	260111	W-3 Construct: Overhead Door	0	0	0	0	0	0	0	551	551	0%
	260112	Connor Creek	0	0	0	0	0	0	0	354	354	0%
	260113	Fire Remediation	0	0	0	0	0	0	0	19,428	19,428	0%
	260200	Sewer and Interceptor Evaluation and Rehabilitation Program	9,172	0	0	0	0	0	0	0	0	0%
	260201	Conveyance System Interceptor Rehab	493	19,906	422	422	0	0	19,906	18,542	38,448	7792%
	260203	Conveyance System Interceptor Rehab	0	0	0	0	0	0	0	4,642	4,642	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	Capitalizations And Other Activity Through December 31,	CWIP Balance December 31, 2024	Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Programs	260204	Energy Services for Rehabilitation of Conveyance Sewer System	40,621	27,253	13,440	13,440	7,371	0	34,624	0	34,624	85%
	260205	NWI Outfall Rehabilitation	358	6,373	324	623	549	0	6,922	0	6,922	1931%
	260206	Conveyence System Rehabilitation - Interceptors	16,762	6,992	5,208	5,208	2,541	0	9,533	0	9,533	57%
	260207	Rehabilitation of Woodward Sewer System	308	20,322	308	308	-796	0	19,526	0	19,526	6330%
	260209	Sewer Repair Contract - As Needed	9,209	3,192	4,605	4,605	391	0	3,584	0	3,584	39%
	260210	Linwood/Lonyo/Ashland/2nd Ave/Shiawassee	27,506	1,606	249	249	295	0	1,900	0	1,900	7%
	260211	Sewer Repair Contract II	5,515	5	1,499	1,499	0	0	5	0	5	0%
	260301	Roof Replacement of Complex II	0	0	0	0	0	0	0	1,673	1,673	0%
	260500	CSO Outfall Rehab	7,636	0	0	0	0	0	0	0	0	0%
	260502	CSO Outfall Rehab	0	0	0	0	0	0	0	3,330	3,330	0%
	260504	Rehabilitation of Outfalls - Phase II	0	0	0	0	0	0	0	4,924	4,924	0%
	260505	Rehabilitation of Outfalls - Phase IV	0	4	0	0	0	0	4	5,710	5,713	0%
	260508	B-39 Outfall Rehab	709	10,461	676	676	0	0	10,461	0	10,461	1475%
	260509	B-40 Outfall Rehab	0	113	0	0	0	0	113	0	113	0%
	260510	Conveyence System Rehabilitation - Outfalls	19,766	4,962	3,993	3,993	4,062	0	9,024	0	9,024	46%
	260600	CSO Facilities Improvements	1,018,312	0	657	657	0	0	0	0	0	0%
	260601	Oakwood Drain Valve Improvements	0	0	0	0	0	0	0	805	805	0%
	260602	CSO Fire Alarm System Improvements	0	0	0	0	0	0	0	998	998	0%
	260603	Conner Creek CSO Basin Rehab	0	0	0	0	0	0	0	7,675	7,675	0%
	260604	Baby Creek CSO Rehab	0	0	0	0	0	0	0	367	367	0%
	260606	Puritan Fenkell Roof Replacement	0	0	0	0	0	0	0	347	347	0%
	260607	Lieb SDF Electrical Improvements	0	0	0	0	0	0	0	1,033	1,033	0%
	260608	Seven Mile RTB - Roof Replacement	0	0	0	0	0	0	0	497	497	0%
	260609	Seven Mile RTB - Parking Lot / Sitework	0	0	0	0	0	0	0	430	430	0%
	260610	Baby Creek MAU Replacement	0	0	0	0	0	0	0	275	275	0%
	260611	HVAC Improvements At Lieb SDF	0	0	0	0	0	0	0	413	413	0%
	260613	Baby Creek HVAC Improvements	0	0	0	0	0	0	0	545	545	0%
	260614	CSO Facilities Structural Improvements	124	13,962	124	124	29	0	13,990	0	13,990	11251%
	260615	PF & Lieb CSO Facilities Site & Drainage Improvements	0	0	0	0	0	0	0	582	582	0%
	260616	Baby Creek SCO Anchor & Wedge Improvements	0	0	0	0	0	0	0	770	770	0%
	260618	Oakwood HVAC Improvements	0	0	0	0	0	0	0	6,211	6,211	0%
	260619	Control System Upgrade At St. Aubin, Lieb and 7 Mile	4,049	3,264	4,049	4,049	892	0	4,156	0	4,156	103%
	260620	Baby Creek Roof Replacement	0	0	0	0	0	0	0	985	985	0%
	260621	Connor Creek Berm Improvements	0	2	0	0	0	0	2	2,245	2,247	0%
	260622	CSO Facilities Emergency Generator Improvements	0	0	0	0	0	0	0	1,110	1,110	0%
	260623	Baby Creek Screen Rehabilitation	31	2,268	31	31	9	2,277	1	2,277	2,277	7376%
	260624	Baby Creek Chemical Tansk Replacement (TOE)	0	0	0	0	304	0	304	0	304	0%
	260700	Sewer System Infrastructure Improvements & Pumping Stations	989	0	54	54	0	0	0	0	0	0%
	260701	Conveyance System Infrastructure Improvements	27,827	34,176	16,081	16,081	6,243	0	40,419	0	40,419	145%
	260702	Pump Station Assets Updates	10,065	0	0	0	0	0	0	0	0	0%
	260800	WRRF Roof Replacement Program	14,700	0	0	0	0	0	0	0	0	0%
	260801	WRRF Sludge Pump Station #3 Roof Replacement	0	0	0	0	0	0	0	80	80	0%
	260802	2022 WRRF Roof Improvements Project	3,894	473	2,103	2,103	3,366	0	3,839	0	3,839	99%
	260900	WRRF Facility Optimization Program	85,000	0	0	0	0	0	0	0	0	0%
	260901	Rehab. Hazmat Facility at WRRF	84	3,253	84	84	266	0	3,519	0	3,519	4172%
	260902	WRRF Renovation of 4th Floor	0	0	0	0	0	0	0	3,552	3,552	0%
	260903	WRRF Front Entrance Rehab.	1,284	1,977	1,284	1,284	1,418	0	3,394	0	3,394	264%
	260904	WRRF 3rd Floor Renovation	3,440	125	2,017	2,017	18	0	143	0	143	4%
	260905	WRRF Plumbing Shop Rehab	1,352	1,134	1,352	1,352	699	0	1,833	0	1,833	136%
	261000	WRRF Rehabilition of Secondary Clarifiers	39,337	0	0	0	0	0	0	0	0	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	Capitalizations And Other Activity Through December 31,	CWIP Balance December 31, 2024	Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Programs	261001	Rehabilitation of Secondary Clarifiers	18,107	141	832	832	36	0	177	0	177	1%
	900015	Baby Creek CON-219 Channel Meters	0	0	0	0	0	0	0	847	847	0%
Programs Total			1,366,654	161,965	59,392	59,691	27,692	2,277	187,380	94,592	281,972	21%
Programs - Water	171501	Roof Replacements - Var Facilities Program	0	0	0	0	0	0	0	83	83	0%
	O13309	OMID	0	258	0	0	0	0	258	0	258	0%
Programs - Water Total			0	258	0	0	0	0	258	83	341	0%
Security	341002	Security Infrastructure Improvements	0	0	0	0	0	0	0	3,201	3,201	0%
Security Total			0	0	0	0	0	0	0	3,201	3,201	0%
Systems Control Center	232001	Fairview Pumping Station - Replace Four Sanitary Pumps	0	4	0	0	0	0	4	44,714	44,718	0%
	232002	Connor Creek Pump Station Improvements	440,137	11,910	21,068	21,068	1,823	0	13,733	6,104	19,836	5%
	232005	Freud Pump Station Improvements	0	4,694	0	0	324	0	5,018	0	5,018	0%
	233002	Collection System In System Storage Devices(ISDs) Improvements	0	0	0	0	0	0	0	1,525	1,525	0%
	233003	Rouge River In-system Storage Devices	81,336	0	0	0	0	0	0	0	0	0%
Systems Control Center Total			521,473	16,608	21,068	21,068	2,147	0	18,755	52,343	71,097	14%
Water Resource Recovery Facility	211001	Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	0	0	0	0	0	0	0	54,749	54,749	0%
	211002	Pump Station No. 2 Pumping Improvments	0	80	0	0	6	0	86	2,676	2,762	0%
	211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	0	0	0	0	0	0	0	27,895	27,895	0%
	211005	Pump Station No. 2 Improvements	82,827	558	2,420	2,420	949	0	1,508	0	1,508	2%
	211006	Pump Station No. 1 Improvements	86,348	20,238	15,064	15,064	8,978	0	29,216	0	29,216	34%
	211007	Replacement of Bar Racks and Grit Collection System at Pump Station No. 2	113,530	8,930	11,467	16,853	12	0	8,942	0	8,942	8%
	211008	Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines	0	12,736	0	0	135	0	12,871	0	12,871	0%
	211009	Rehabilitation of the Circular Primary Clarifier Scum Removal System	22,590	640	0	0	0	0	641	0	641	3%
	211010	Rehabilitation of Sludge Processing Complexes A and B	14,010	94	0	0	0	0	94	0	94	1%
	211011	WRRF PS1 Screening and Grit Improvements	96,901	3,401	2,643	2,643	282	0	3,683	0	3,683	4%
	212001	Returned Activated Sludge (RAS) Pumps, Influent Mixed Liquor System and Motor Control Centers (MCC) Improvements for Secondary Clarifiers	0	0	0	0	0	0	0	34,090	34,090	0%
	212002	Study, Design, & Construction,Management Services for Modified Detroit River Outfall No. 2 - WRRF	0	0	0	0	0	0	0	10,819	10,819	0%
	212003	Aeration System Improvements	0	0	0	0	0	0	0	16,525	16,525	0%
	212004	ProjectChlorination/Dechlorination Process Equipment Improvements	0	0	0	0	0	0	0	5,652	5,652	0%
	212005	Rouge River Outfall No. 2 (RRO-2) Segement 1-WWTP Modifications	0	0	0	0	0	0	0	252	252	0%
	212006	PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	0	0	0	0	0	0	0	43,789	43,789	0%
	212008	WRRF Rehabilitation of Intermediate Lift	212,664	8,191	10,783	10,783	5,877	0	14,068	0	14,068	7%
	212009	WRRF Aeration Improvements 3 and 4	69,528	0	0	0	0	0	0	0	0	0%
	212010	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite	6,232	0	0	0	0	0	0	0	0	0%
	213001	Replacement of Belt Filter Presses for Complex I and Upper Level Complex II	0	0	0	0	0	0	0	36,669	36,669	0%
	213003	Sewage Sludge Incinerator Air Quality Improvements at WRRF	0	0	0	0	0	0	0	36,676	36,676	0%
	213004	Biosolids Dryer Facility at WRRF	0	0	0	0	0	0	0	2,408	2,408	0%

Construction Work-in-Progress Quarterly Report

As of December 31, 2024

Great Lakes Water Authority
B4 - Wastewater System Construction Work-in-Progress (CWIP) FY 2025 Rollforward
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024
(in thousands)

Project Category	Project	Project Name	Total Project Plan Estimate	CWIP Balance July 1, 2024	FY 2025 Board Approved CIP	FY 2025 Board Approved CIP With Project Amendments	FY 2025 Activity through December 31, 2024	Capitalizations And Other Activity Through December 31,	CWIP Balance December 31, 2024	Life to Date Capitalizations And Other Activity	Life to Date Activity Through December 31, 2024	Life to Date Activity / Total Project Plan Estimate
Water Resource Recovery Facility	213005	Complex I Incinerators Decommissioning and Reusability	0	0	0	0	0	0	0	370	370	0%
	213006	Improvements to Sludge Feed Pumps at Dewatering Facilities	14,899	2,620	64	64	746	0	3,366	0	3,366	23%
	213007	Construction of the Improved Sludge Conveyance and Lighting System at the WWTP	104	749	104	104	72	0	821	22,912	23,733	22858%
	213008	Rehabilitation of the Wet and Dry Ash Handling Systems	7,033	151	0	0	15	0	166	0	166	2%
	213009	Phosphorous Recovery Facility at the WWRF	335,352	24	1,988	1,988	12	0	35	0	35	0%
	214001	Relocation of Industrial Waste Division and Analytical Laboratory Operations	0	0	0	0	0	0	0	14,300	14,300	0%
	215001	Rehabilitation of Combined Sewer Overflow (CSO) Retention Treatment Basins (RTB), Screening and Disinfection Facilities (SDF)	0	0	0	0	0	0	0	1,699	1,699	0%
	216001	Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WRRF	0	0	0	0	0	0	0	32,686	32,686	0%
	216002	Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements	0	0	0	0	0	0	0	849	849	0%
	216004	Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP	0	0	0	0	0	0	0	7,907	7,907	0%
	216006	Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System	15,047	10,427	3,342	6,161	4,171	0	14,598	0	14,598	97%
	216007	DTE Primary Electric 3rd Feed Supply Line to the WRRF	0	0	0	0	0	0	0	4,008	4,008	0%
	216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	92,505	4,469	13,500	13,500	102	0	4,571	0	4,571	5%
	216011	WRRF Structural Improvements	11,706	5,453	3,732	3,732	2,186	0	7,639	0	7,639	65%
Water Resource Recovery Facility Total			1,181,276	78,762	65,107	73,312	23,544	0	102,305	356,931	459,237	39%
Grand Total			3,401,797	335,270	169,189	179,479	69,551	2,277	402,544	510,196	912,741	27%

Appendix C - Project Amendment Summaries

The purpose of the Project Amendment Summary is to illustrate the amendments to the current fiscal year board approved CIP for each project with an amendment resulting from the use of allowance and program funding for a specific amount necessitated by contract award.

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, project amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the current fiscal year board approved Capital Improvement Plan accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the project amendments prepared for the Capital Reserve, project amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded, and other project information becomes available additional project amendments to and from the Capital Reserve will be prepared to amend the board approved FY 2025 Capital Improvement Plan.

$2,489,162 of Capital Reserve project amendments have been prepared as of December 31, 2024, as shown for the Water System in C1 – Water FY 2024 Project Amendment Summary with project amendments detailing the assignment of funding within Program and Allowance accounts. This year-to-date total illustrates a decreased use of reserves.

$10,289,979 of Capital Reserve project amendments have been prepared as of December 31, 2024, as shown for the Wastewater system in C2 – Wastewater FY 2024 Project Amendment Summary with project amendments detailing the assignment of funding within Program and Allowance accounts.

These amendments are in alignment with the FY 2025-2029 CIP plan.

The order of these appendices on the subsequent pages are in ascending order by CIP project number.

Construction Work-in-Progress Quarterly Report
As of December 31, 2024

Great Lakes Water Authority
C1 - Water System Project Amendment Summary
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024

Project	Project Name	Capital Reserve	Grand Total
111009	Lake Huron WTP-35 MGD HLP, Flow Meters	237,062	237,062
122004	96" WTM Relocation 84" Triple Offset Ball Valve Material Procurement	772,300	772,300
132015	Newburgh Road Booster Pumping Station Improvements	1,206,500	1,206,500
170602	Water Transmission Main, Valve and Other Priority Repairs	273,300	273,300
Grand Total		**$ 2,489,162**	**$ 2,489,162**

Construction Work-in-Progress Quarterly Report
As of December 31, 2024

Great Lakes Water Authority
C2 - Wastewater System Project Amendment Summary
Unaudited Activity For the Fiscal Quarter Ended December 31st, 2024

Project	Project Name		Capital Reserve	Grand Total
211007	WRRF PS-2 Bar Racks Replacements and Grit Collection System Improvements AM#3		5,386,324	5,386,324
216006	CON-1903598 Yard Piping, Construction Manager at Risk - Change Order No. 5 & 6		1,097,834	1,097,834
216006	1903601 - Yard Piping Engineering Services, Amendment No. 5		1,721,566	1,721,566
222001	Northwest Interceptor to Oakwood CSO Sewer Construction		1,785,755	1,785,755
260205	NWI Rehabilitation		298,500	298,500
Grand Total		**$**	**10,289,979**	**$ 10,289,979**

Procurement Pipeline

Great Lakes Water Authority (313) 964-9157 www.glwater.org **March 2025 - Volume 67**

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

Kahua PMIS Implementation Project

Last month, GLWA kicked off the implementation of its new Project Management Information System (PMIS) software, Kahua, which will help GLWA to streamline the delivery of its Capital Improvement Plan (CIP) as outlined in the CIP PMP (Program Management Plan). The Kahua PMIS system will be used by GLWA's CIP group, as well as GLWA engineers and contractors and will have a phased rollout over the next two years. Phase I, which has a targeted go-live date of April 2026, will migrate the current CIP planning process and documentation into Kahua. Phase II, which has a targeted go-live date of April 2027, will transfer the management of the day-to-day CIP program and project delivery into Kahua. Read below to learn more about the benefits of the new PMIS system.

- ✓ ***Centralized project information***. The Kahua PMIS system will integrate several databases currently used by GLWA into one centralized platform that will enable GLWA and contractors to have shared access to key project info and documents.
- ✓ ***Real-time project updates***. Kahua's cloud-based system ensures that as soon as changes are made to project documents, including costs and schedules, they will be visible to both GLWA and contractors.
- ✓ ***Enhanced communication***. Kahua's system will help vendors communicate more effectively with GLWA project managers by allowing them to view and share project updates, manage tasks, submit deliverables, and track project progress.
- ✓ ***User friendly mobile interface***. Kahua's user-friendly system allows for mobile access, allowing GLWA and contractors to access project information anywhere.

Vendors should stay tuned to future editions of the *Procurement Pipeline* for additional information about the PMIS system and training opportunities.

GLWA 2025 Vendor Outreach Event

GLWA is excited to announce that its 2025 Vendor Outreach Event will be held on September 25, 2025 at Macomb County Community College. GLWA encourages vendors to stay tuned to the Pipeline newsletter for event information and registration details. We look forward to seeing you there!

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 how to submit a competitive bid or proposal to any GLWA solicitation.

Keeping up with GLWA

Our Chief Executive Officer (CEO) Monthly Report provides a wealth of information and news about important initiatives within GLWA's service territory that impact GLWA, its member partners, and the public. To read the February 2025 Monthly Report, please click here.

What's Coming Down the Pipe?

Current Solicitations: Register in GLWA's Bonfire Procurement Portal for new solicitations and contract award information.

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

Visit GLWA online!

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

Upcoming Solicitations March 2025

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	$95,000,000
Design Build	170803	Reservoir Rehabilitation Phase III	$51,830,000
Professional Services	O&M	Heating, Ventilation, and Air Conditioning (HVAC) Building and Mechanical Systems Inspection, Repair, and Preventative Maintenance Services	$24,000,000
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	$15,000,000
Construction	273001	Hubbell Southfield CSO Facility Improvements	$56,000,000
Enterprise (next three months)			
Information Technology	O&M	Information Technology Service Management Software and Implementation Services	$750,000
Wastewater (next three months)			
Design	270007	CSO Facility Disinfection Improvements	$2,000,000
Construction	270006	CSO Facility Improvements II	$17,500,000
Construction	260904	Renovation of the New Administration Building 3rd Floor	$8,500,000
Construction	270004	Oakwood/Leib CSO Facilities Improvements	$55,000,000
Construction	213006	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities	$16,000,000
Projects moved to Procurement Team (Preparing for solicitation on Bonfire)			
Professional Services	O&M	Low Voltage Wiring Task Order Service	$5,639,560
Construction	112007	Structural Repairs, Northeast Water Treatment Plant	$6,000,000
Professional Services	O&M	External Auditor Services	$975,000
Professional Services	O&M	Investment Advisor	$2,200,000
Professional Services	O&M	Grant Consulting Services	$150,000
Professional Services	O&M	Staffing Services	$750,000
Design	113010	Southwest WTP Flocculation Improvements	$4,933,000
Professional Services	O&M	Task Order Engineering Services (TOES) Contract 2025	$15,000,000
Construction	260210	Rehabilitation of GLWA Sewers; Ashland Relief, Linwood, Lonyo, Second Ave., and Shiawassee	$26,870,036
Professional Services	O&M	Valve Reconditioning Service	$54,000,000
Construction	122016	Downriver Transmission Main Loop – Phase 1 – Inkster Road	$2,172,102
Professional Services	O&M	2025 Task Instrumentation and Control	$7,500,000

Vendors should continue to monitor Bonfire for solicitation updates.

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