



Annual Comprehensive Financial Report

Fiscal Year Ended June 30, 2022

*Prepared by
Great Lakes Water Authority
Financial Services Area
Detroit, Michigan*

*Dedicated to efficiently delivering the nation's
best water and sewer services in partnership with
our member partners across southeast Michigan*

GREAT LAKES WATER AUTHORITY

Southeast Michigan

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Including Independent Auditors' Report

Fiscal Year Ended June 30, 2022

Prepared By:

Great Lakes Water Authority Financial Services Area

GREAT LAKES WATER AUTHORITY

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GREAT LAKES WATER AUTHORITY

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INTRODUCTORY SECTION



TRANSMITTAL LETTER

December 14, 2022

Board of Directors
Great Lakes Water Authority

Directors,

We are pleased to present the Annual Comprehensive Financial Report (“ACFR”) for the Great Lakes Water Authority (“GLWA” or “Authority”) for the fiscal year which ended June 30, 2022.

About this Annual Comprehensive Report

The accompanying financial statements for GLWA were prepared in accordance with U.S. generally accepted accounting principles (“GAAP”), as promulgated by the Governmental Accounting Standards Board (“GASB”) and audited by a firm of independent certified public accountants engaged by the GLWA Board of Directors. This is consistent with the GLWA Articles of Incorporation and By-laws which require an annual audit of the Authority’s financial statements by independent certified public accountants.

Responsibility for the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with GLWA management. To the best of our knowledge and belief, the information contained in this report is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of GLWA. All disclosures necessary for the reader to gain an understanding of GLWA’s financial activity have been included.

GLWA management is responsible for establishing and maintaining an internal control structure designed to ensure that its assets are adequately safeguarded against loss, theft, or misuse and to maintain accurate and reliable financial records for the preparation of financial statements and the representations made by management. The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that: 1) the cost of internal controls should not exceed the benefits derived from the controls; and 2) the evaluation of costs and benefits requires management’s exercise of judgment. To the best of our knowledge and belief, GLWA’s internal accounting controls adequately safeguard its assets and provide reasonable assurance of the proper recording of financial transactions in accordance with GAAP.

Baker Tilly US, LLP, Certified Public Accountants, has been retained by GLWA to serve as its independent auditors and has issued an unmodified (“clean”) opinion on GLWA’s financial statements for the year ended June 30, 2022, with comparative amounts for June 30, 2021.

GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis ("MD&A"). This letter of transmittal is designed to supplement the MD&A and should be read in conjunction with it. GLWA's MD&A is located immediately following the independent auditors' report.

Overview of GLWA

The creation of GLWA was the outcome of an historic collaboration among regional leaders at the time of the City of Detroit's Chapter 9 Bankruptcy. The creation of a regional water authority was outlined in a memorandum of understanding on September 9, 2014 ("2014 MOU"). Subsequently, on November 26, 2014, GLWA was incorporated by the City of Detroit ("City"), and the counties of Macomb, Oakland, and Wayne pursuant to Act 233, Public Acts of Michigan, 1955, as amended. At the time of GLWA's incorporation, the City, through its Detroit Water and Sewerage Department ("DWSD"), was providing water supply services within and outside of the City through a water supply system and drainage and sewage disposal services within and outside of the City through a sewage disposal system. The purpose of GLWA is to operate, control, and improve the regional assets of both the Water System and Sewage Disposal System owned by the City which were operated by DWSD. The purpose of DWSD is to be the local service provider for the retail system, which is largely the City of Detroit customer base, including a few retail customers located just outside the City of Detroit. GLWA began operating the systems on January 1, 2016.

GLWA leases the regional water and sewage disposal facilities from the City for an allocation of \$50 million per year to fund capital improvements for the City's retail system and/or debt obligations associated with providing water and sewer service to the City.

The structure that launched GLWA also provided an opportunity to fund a Water Residential Assistance Program ("WRAP") to assist eligible low-income residential households in our member partner communities.

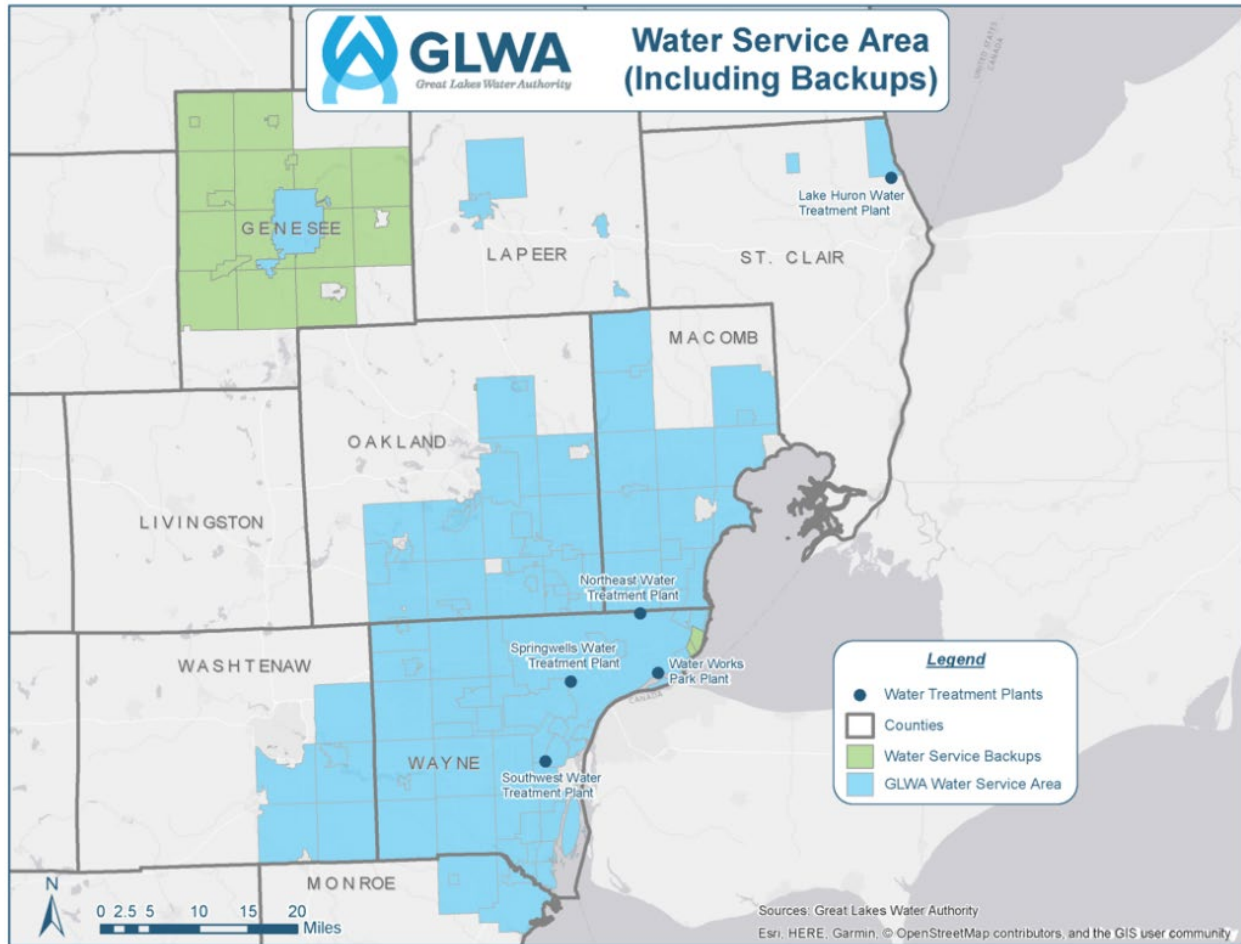
At GLWA, we define "member partner" as the city, township, village, drainage district, authority or other public body corporate recognized by the state of Michigan that holds a wholesale water or wastewater disposal services contract with GLWA and includes its staff and consultants. Our member partners are actively engaged with GLWA and supported by a facilitated outreach program to ensure open, ongoing, and proactive relationships.

Regional Water System

Our regional water system is one of the largest in the United States, both in terms of water produced and population served. The system currently serves an area of 1,698 square miles with an estimated population of nearly 3.8 million or approximately 38 percent of Michigan's population. The water system has 88 member partners across 112 communities.

The water supply system consists of three intake facilities, five water treatment plants, 19 booster pumping stations, 32 water storage reservoirs and a conveyance system with over 816 miles of transmission mains. The facilities have the treatment capacity of 1,720 million gallons per day.

Below is the water service area map.



Regional Wastewater System

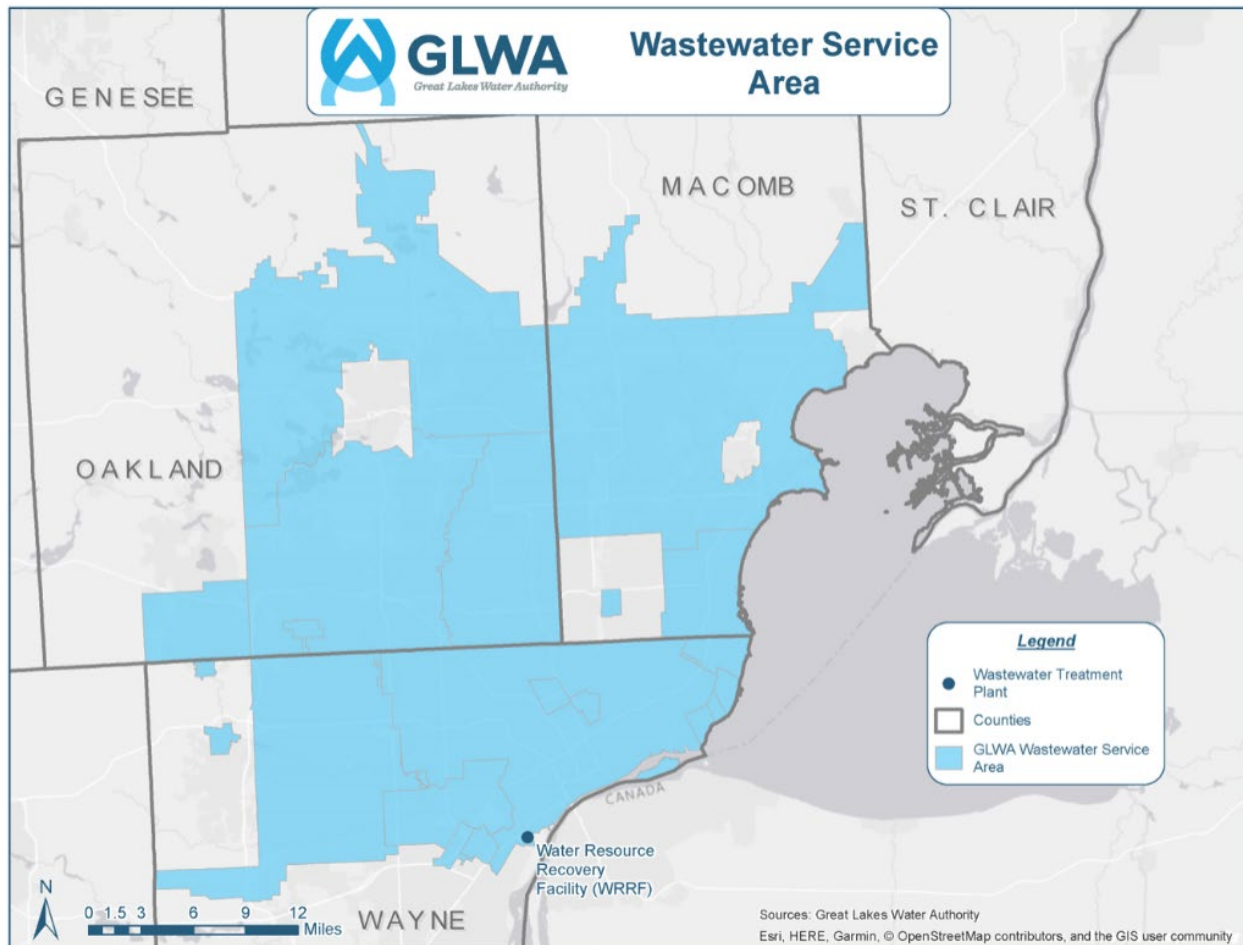
Our regional wastewater system is also one of the largest in the United States, both in terms of treatment capacity and population served. The wastewater system currently serves an area of 944 square miles with an estimated population of nearly 2.8 million or approximately 28 percent of Michigan’s population. The wastewater system has 19 member partners across 79 communities.

The wastewater system consists of one of the largest single-site water resource recovery facilities in the United States, three major interceptors, nine pump stations, eight Combined Sewer Overflow (“CSO”) Control Facilities, including five retention treatment basins and three flow-through type facilities, as well as a conveyance system with 195 miles of trunk sewers and interceptors.

The long-term strategy for the wastewater treatment and sewage disposal system is a focus on regional efficiencies. The 2020 Wastewater Master Plan (“WWMP”) was adopted by the Board in September 2020. The WWMP was created with incredible energy, insight, and direction from a broad cross section of our member partners working collaboratively with our team members and consultants and other regional stakeholders. The focus, approach and outcomes of the plan demonstrate the true spirit of the One Water Partnership that GLWA and our member partners are

committed to for the benefit of southeast Michigan. The 40-year master plan focuses on water quality, leveraging the entire region’s existing infrastructure, maximizing the use of dynamic wet weather operations, strategic use of green infrastructure, addressing changes in weather patterns and rain event intensities, extensive system modeling including surface water and wastewater treatment, evaluation of resource recovery options and energy reduction opportunities.

Below is the wastewater service area map.



Local Economy

The City of Detroit is experiencing significant growth driven by large scale redevelopment and major corporations increasing their presence or relocating. Southeast Michigan’s largest employers are comprised mostly of automobile manufacturers and health care systems. There has not been much change in the population of the service area. Due to the COVID-19 pandemic, the annual average unemployment rate increased to 11.5 percent in 2020 but has trended downward and is at 4.6 percent in June 2022. Per capita income has had a steady increase over the years.

Budget Process

GLWA has a rigorous budget process. Annually, a biennial budget and five-year plan are prepared concurrently. This process begins soon after the current fiscal year begins with the operating area budget managers. A preliminary budget is presented to the Audit Committee in December and then to the full Board in January. It is also presented to our member partners for comments during the charge development process. The final proposed biennial budget and five-year financial plan, as well as a five-year capital improvement plan (“CIP”), is presented to the Board during a public hearing in February. Once approved, the budget takes effect on July 1st.

The legal level of budgetary control is the bottom line of each of the budgeted revenue requirements to align with the charge setting process. Components of the revenue requirements are referred to as appropriation categories. The budget shall not be increased or decreased by appropriation category without prior Board authorization. The Board is provided a detailed budget by line item which supports the totals in each appropriation category at the time of budget approval. The Chief Financial Officer may exercise discretion to modify the detail budget line items within each appropriation category.

The budget is prepared on a modified cash basis and the revenue requirements are determined based upon the cash needed to meet the expenditures as required by the Master Bond Ordinances (“MBOs”). A budget to actual comparison is included in the Schedule of Revenue Requirements in the Supplementary Information. A crosswalk is provided in the Supplementary Information that provides a reconciliation between budget basis results in the Schedule of Revenue Requirements to the accrual basis results in the Statement of Revenues, Expenses and Changes in Net Position.

The 4% Promise

Affordability and sustainability were primary concerns in establishing the regional water authority. The mechanism to achieve that balance was the “4% Promise” as established in the foundational documents for GLWA. The 4% Promise requires that the annual revenue requirement does not increase by more than 4 percent in any one year for the first 10 years of the Authority’s existence. The revenue requirement includes operations and maintenance (O&M) expense, debt service, system lease payments, legacy pension, funding for WRAP, funding for the capital program via Improvement & Extension Fund contributions and any other expenditure or funding as required by the MBOs. With a strong commitment to affordability, GLWA has stayed well under that promise with an average annual revenue requirement adjustment of 1.6 percent for the water fund and 1.1 percent for the sewage disposal fund from FY 2017 through FY 2023.

Long-term Financial Planning

GLWA annually updates a 10-year financial forecast as a roadmap to achieve one of the organizational goals of a solid AA category rating, by meeting or exceeding rating agency criteria. The path to achieve a solid AA credit rating is based upon rebalancing the mix of debt financing and revenue generated capital (also known as pay-as-you go) to fund the CIP. GLWA has delivered in reducing the annual revenue dollars that are dedicated to debt service with an effective debt refunding program.

There was no debt refunding activity during the fiscal year ended June 30, 2022, however sewage disposal bonds were refunded in September 2022 which resulted in a net present value economic gain of approximately \$212,000. This transaction also achieved a \$1.6 million reduction in reserve requirements and future cash flow savings of \$1.96 million. Since GLWA's operational inception in 2016, refunding transactions have achieved a) reductions in debt reserve requirements of \$105.9 million and b) future cash flow savings of \$718.2 million with a net present value economic gain of \$440.7 million. These savings have a material impact on GLWA's ability to keep the annual revenue requirement adjustments and related charge adjustments at an amount well below the consumer price index.

This financial achievement demonstrates the strength, stability, and best-in-class performance that the regional stakeholders and leadership team envisioned when the concept of a regional authority emerged in 2014. Further, we believe that our transparency and accessibility in addressing questions from rating agencies, as well as investors, contributed to successful outcomes in uncertain times. The result is rating agency improvements since the operational effective date of the Authority. Moody's Investor Services has increased the ratings 5 notches, Fitch Ratings has increased the ratings 4 notches and Standard & Poor's has increased the ratings 3 notches. With the recent 2022 transactions, Fitch Ratings moved the outlook to Positive from Stable for the wastewater system and Moody's Investors Service moved the outlook to Positive from Stable for both the water and sewage disposal systems.

Major Initiatives

Economic Outlook Task Force - A rare combination of supply chain constraints and sharp demand increases have driven unprecedented cost increases in both capital and operating expenses – most notably over the past 24 months. By way of example, since early 2021, the cost of steel is up 76 percent, electrical equipment 30 percent, and chlorine is up 80 percent. GLWA is not exempt from these national trends and faces difficult choices in managing the operating and capital budgets. In response, GLWA formed an Economic Outlook Task Force (“EOTF”) to analyze current trends, forecast future price increases, and offer mitigation strategies. Recently, the EOTF's Phase 1 report which offers both short-term and long-term cost pressure mitigation strategies, was presented to the Board. It addresses forecasting strategies, capital project portfolio management, and other risk and cost mitigation actions such as modifying vendor contract terms.

Capital Improvement Program - The majority of the GLWA FY 2023–2027 five-year CIP is driven by optimizing the system and maintaining reliability. There are no projects in the water system or sewer system CIP which have costs that will be incurred during FY 2023 to 2027 that are driven by mandated permit requirements. The water system CIP calls for \$965.6 million of major capital expenditures over the next five fiscal years (2023-2027) and the sewer system CIP calls for \$761.8 million of capital expenditures over the same period. The staff from Michigan Department of Environment, Great Lakes, and Energy (“EGLE”) regularly engage with GLWA on capital project matters to ensure alignment and open dialog to achieve optimal results.

One Water Partnership - The One Water Partnership Agreement between GLWA and its member partners outlines the mutual commitments to working together for the greater good of the region, detailing the responsibilities of all parties and a commitment to a multi-jurisdictional, multi-agency

approach to infrastructure renewal and investment. GLWA’s collaborative relationship with its customers is foundational to its operations wherein GLWA works with its customers as member partners. Recently, the 2022 Member Partner Outreach Scorecard was released which provided an overall satisfaction survey at 90% with communication, transparency, and responsiveness as key strengths. Not surprisingly, shared concern of capital project cost increases was noted in the survey results.

Payment Assistance Program - WRAP set aside \$4.1 million of resources to support customer assistance needs in the region for the year ended June 30, 2022. Services include payment assistance, consumption audit, basic plumbing repairs, conservation education, and limited lead fixture replacement. This means that qualified households can receive payment assistance, as well as take steps to sustainably reduce their bills in the future. In October 2022, the new WRAP Income Based Plan (“IBP”) was launched to provide eligible households with payment assistance that limits the household cost for services to 3 percent. The IBP was the result of extensive research which GLWA believes to be a nationally leading program design.

Workforce Development – At a time when many employers are facing labor shortages and turnover due to retirement, GLWA is focused on continuing to expand workforce development and succession planning. Developed in partnership with Focus: HOPE and approved by the US Department of Labor, GLWA’s apprenticeship program successfully demonstrates a “learn-while-you-earn” model with on-the-job training and education at no cost to the participants. In partnership with Focus: HOPE, and several educational providers, GLWA has launched four multiple-year apprenticeships. A successful outcome is for apprentices to remain with GLWA post-apprenticeship.

Business Inclusion and Diversity Initiative - On November 25, 2020, the GLWA Board of Directors approved an amendment to the procurement policy that establishes the submission of a diversity plan for all procurements over \$1 million to ensure that the vendor community is aligned with GLWA’s values for a diverse vendor base. The amendment also provides incentives to business located in our state, services area, and in economically disadvantaged communities among our member partner communities. The launch of the Business Inclusion & Diversity (“BID”) program significantly strengthens the Small Business Initiative and the Strategic Alliance Memorandum executed with the United States Small Business Administration (“SBA”) in 2018 to meet the needs of the small business community and engagement in GLWA business opportunities. The inaugural annual report for the BID program was issued in September 2022 with excellent results – 65 percent of eligible procurements were awarded to firms that met the diversity certification criteria as a disadvantaged, minority-owned, women-owned or small business enterprise for a total of \$121 million.

FY 2022 Financial Results

Most important to our member partners is the budget results, as the customer charges are set based upon our revenue requirements that must be fulfilled. The Schedule of Revenue Requirements Budget to Actual, in the Supplementary Information, provides an overall view of the financial results for FY 2022. In preparation of the budget, GLWA adheres to the following Financial Plan Objectives that are discussed in detail in our budget document:

1. The 4% Promise - The 2014 MOU and lease agreements that established the regional authority demonstrated a commitment to affordability by codifying what is commonly referred to as the 4% Promise. This caveat established that the annual revenue requirement budget increases are limited to 4 percent for the first ten years of operations beginning with FY 2016;
2. Revenue Stability for the System – This is achieved by utilizing a charge model to provide revenue stability despite changes in climate conditions that vary from year to year which also includes measures to foster water conservation;
3. Managing Charge Stability for Our Member Partners – The goal is to adjust charges on a modest incremental basis systemwide to prevent unpredictable cost increases for our Member Partners;
4. Retail System Revenue and Collections – Under the terms of the leases, Master Bond Ordinance (“MBO”), and the services agreement with DWSD, GLWA distributes receipts to the revenue requirements following a flow of funds that may result in a cashflow loan to DWSD. The goal is that the retail system collections exceed the financial commitments under the MBO;
5. WRAP – This program is required to be funded at 0.5 percent of revenue;
6. Closed Loop Lease Payment – The regional system lease payments stay within the local, retail water and sewage disposal systems for the benefit of the DWSD;
7. Closed Legacy Benefit Plan Costs – GLWA’s share of the required DWSD commitment as part of the City of Detroit’s Chapter 9 bankruptcy Plan of Adjustment is funded consistent with the terms of the agreement.

The bottom-line revenue requirement budget result is that Water Operations ended the year with an \$8.2 million (2.4 percent) positive budget variance after meeting all of the revenue requirements. Similarly, the Sewage Disposal Operations ended the year with an \$8.5 million (1.8 percent) positive budget variance after meeting all of the revenue requirements.

A further discussion of FY 2022 results is presented in the MD&A. The MD&A provides further analysis of the water and sewer systems individually in addition to GLWA overall.

Solid Foundation for Sustainability

GLWA is committed to ensuring the long-term sustainability of the regional water supply and sewage disposal systems – we do this by recognizing that near-term actions have long-term impacts.

Stable Revenues with Modest Charge Adjustments - GLWA balances steady and controlled Operations and Management budget requests for the short-term, while continuing to focus on increasing cash reserves for capital investment and controlling long-term financial commitments. This provides stability in the cost of supply for our member partners (See Schedule 3 in the Statistical Section which provides the history of charge adjustments). The water and sewer regional system charge structure, developed collaboratively with member partners, supports a high degree of financial stability. The regional water supply system revenues are set using a methodology with a basis of 60 percent fixed monthly charge and 40 percent commodity consumption using a 36-months historical average usage. Proof of that stability gained is that actual wholesale customer revenue for 2022 was 100.5 percent of the amended budget. The regional sewage disposal system charge revenue methodology is

designed to recover 100 percent with a fixed monthly billing based on each member partner's share of the annual forecasted revenue requirement. The sewage disposal charges for FY 2022 used an updated core methodology to the SHARES calculation which embraces simplicity and replaces the strength of flow with an appropriate weighting on sanitary volumes. This simplified sewer charge methodology was developed by GLWA team members, advisors, and member partners.

Strong Bondholder Protections - All GLWA and DWSD customer payments are deposited to Bond Trustee Accounts and are disbursed in accordance the MBO flow of funds.

Defined Contribution Benefit Plans - All employee benefit plans are defined contribution which provide shorter term vesting and flexibility for the employee while creating zero risk on unfunded liabilities for GLWA.

Awards

Government Finance Officers Association Distinguished Budget Presentation Award – The Government Finance Officers Association of the United States and Canada (“GFOA”) presented a Distinguished Budget Presentation Award to Great Lakes Water Authority, Michigan, for its Biennial Budget for the biennium beginning July 1, 2022. This was the Authority's fourth year receiving the award. To receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as a financial plan, as an operations guide, and as a communications device.

Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting - GFOA has awarded the Certificate of Achievement for Excellence in Financial Reporting to Great Lakes Water Authority for its annual comprehensive financial report for the fiscal year ended June 30, 2021, for the third year in a row. The report has been judged by an impartial panel to meet the high standards of the program, which includes demonstrating a constructive "spirit of full disclosure" to clearly communicate its financial story and motivate potential users and user groups to read the report. The Certificate of Achievement is the highest form of recognition, in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by a government and its management.

COVID-19 Pandemic

On March 11, 2020, the World Health Organization declared a pandemic following the outbreak of COVID-19, a respiratory disease caused by a novel strain of coronavirus. GLWA quickly responded activating its Emergency Operations Center to support its ability to provide water and wastewater services without disruption during the COVID-19 pandemic. GLWA's response to COVID-19 has continued to evolve through the course of the pandemic. GLWA has largely returned to normal operations but still maintains additional health procedures including social distancing and utilizing face coverings when appropriate under Centers for Disease Control and Prevention community threat level guidelines to support its team members and operations. On June 30, 2022, GLWA closed its COVID-19 Emergency Operations Center. GLWA remains in a threat preparedness posture and is prepared to address additional COVID-19 issues that may arise in the future.

Special Message from Suzanne R. Coffey, PE, Chief Executive Officer

In June 2022, I was honored to accept the Board’s appointment to serve as the Chief Executive Officer (“CEO”) for GLWA after serving as Interim CEO since August 2021 and the Chief Planning Officer (“CPO”) since 2016. In this new role, I bring leadership experience and extensive knowledge of the regional system and its operations, as well as a strong commitment to customer service at all levels. My focus in this first year as CEO is building resiliency within our regional system, our relationships with our member partners, and our organization.

Resiliency Within Our Regional System - As it relates to building resiliency in our regional system, our commitment to asset management plays a significant role. So much has been accomplished over these last five years, including completing the Water Services Association Management Customer Value assessment to benchmark GLWA’s Asset Management maturity, hosting a blue ribbon panel of experts from around the world as an information exchange to help guide our efforts, developing our Strategic Asset Management Plan and Asset Management policy and principles, conducting a broad cross section of trainings for our team members, and developing GLWA’s Water and Wastewater Asset Management Plans.

Resiliency Within Our Member Partners - When it comes to resiliency with our member partners, there are several recent examples of how GLWA can support our region’s communities and residents. First, working in partnership with EGLE, a webinar was conducted for member partners on the Drinking Water State Revolving Fund and the Clean Water State Revolving Fund loans programs to provide information and the current status of the identification of burdened community status for the deadlines that were fast approaching. Second, we have also been working to inform member partners and other stakeholders of important Board-approved changes to WRAP to increase participation and reach more eligible households across our service area, including the new IBP.

Resiliency Within Our Organization - Moving on to efforts we are undertaking to build resiliency in our organization. GLWA is filled with a very talented group of water professionals doing great things in and for our community. In October 2022, two GLWA team members – Jody Caldwell, P.E. and Jordie Kramer – were selected to fill key positions on the Executive Leadership Team.

Jody Caldwell, P.E., was selected to be the CPO. He has served as the Asset Management Director for more than five years and as Interim CPO since August 2021. In this role, he champions GLWA’s efforts to bolster its asset management capacities, leads long-term planning efforts such as the five-year CIP, and is responsible for System Analytics and Meter Operations and Member Outreach. He is a licensed, professional engineer in the state of Michigan and holds a bachelor and master’s degree in Civil Engineering from Michigan State University. Jody brings has more than 23-years of experience in many areas within the water and wastewater sector.

Jordie Kramer, was selected to be the Chief Organizational Development Officer (“CODO”). In this new role, she will be responsible for leading all areas of GLWA’s Organizational Development Group, including recruitment, compensation, benefits, labor relations, employee relations, human resource information systems (“HRIS”), and training and development. Prior to being elevated to this executive-level position, Kramer served as Director of Organizational Development, a role she has been in since joining GLWA in 2019. Before beginning her tenure at GLWA, Jordie served as a Director of Human Resources, and served as Labor Relations Supervisor and Senior Compensation Analyst. She earned a Bachelor of Science Degree from Central Michigan University.

Our Professional Development Certification Program allows team members in 10 job classifications represented by a union through a Collective Bargaining Agreement and in the team leader classification to earn stipends for EGLE required certifications. The recently completed first year of the program resulted in 150 team members earning certifications from EGLE.

Acknowledgements

The positive financial results presented in the annual comprehensive financial report is the demonstration of the commitment that each GLWA team member has to accountability for the resources we are given. In addition, a special acknowledgement is in order for the members of the Financial Services Area – who consistently excel in delivering quality, transparent financial reporting all year in addition to this annual comprehensive financial report.

Collaboration is at the Core of a Successful Regional Water Authority

When we say “our” system, it is “our” system that we mutually support and foster in collaboration with our member partners, team members, vendor community, Board of Directors, other stakeholders, and the public at-large. Now, more than ever, thank you for your continued engagement.



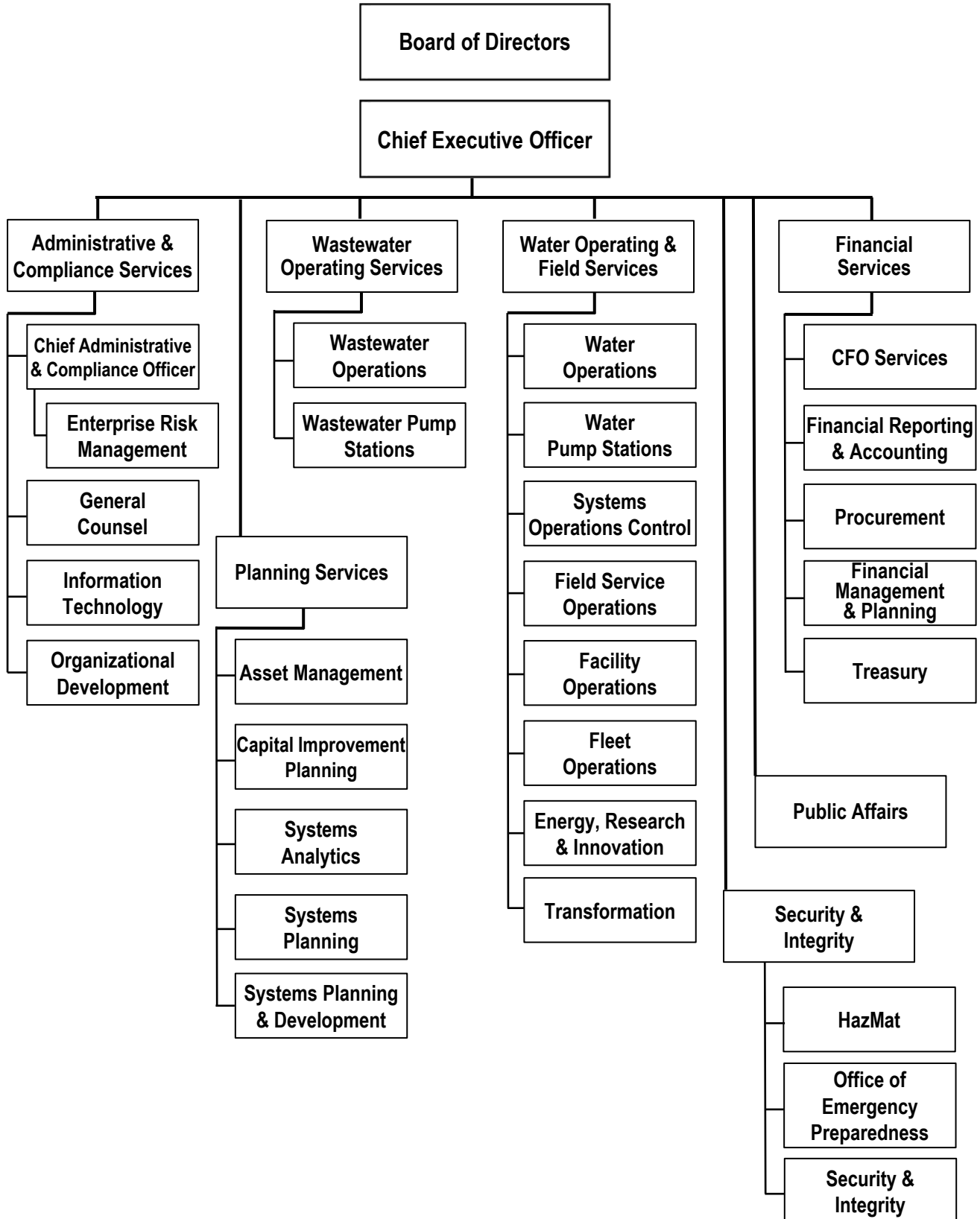
Suzanne R. Coffey, P.E.
Chief Executive Officer



Nicolette N. Bateson, CPA
Chief Financial Officer & Treasurer



Organizational Line of Reporting Chart





**Great Lakes Water Authority Board of Directors
as of June 30, 2022**

Jaye Quadrozzi GLWA Board Chairman; Representative for Oakland County
 Freman Hendrix GLWA Board Vice-Chair; GLWA Board Representative for the City of Detroit
 Brian Baker GLWA Board Secretary, GLWA Board Representative for Macomb County
 Beverly Walker-Griffea, Ph.D GLWA Board Representative for the State of Michigan
 Gary A. Brown GLWA Board Representative for the City of Detroit
 John J. Zech GLWA Board Representative for Wayne County

**Great Lakes Water Authority Executive Leadership Team
as of June 30, 2022**

Suzanne R. Coffey, P.E. Chief Executive Officer
 William M. Wolfson Chief Administrative and Compliance Officer
 Nicolette N. Bateson, CPA Chief Financial Officer/Treasurer - Financial Services
 Cheryl D. Porter Chief Operating Officer – Water Operating Services
 Navid Mehram, P.E. Chief Operating Officer – Wastewater Operating Services
 Jody Caldwell, P.E. * Interim Chief Planning Officer
 Jeffrey E. Small Chief Information Officer
 W. Barnett Jones Chief Security & Integrity Officer
 Randal M. Brown General Counsel
 Michelle A. Zrodowski Chief Public Affairs Officer

* In October 2022, CEO Suzanne Coffey appointed Jody Caldwell as Chief Planning Officer and Jordie Kramer as Chief Organizational Development Officer.

Mission Statement

To exceed our member partners' expectations by utilizing best practices in the treatment and transmission of water and wastewater, while promoting healthy communities and economic growth.



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Great Lakes Water Authority
Michigan**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morill

Executive Director/CEO

FINANCIAL SECTION

Independent Auditors' Report

To the Board of Directors of
Great Lakes Water Authority

Report on the Audit of the Financial Statements

Opinions

We have audited the accompanying financial statements of the business-type activities, and each major fund of the Great Lakes Water Authority (the Authority), as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities, and each major fund of the Authority as of June 30, 2022 and the respective changes in the financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Authority 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 opinions.

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 Authority's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' 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 auditors' report that includes our opinions. 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 and *Government Auditing Standards* 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.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, 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 Authority'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 Authority'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 required supplementary information, as listed 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 who 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 opinions on the financial statements that collectively comprise the Authority's basic financial statements. The supplementary information as listed in the table of contents is presented for purposes 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.

Other Information

Management is responsible for the other information, the introductory section and statistical section, of the annual comprehensive financial report (annual report). The other information comprises the other information included in the annual report but does not include the basic financial statements and our auditors' report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Report on Summarized Comparative Information

We have previously audited the Authority's 2021 financial statements, and we expressed unmodified audit opinions on the respective financial statements of the business-type activities, and each major fund in our report dated December 8, 2021. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2021, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2022 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.



Madison, Wisconsin
December 14, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

June 30, 2022

The management of the Great Lakes Water Authority (GLWA or Authority) presents this discussion and analysis of GLWA's financial position and changes in financial position as of and for the fiscal year ended June 30, 2022. The Management's Discussion and Analysis (MD&A) should be read in conjunction with GLWA's basic financial statements and the related notes to the financial statements in addition to the transmittal letter provided in this report.

GLWA began operations on January 1, 2016. This discussion starts with the GLWA's accounting framework followed by an overview of the financial statements and then the financial analysis. Information in condensed format compares the fiscal year ended June 30, 2022 to the fiscal year ended June 30, 2021 for Total Business-Type activities for the Statement of Net Position. The condensed format of the Statement of Changes in Net Position is presented for the Total Business-Type activities. Financial analysis of this statement is explained by an analysis of the two major funds changes in net position. Comparison analysis is also provided for the fiscal year ended June 30, 2021 to the fiscal year ended June 30, 2020.

Accounting Framework

GLWA leases the regional system assets from the City of Detroit. In order to understand the GLWA's financial activity, it is helpful to revisit key financial reporting categories impacted by the accounting for the start-up of the Authority. The Regional System Leases which transferred the regional water system and sewage disposal system assets and operations to the GLWA are recorded based upon GASB 69, Government Combinations and Disposals of Government Operations. Accounting for the regional system leases under GASB 69 resulted in the following Statement of Net Position categories.

Capital Assets: Based on the terms of the transaction, and GASB 69 requirements, the assets subject to lease are recorded as capital assets by GLWA. The capital assets acquired were recorded at "acquisition value" based upon an inventory valuation performed by a certified appraisal firm as of January 1, 2016. This resulted in an overall increase in capital asset value from the predecessor entity's historical cost. Accordingly, the depreciable lives were reviewed and, in several cases shortened, which has increased annual depreciation expense.

Bonded Indebtedness: The outstanding bonded indebtedness of the predecessor entity (DWSD) was assumed in its entirety by GLWA. GASB 69 also required debt to be recorded at acquisition value.

Net Pension Liability: The net pension liability represents the Regional Systems' share of the frozen, defined benefit City of Detroit GRS pension assigned to DWSD in the City of Detroit's Chapter 9 Bankruptcy Plan of Adjustment. On January 24, 2017, the parties agreed that 70.3 percent of the liability was allocable to the GLWA regional operations and 29.7 percent to DWSD and is the basis of allocation for future pension contributions. That net pension liability is further subdivided between the Water Fund and the Sewage Disposal Fund for each entity.

BC Note Obligation: The BC Note obligation payable represents the Regional Systems' share of the B and C Note Obligations assigned to DWSD in the City of Detroit's Chapter 9 Bankruptcy Plan of Adjustment. The B and C Note Obligations refers to the debt service on the City of Detroit Financial Recovery Bonds dated December 10, 2014. Those bonds were issued to satisfy claims relating to the City's pension obligation certificates and postemployment healthcare benefits. GLWA's portion of the liability was estimated at 71.42 percent of the total DWSD liability.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Beginning Net Position: The acquisition value of assets acquired exceeded the liabilities assumed by \$736.5 million in total with \$457.9 million attributable to the Water Fund and \$278.6 million attributable to the Sewage Disposal Fund. In accordance with GASB 69, the opening capital assets were adjusted by an amount to establish a total net position of zero as of January 1, 2016.

Contractual Obligation Receivable: This represents DWSD's allocable portion of the long-term bonded indebtedness assumed by GLWA on January 1, 2016 for local system capital improvements in previous years. This receivable is amortized annually in an agreed upon amount that approximates debt service. If new debt is issued on behalf of DWSD, the receivable is increased.

Regional System Lease Payable: The regional system lease payable is the net present value of the lease payment of \$50 million per year for 40 years payable to the DWSD with \$22.5 million paid to the DWSD local water system and \$27.5 million paid to the DWSD local sewer system based on a 4.17 percent borrowing rate for both systems.

Since GLWA assumed the outstanding bonded indebtedness, retail customer revenues are pledged for payment of outstanding bonded indebtedness assumed by GLWA. For this reason, pursuant to the terms of the Regional System Leases, DWSD is GLWA's agent for retail billing, collections, and enforcement.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. The basic financial statements are comprised of the following:

The *statement of net position* presents information on the Authority's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the residual reported as net position.

The *statement of revenues, expenses and changes in net position* presents information showing how the Authority's net position changed during the year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, *regardless of the timing of related cash flows*. Thus, revenues and expenses are reported for some items that will result in cash flows in future fiscal periods.

The *statement of cash flows* provides information about the Authority's cash receipts, cash payments and net changes in cash and cash equivalents resulting from operating, investing and capital and non-capital financing activities for the fiscal year.

The *notes to the financial statements* provide additional information that is essential to a full understanding of the data provided in the basic financial statements.

This report also contains other supplementary information in addition to the basic financial statements themselves. These schedules provide additional financial, budgetary, statistical, trend, and economic information that may be helpful to the readers of these financial statements.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

The Authority presents a combining statement for each fund in the supplementary financial information classified into three categories that align with the Authority's strategic and budgetary focus of managing capital investment for both the Regional Water System and Regional Sewage Disposal System: 1) operations (low capital investment), 2) improvement and extension (moderate capital investment and financial mechanism to lower borrowings and the related cost of capital over the long term), and 3) construction projects (high capital investment). The water and sewage disposal funds together comprise the activity of these three categories of the Authority in total. The separate water and sewage disposal funds are required by the MBO. A separate credit rating is established for each system and services provided to the member partner communities by each system are separate and distinct (although many may geographically overlap).

Financial Analysis

Summaries of the basic financial statements and related commentaries are presented below.

Net Position (Deficit)

Net position is defined by the 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. Deferred inflows and deferred outflows generally relate to financing activity and GLWA's share of the GRS pension obligation.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

	Net Position (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Assets							
Current assets	\$ 933,790	\$ 1,053,770	\$ 1,071,116	\$ (119,980)	-11.4%	\$ (17,346)	-1.6%
Restricted assets	45,956	43,929	87,325	2,026	4.6%	(43,396)	-49.7%
Capital assets	4,415,024	4,458,165	4,506,699	(43,141)	-1.0%	(48,533)	-1.1%
Other noncurrent assets	961,062	980,169	1,007,583	(19,107)	-1.9%	(27,414)	-2.7%
Total assets	6,355,832	6,536,034	6,672,723	(180,202)	-2.8%	(136,689)	-2.0%
Deferred outflows of resources	182,497	225,074	217,097	(42,577)	-18.9%	7,977	3.7%
Liabilities							
Current liabilities	366,461	338,292	308,601	28,169	8.3%	29,691	9.6%
Long-term debt	5,295,565	5,469,009	5,627,391	(173,444)	-3.2%	(158,382)	-2.8%
Net pension liability	65,221	144,305	132,910	(79,084)	-54.8%	11,395	8.6%
Other liabilities	910,224	923,254	932,619	(13,030)	-1.4%	(9,365)	-1.0%
Total liabilities	6,637,471	6,874,860	7,001,521	(237,388)	-3.5%	(126,661)	-1.8%
Deferred inflows of resources	120,157	96,380	109,876	23,776	24.7%	(13,496)	-12.3%
Net position (Deficit)							
Net investment in capital assets	(194,715)	(302,012)	(351,219)	107,297	-35.5%	49,206	-14.0%
Restricted for debt service	123,415	114,545	105,283	8,870	7.7%	9,262	8.8%
Restricted for payment assistance program	12,318	11,043	8,988	1,275	11.5%	2,055	22.9%
Unrestricted	(160,317)	(33,707)	15,370	(126,609)	375.6%	(49,078)	-319.3%
Total net position (deficit)	\$ (219,299)	\$ (210,132)	\$ (221,578)	\$ (9,167)	4.4%	\$ 11,445	-5.2%

In total, GLWA ended June 30, 2022 with a \$219.3 million net deficit. This represents the combined net deficit for the water fund of \$109.3 million and \$110 million for the sewage disposal fund. The net deficit as of June 30, 2021 was \$210.1 million. This is the combined net deficit of \$97.2 million for the water fund and \$112.9 million for the sewage disposal fund. The decrease in net position for the year ended June 30, 2022 of \$9.2 million was due to a \$2.8 million improvement in the sewer fund offset by a \$12 million decrease in the water fund. These amounts are reported in the Statement of Revenues, Expenses, and Changes in Net Position.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

There are three general components of a net position which could be a deficit: 1) net investment in capital assets (in its simplest form, capital assets acquired less debt incurred to acquire those assets); 2) restricted (non-capital assets whose use is restricted less the related liabilities); and 3) unrestricted (any portion of net position not already classified in the first two categories listed). The ending net position (deficit) is the prior year's ending balance plus or minus activity for the year.

Net investment in capital assets is the largest component of the net position with a deficit balance of \$194.7 million. The balance on June 30, 2021 was a deficit of \$302 million. The improvement for 2022 and 2021 was due to reductions in outstanding debt and increase in capital asset additions being larger than the depreciation expense with the reduction in outstanding debt being the biggest factor in this improvement. It should be noted that the deficit in the net investment in capital assets is representative of cumulative historical financial impacts carried forward from the predecessor entity. Those primarily related to terminated capital projects which have been subsequently addressed by other projects or approaches to address system needs.

Restricted Net Position for debt service represents amounts that are required by the related MBO or other third-party agreements to be used for the repayment of debt. The total amount restricted at June 20, 2022 was \$123.4 million. The amount at June 30, 2021 was \$114.5 million. Changes in this category can be related to a change in the debt reserve requirement or in the amount of funds being set aside. The MBO requires funds to be set aside monthly for debt service. The trustee provides the calculation of the monthly required debt service set aside amount so that the funds are available when the debt service payment is due. The increase in both 2022 and 2021 is due to an increase in the debt set aside payments based on future debt requirements. There was not much change in the debt reserve balances.

Restricted Net Position for payment assistance program represents WRAP funds that have not been spent, by the agencies who disburse the funds to those who meet the qualifications for assistance. For payment assistance, a client is in the program for two years. Monies are distributed to the agencies based on cashflow needs. As a result, funds are committed to clients but not disbursed until needed. The total amount restricted at year end was \$12.0 million. This is an increase of \$1.3 million from the prior year total of \$11.0 million. The community action agencies who manage the WRAP funding also received federal and state funding allocations to address client needs as a result of the COVID-19 pandemic. That allowed WRAP funding to be relied upon less, therefore making it available for subsequent years. In addition, many of the in-home service aspects of WRAP were on hold due to social distancing concerns because of the pandemic. We are currently in the process of modifying the WRAP program and expect these funds to be used at a higher rate in the coming years.

Unrestricted net position is generally defined as the net result of the other components of total net position. The unrestricted net position is a deficit of \$160.3 million as of June 30, 2022. The unrestricted net position has decreased for both 2022 and 2021 as a result of using the unrestricted cash and investments in the improvement and extension funds to pay for capital expenditures. The improvement and extension funds hold the revenues that are budgeted for in the revenue requirements to reduce debt financing for capital expenditures. This is part of the Authority's strategic goals to rebalance the mix of debt financing to reduce the cost of capital to become a solid AA category credit rating.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Changes in Net Position

The following is a comparative summary of the business-type activities changes in net position for the last three years, followed by a detailed discussion of the significant changes by activity.

	Changes in Net Postion (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Operating revenues	\$ 816,345	\$ 815,369	\$ 800,889	\$ 976	0.1%	\$ 14,479	1.8%
Operating expenses	609,951	579,460	593,153	30,491	5.3%	(13,693)	-2.3%
Operating income	206,394	235,909	207,736	(29,514)	-12.5%	28,173	13.6%
Nonoperating revenues (expenses)	(222,552)	(230,424)	(234,449)	(7,871)	-3.4%	(4,025)	-1.7%
Income (loss) before capital contributions	(16,158)	5,485	(26,713)	(21,643)	-394.6%	32,198	120.5%
Capital contributions	6,991	5,960	5,960	1,031	17.3%	-	0.0%
Change in net position	(9,167)	11,445	(20,753)	(20,612)	-180.1%	32,198	155.2%
Net position (deficit), beginning of year	(210,132)	(221,578)	(200,825)	11,445	5.2%	(20,753)	-10.3%
Net position (deficit), end of year	<u>\$ (219,299)</u>	<u>\$ (210,132)</u>	<u>\$ (221,578)</u>	<u>\$ (9,167)</u>	<u>-4.4%</u>	<u>\$ 11,445</u>	<u>5.2%</u>

The change in net position of \$9.2 million is a decrease of \$20.6 million when compared to 2021. This decrease is mostly attributed to an increase in operating expenses of \$30.5 million offset by a decrease in nonoperating revenues of 7.9 million. Revenues were relatively stable from the previous year. The water fund had increased operating expense of \$14.1 million and the sewage disposal fund had increased operating expenses of 16.4 million. The nonoperating expenses decrease is a result of a decrease in the legacy pension expense of \$8.6 million, a decrease in interest expense of \$7.3 which were offset by a decrease in investment earnings of \$6.6 million and interest on obligations receivable of \$1.4 million. The decrease in investment earnings includes an increase in unrealized losses of \$3.4 million. These unrealized losses are not expected to be realized as the Authority holds most investments to maturity.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Water Fund

Water Fund Changes in Net Position (\$000)								
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020		
2022	Percentage of Operating Revenue	2021	2020	Amount	Percent	Amount	Percent	
Wholesale customer charges	\$ 323,026	93.6%	\$ 322,424	\$ 312,702	\$ 602	0.2%	\$ 9,722	3.1%
Local system charges	21,697	6.3%	21,926	21,296	(228)	-1.0%	630	3.0%
Other revenues	234	0.1%	266	256	(31)	-11.8%	10	3.7%
Total operating revenues	344,958	100.0%	344,615	334,254	343	0.1%	10,362	3.1%
Operating expenses	264,579	76.7%	250,476	263,283	14,102	5.6%	(12,806)	-4.9%
Operating Income	80,379	23.3%	94,139	70,971	(13,759)	-14.6%	23,168	32.6%
Nonoperating revenues (expenses)	(92,380)	-26.8%	(94,995)	(90,499)	2,615	2.8%	(4,496)	-5.0%
Change in net position	(12,000)	-3.5%	(856)	(19,528)	(11,144)	-1301.9%	18,672	95.6%
Net position (deficit), beginning of year	(97,266)		(96,410)	(76,882)	(856)		(19,528)	
Net position (deficit), end of year	\$ (109,266)		\$ (97,266)	\$ (96,410)	\$ (12,000)	-12.3%	\$ (856)	-0.9%

Operating revenues are primarily from wholesale water charges of \$323 million (93.6 percent of Water Fund revenues). The 2022 wholesale customer charges were budgeted at \$321 million in the adopted budget which included a 1.9 percent increase in charges offset by a decrease in expected usage. The increase from 2021 to 2020 of 3.1 percent lines up with the budgeted wholesale charge adjustment increase of 3.1 percent even though the charge increase was deferred for 6 months. This resulted in approximately half of the increase related to the charge increase and the other half is related to an increase in volume usage that was partially offset with an increase in bad debt charges of \$1.7 million.

The revenue from the local system charges of \$21.7 million account for 6.3 percent of the total operating revenue. The decrease in 2022 local system charges from 2021 was expected based on the adopted budget and the calculation of charges. The increase in 2021 compared to 2020 is based on the budgeted increase of 3 percent which was an "across the board" increase that was used for determining charges in FY 2020. Pursuant to the terms of the WSSA with DWSD, a \$20.7 million credit is applied against allocated water revenue requirements in the charge methodology. This credit replaces a previous ownership benefit that was in place prior to the Effective Date of the Regional System Lease.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Revenue and charge stability are important goals for GLWA and its member partners. Established via an engaged, collaborative process, the water charge structure is based on the following.

1. 40% is based on the average annual usage for each customer based on their 36 prior months of usage ending September 30th each year
2. 60% is based on fixed monthly charges

Fiscal year 2022 revenue billed was 100.5 percent of the amended budget meeting the goal of revenue stability and was net of the Karegnondi Water Authority (KWA) credit. Fiscal year 2021 revenue billed was 99.6 percent of the amended budget and was net of the KWA credit.

Operating income after operating expenses (including depreciation and amortization) equals \$80.4 million or 23.3 percent of operating revenue. Operating expenses are detailed below.

Water Fund Operating Expenses (\$000)							
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020	
2022	Percentage of Operating Expense	2021	2020	Amount	Percent	Amount	Percent
Personnel	\$ 44,893 17.0%	\$ 43,889	\$ 43,946	\$ 1,003	2.3%	\$ (57)	-0.1%
Contractual services	50,684 19.2%	40,411	46,097	10,273	25.4%	(5,687)	-12.3%
Utilities	28,725 10.9%	28,828	27,720	(103)	-0.4%	1,108	4.0%
Chemicals	7,789 2.9%	6,028	5,569	1,761	29.2%	459	8.2%
Supplies and other	9,157 3.5%	9,159	12,034	(2)	0.0%	(2,875)	-23.9%
Capital adjustment	- 0.0%	-	27	-	0.0%	(27)	-100.0%
Capital program allocation	(1,618) -0.6%	(2,123)	(2,164)	505	23.8%	41	1.9%
Intergovernmental reimbursements	(1,814) -0.7%	(2,555)	(697)	741	29.0%	(1,858)	-266.5%
Total operating expenses before depreciation and amortization	137,816 52.1%	123,638	132,533	14,178	11.5%	(8,895)	-6.7%
Depreciation and amortization	126,763 47.9%	126,838	130,750	(76)	-0.1%	(3,912)	-3.0%
Total Operating Expenses	\$ 264,579 100.0%	\$ 250,476	\$ 263,283	\$ 14,102	5.6%	(12,806)	-4.9%

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Operating expenses of \$264.6 million represent 76.7 percent of total operating revenue which consists primarily of depreciation and amortization expense and operations and maintenance activities. Depreciation and amortization are the larger category of expense at \$126.8 million or 47.9 percent of operating expense. Given the nature of GLWA's water operations, it is expected that personnel, contractual services, and utilities would represent the higher dollar amount.

Personnel cost variance is mostly due to the change in personnel allocations from both Centralized and Administrative charges. See the Centralized Services and Administrative Services section for a discussion of these variances. This discussion follows the Sewage Disposal Fund discussions.

Contractual services include field services contracts for timely repairs to minimize disruption in service, technology related services for both operational and enterprise data networks, and outsourcing of janitorial, fleet, and other functions. The increase in contractual services of \$10.3 million from 2022 to 2021 is a result of variances throughout various cost centers. The major variances are detailed below:

- Decrease of \$1.2 million in the Field Engineering cost center as a result of a reclass of construction activity for contaminated materials that could not be capitalized. These projects were for the betterment of the system and therefore paid with I&E funds.
- Decrease of \$1.2 million in the amount recorded to water I&E for the development of the AECOM Project Management Information System (PMIS) (\$1.2 million of this project recorded to sewer I&E in FY 2022).
- Increase of \$3.3 million for increased sludge removal activity at Northeast Water Plant (\$1.8 million), Southwest Water Plant (\$1.3 million), and Springwells Water Plant (\$0.2 million).
- Increase of \$0.5 million recognized in Fleet Operations due to a \$1.0 credit for the true-up of shared services which was posted in FY 2021, half of which was charged to water.
- Increase of \$3.6 million in the Hydromax and Ric-Man Water Transmission Main Contracts for Field Services in FY 2022.
- Increase of \$1.7 million due to the net change in year-end adjustment to the legal accrual (\$1.5 million) and an increase of legal services during FY 2022 (\$0.2 million).
- Increase of \$1.4 million related to the AT&T credit which was received in FY 2021 for overcharges on telecom services that were not billed at the contract rate.
- Increase of \$0.7 million for the increase in business insurance premiums.
- Increase of \$1.5 million in Asset Management for the Linear System Integrity Program (LSIP) which began in FY 2022.

The decrease in contractual services of \$5.7 million from 2021 to 2020 is a result of variances throughout various cost centers. The major variances are detailed below:

- Increase of \$1.2 million in the Field Engineering cost center as a result of a reclass of construction activity for contaminated materials that could not be capitalized. These projects were for the betterment of the system and therefore paid with I&E funds.
- Decrease of \$1.9 million at the Southwest water plant for reduced activity of sludge removal.
- Decrease of \$3.4 million for year-end adjustment to the legal accrual (\$2.0 million) and a decrease of legal services during the fiscal year (\$1.4 million).
- Decrease of \$3.1 million related to a credit received from AT&T for overcharges on telecom services that were not billed at the contract rate.
- Increase of \$1.5 million for transfer of low voltage wiring contract from Information Technology (Administrative Services).

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

The increase in chemicals from 2022 to 2021 of \$1.8 million is due to the increase in prices of chemicals.

The decrease in the supplies and other expenses from 2021 to 2020 of \$2.9 million is due to a decrease in the utilization of the low voltage wiring contract.

Intergovernmental reimbursements will vary year to year based on the amount of activity and any true-ups recorded. The decrease in reimbursements from 2022 to 2021 is mostly related to a decrease in activity. The increase in reimbursements from 2021 to 2020 is mostly related to the amount of true-ups recorded in those years.

The following table details the Water Fund nonoperating revenue and expenses:

Water Fund Nonoperating Revenue (Expenses) (\$000)								
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020		
2022	Percentage of Operating Expense	2021	2020	Amount	Percent	Amount	Percent	
Earnings (loss) on investments	\$ (2,361) 2.6%	\$ 769	\$ 13,745	\$ (3,130)	-407.1%	\$ (12,976)	-94.4%	
Interest on obligations receivable	25,107 -27.2%	25,475	22,946	(368)	-1.4%	2,529	11.0%	
Interest expense	(125,086) 135.4%	(128,257)	(133,538)	3,171	-2.5%	5,280	-4.0%	
Legacy pension income (expense)	(4,988) 5.4%	(8,075)	(7,221)	3,087	-38.2%	(855)	11.8%	
Other	14,949 -16.2%	15,094	13,569	(145)	-1.0%	1,525	11.2%	
Total Nonoperating Revenue (Expenses)	<u>(92,380) 100.0%</u>	<u>(94,995)</u>	<u>(90,499)</u>	<u>2,615</u>	<u>-2.8%</u>	<u>(4,496)</u>	<u>5.0%</u>	

Net nonoperating expense of \$92 million is primarily related to interest expense of \$125 million. The interest expense from debt service is \$103.6 million with the remainder related to the Regional Water System Lease, obligation payable and raw water rights obligation. The largest offset to the nonoperating expense is interest revenue on the obligations receivable of \$25.1 million, which is related to the terms of the Regional Water System Lease.

As a result of the short-term nature of the GLWA portfolio, it is heavily impacted by changes in the Fed Funds interest rate. Earnings started to drop in 2020 as the Federal Reserve cut the Fed Funds interest rate to 0 percent in March 2020. Although the Federal Reserve started increasing the Fed Funds interest rate in March 2022, the maturity timing of the investments did not allow the Authority to benefit from the increased rates in 2022. The increase in the rates did have a negative impact of the valuation of the investments for 2022 resulting in an increase in unrealized losses for 2022. These losses most likely will not be realized as the Authority holds most investments until maturity.

The decrease in interest expense in 2022 and 2021 is a result of a reduction in long term debt as well as the savings being realized from bond refunding transactions in 2016, 2018 and 2020.

The legacy pension expense decrease in 2022 is mainly related to an increase in investment earnings on the plan assets to offset the expenses. The legacy pension expense increase in 2021 is mainly related to a decrease in investment earnings on the plan assets to offset the expenses.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund

Sewage Disposal Fund Changes in Net Position (\$000)								
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020		
2022	Percentage of Operating Revenue	2021	2020	Amount	Percent	Amount	Percent	
Wholesale customer charges	\$ 268,813	57.0%	\$ 267,568	\$ 266,003	\$ 1,246	0.5%	\$ 1,565	0.6%
Local system charges	188,662	40.0%	187,960	185,807	703	0.4%	2,152	1.2%
Industrial waste charges	8,300	1.8%	8,005	7,855	295	3.7%	150	1.9%
Pollutant surcharges	5,182	1.1%	6,720	6,449	(1,538)	-22.9%	271	4.2%
Other revenues	429	0.1%	501	522	(72)	-14.3%	(21)	-4.0%
Total operating revenues	471,387	100.0%	470,754	466,636	634	0.1%	4,118	0.9%
Operating expenses	345,372	73.3%	328,983	329,870	16,389	5.0%	(887)	-0.3%
Operating Income	126,015	26.7%	141,770	136,765	(15,755)	-11.1%	5,005	3.7%
Nonoperating revenues (expenses)	(130,173)	-27.6%	(135,429)	(143,950)	5,256	-3.9%	8,521	-5.9%
Income (loss) before capital contributions	(4,158)	-0.9%	6,341	(7,185)	(10,499)	-165.6%	13,526	-188.3%
Capital contributions	6,991	1.5%	5,960	5,960	1,031	17.3%	-	0.0%
Change in net position	2,833	0.6%	12,301	(1,225)	(9,468)	-77.0%	13,526	-1104.2%
Net position (deficit), beginning of year	(112,867)		(125,168)	(123,943)	12,301	-9.8%	(1,225)	1.0%
Net position (deficit), end of year	\$ (110,033)		\$ (112,867)	\$ (125,168)	\$ 2,833	-2.5%	\$ 12,301	-9.8%

Operating revenues are primarily from wholesale sewer charges of \$268.8 million (57.0 percent of Sewage Disposal Fund revenues). Revenues were budgeted at \$272.1 million for 2022 with no expected increase in the allowance for bad debts. Actual revenues were \$272.4 with bad debt expense of \$3.6 million. The increase in 2021 is related to the charge increase of 1.7 percent for wholesale customers that was delayed six months resulting an increase of 0.85 percent. There was also an increase in bad debt charges of approximately \$265,000.

The revenue from local system charges of \$188.7 million account for 40 percent of total operating revenues. The increase in 2022 local system charges from 2021 was expected based on the adopted budget and the calculation of charges. The variances in the local system charges for 2021 line up with half of the budgeted increases of 2.3 percent for 2021 as the charges were delayed six months due to the pandemic. Pursuant to the terms of the WSSA with DWSD, a \$5.516 million credit is applied against sewer charges in the charge methodology. This credit replaces a previous contractual arrangement that was in place prior to the Effective Date of the Regional System.

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Management's Discussion and Analysis

Industrial waste charges and pollutant surcharges represent 2.9 percent of operating revenue which are charged to non-residential users.

Wholesale contract charges are based on a “share” percentage of the annual revenue requirement billed one-twelfth each month. The shares are established based upon historical flows and are formally revisited every three years. The result is no revenue shortfall or overestimation.

Operating income after operating expenses (including depreciation and amortization) equals \$126 million or 26.7 percent of operating revenue. Operating expenses are detailed below.

Sewage Disposal Fund Operating Expenses (\$000)							
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020	
2022	Percentage of Operating Expense	2021	2020	Amount	Percent	Amount	Percent
Personnel	\$ 62,161 18.0%	\$ 63,056	\$ 60,320	\$ (895)	-1.4%	\$ 2,735	4.5%
Contractual services	63,410 18.4%	62,913	63,351	497	0.8%	(438)	-0.7%
Utilities	30,930 9.0%	23,921	23,433	7,009	29.3%	488	2.1%
Chemicals	12,593 3.6%	7,954	8,672	4,639	58.3%	(718)	-8.3%
Supplies and other	19,912 5.8%	21,938	23,393	(2,026)	-9.2%	(1,455)	-6.2%
Capital program allocation	(1,014) -0.3%	(1,069)	(1,183)	55	-5.2%	115	-9.7%
Intergovernmental reimbursements	(1,074) -0.3%	(612)	(1,037)	(462)	75.5%	425	-41.0%
Total operating expenses before depreciation and amortization	186,919 54.1%	178,101	176,949	8,817	5.0%	1,152	0.7%
Depreciation and amortization	158,453 45.9%	150,882	152,921	7,571	5.0%	(2,039)	-1.3%
Total Operating Expenses	\$ 345,372 100.0%	\$ 328,983	\$ 329,870	\$ 16,389	5.0%	\$ (887)	-0.3%

Operating expenses of \$345.4 million represent 73.3 percent of total operating revenue which consists primarily of depreciation and amortization expense and operations and maintenance activities. Depreciation and amortization are the larger category of expense at \$158.5 million or 45.9 percent of operating expense. Given the nature of GLWA’s wastewater operations, it is expected that personnel, contractual services, and utilities would represent the higher dollar amount.

Personnel cost decreases in 2022 and personnel cost increases in 2021 are mainly due to the amounts charged in the allocation from both Centralized and Administrative charges. See the Centralized Services and Administrative Services section for a discussion of these variances. This discussion follows the Sewage Disposal Fund discussions.

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Management's Discussion and Analysis

Contractual services include operation and management of the Biosolids Dryer Facility (BDF), timely repairs for the Water Resources Recovery Facility (WRRF), staff augmentation for operations, technology related services for both operational and enterprise data networks, and outsourcing of janitorial, fleet, and other functions. Contractual services decreased \$.5 million in 2022 which is mainly due to the following:

- Increase of \$1.2 million for the development of the AECOM Project Management Information System (PMIS).
- Increase of \$1.0 million for the use of the New England Fertilizer Co. (NEFCO) contract along with the cost for the material processed through the Biosolids Dryer Facility (BDF) which is based on the increasing consumer price index (CPI).
- Decrease of \$1.7 million in the year-end claims & judgements accrual.

Contractual services decreased \$.4 million in 2021 which is mainly due to the following:

- Decrease of \$2.0 million due to various contract reductions in the following cost centers: Wastewater Operations, Wastewater Primary Process, Wastewater Secondary Process, Combined Sewer Overflow.
- Increase of \$1.7 million in the year-end claims & judgements accrual.

Utilities increased \$7 million in 2022 due to the following.

- Water – Increase of \$1.7 million due to the repair and replacement of existing meters at the Water Resource Recovery Facility (WRRF). Water bills are now being produced with actual readings which are higher than prior years billings.
- Gas – Increase of \$2.5 million due to the cost of natural gas MMBTU which has increased significantly over the past two years. In addition, the Biosolids Dryer Facility (BDF) and wastewater incineration has had an increase in production which has led to an increase in natural gas usage.
- Electric – Increase of \$2.6 million is the result of DTE changing from a nuclear surcharge recovery to a volumetric delivery surcharge. This change has resulted in an increase to the charge for kWh. In addition, the on-demand rate for electricity significantly increased in FY 2022 due to the wet weather events which resulted in increased usage.
- Sewage – Increase of \$0.2 million is due to the increase in the cost per acre related to drainage charges at various wastewater facilities.

The increase in chemicals from 2022 to 2021 of \$4.6 million is due to the increase in prices of chemicals as well as the increase in wet weather events which resulted in a need for increase chemical usage.

The supplies and other expenses decreased of \$2 million in 2022 mainly due to the decrease in the number of inspections and amount of permit fees.

The supplies and other expenses decreased of \$1.5 million in 2021 mainly due to the following:

- Increase of \$0.9 million due to increase in repair work at the following cost centers: Wastewater Primary Process and Wastewater Incineration Process.
- Decrease of \$2.5 million in allocated supplies and other centralized services. See the Centralized Services and Administrative Service section for a discussion of these variances. This discussion follows the Sewage Disposal Funds discussions.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

The following table details the Sewage Disposal Fund nonoperating revenue and expenses:

Sewage Disposal Fund Nonoperating Revenue (Expenses) (\$000)								
Fiscal Year				Change 2022 vs 2021		Change 2021 vs 2020		
2022	Percentage of Operating Expense	2021	2020	Amount	Percent	Amount	Percent	
Earnings (loss) on investments	\$ (3,023) 2.3%	\$ 491	\$ 11,672	\$ (3,514)	-716.0%	\$ (11,181)	-95.8%	
Interest on loan and obligations receivable	17,158 -13.2%	18,248	19,489	(1,090)	-6.0%	(1,241)	-6.4%	
Interest expense	(131,110) 100.7%	(135,228)	(155,410)	4,118	-3.0%	20,183	-13.0%	
Legacy pension income (expense)	(8,927) 6.9%	(14,453)	(12,923)	5,525	-38.2%	(1,530)	11.8%	
Other	(4,270) 3.3%	(4,487)	(6,778)	217	-4.8%	2,291	-33.8%	
Total Nonoperating Revenue (Expenses)	(130,173) 100.0%	(135,429)	(143,950)	5,256	-3.9%	8,521	-5.9%	

Net nonoperating expense of \$130.2 million is primarily related to \$131.1 million of interest expense. Interest expense from debt service is \$108.6 million with the remainder related to the Regional Sewage Disposal Lease, obligation payable and lease for the right to use asset. The largest offset to the expense is interest revenue of \$17.2 million on the shortfall and obligations receivable, which is related to the terms of the Regional Sewage Disposal Lease.

As a result of the short-term nature of the GLWA portfolio, it is heavily impacted by changes in the Fed Funds interest rate. Earnings started to drop in 2020 as the Federal Reserve cut the Fed Funds interest rate to 0 percent in March 2020. Although the Federal Reserve started increasing the Fed Funds interest rate in March 2022, the maturity timing of the investments did not allow the Authority to benefit from the increased rates in 2022. The increase in the rates did have a negative impact of the valuation of the investments for 2022 resulting in an increase in unrealized losses for 2022. These losses most likely will not be realized as the Authority holds most investments until maturity.

Interest earnings on the shortfall and obligation receivable have decreased for 2022 and 2021 as the balances are being paid down.

The decrease in interest expense in 2022 and 2021 is a result of a reduction in long term debt as well as the savings being realized from bond refunding transactions in 2016, 2018 and 2020.

The legacy pension expense decrease in 2022 is mainly related to an increase in investment earnings on the plan assets to offset the expenses. The legacy pension expense increase in 2021 is mainly related to a decrease in investment earnings on the plan assets to offset the expenses.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Centralized Services and Administrative Services

The following table summarizes the activity for centralized services and administrative services.

Centralized and Administrative Services (\$000)											
Fiscal Year			Change 2022 vs 2021				Change 2021 vs 2020				
			Amount	Percent	Variance Allocation		Amount	Percent	Variance Allocation		
2022	2021	2020			Water	Sewer			Water	Sewer	
Centralized Services											
Personnel	\$31,777	\$30,318	\$ 28,798	1,459	4.8%	\$ 2,307	\$ (847)	1,520	5.3%	\$ (766)	\$ 2,286
Contractual services	50,777	48,802	59,999	1,975	4.0%	7,946	(5,971)	(11,197)	-18.7%	(8,228)	(2,969)
Utilities	141	136	66	5	3.7%	3	2	70	106.1%	36	34
Supplies and other expenses	9,027	8,873	13,836	154	1.7%	0	153	(4,963)	-35.9%	(2,484)	(2,479)
Total Centralized Services	\$91,722	\$88,129	\$102,699	\$ 3,593	4.1%	\$10,256	\$ (6,663)	\$ (14,570)	-14.2%	\$ (11,442)	\$ (3,128)
Administrative Services											
Personnel	\$16,938	\$17,823	\$ 17,629	\$ (885)	-5.0%	\$ (443)	\$ (443)	\$ 194	1.1%	\$ 97	\$ 97
Contractual services	14,950	6,524	10,126	8,426	129.2%	2,383	6,043	(3,602)	-35.6%	(1,801)	(1,801)
Utilities	160	24	28	136	566.7%	68	68	(4)	-14.3%	(2)	(2)
Supplies and other expenses	1,344	846	1,173	498	58.9%	79	419	(327)	-27.9%	(223)	(104)
Total Administrative Services	\$33,392	\$25,217	\$ 28,956	\$ 8,175	32.4%	\$ 2,088	\$ 6,087	\$ (3,739)	-12.9%	\$ (1,929)	\$ (1,810)

Centralized services personnel costs increased \$1.5 million in 2022. Part of this increase was a result of moving the Transformation department to a centralized service classification from the administrative services classification (increase of \$0.6 million to centralized services). The balance of the increase in centralized services is due to increases in personnel costs of \$0.9 million in Security, Systems Operations Control, and Field Services primarily due to overtime. Centralized services personnel costs increased \$1.5 million in 2021. This increase is mostly driven by the change in staffing in 2020, which occurred throughout 2020, with more increases in the latter half of 2020, therefore a full year increase in 2021 and a partial year increase in 2020. Administrative personnel costs decreased \$0.9 million in 2022. This decrease was a result of moving the transformation department from the administrative services classification to the centralized services classification (decrease of \$0.6 million to administrative services). The remainder of the decrease is due to the closing of the Data Analytics department (\$0.2 million), team members in other departments within Financial Services assumed the responsibilities previously performed in Data Analytics, and a reduction in overtime hours (\$0.1 million).

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Centralized contractual services increased 2 million in 2022 due to the following:

- Decrease of \$0.8 million related to COVID-19 deep cleaning at various GLWA facilities.
- Increase of \$0.2 million in elevator maintenance at various GLWA facilities.
- Increase of \$1.0 million recognized in Fleet Operations due to a \$1.0 credit for the true-up of shared services which was posted in FY 2021.
- Decrease of \$2.1 million related to change in use of various Field Services contracts in FY 2022 (usage of these contracts varies from year-to-year) Hydromax (increase \$1.2 million), Ric-Man Water Transmission Main (increase \$2.2 million), Inland Waters Pollution Control (decrease \$5.0), and Lakeshore Global professional services (decrease \$0.5 million).
- Increase of \$1.0 million related to the wet weather events for Field Services to remove the storm borne solids from three Outfall sites (\$0.5 million), CCTV footage taken of the east side sewer system (\$1.0 million), and a credit of \$0.5 million from insurance proceeds.
- Increase of \$2.7 million related to the AT&T credit which was received in FY 2021 for overcharges on telecom services that were not billed at the contract rate.
- Increase of \$1.5 million in Asset Management for the Linear System Integrity Program (LSIP) which began in FY 2022.
- Decrease of \$1.5 million in Capital Improvement Planning with the operations & maintenance work wrapping up for AECOM in FY 2021 and shifting to Capital.

Centralized contractual services decreased \$11.2 million in 2021. The major variances which total \$10.7 million are detailed below:

- Decrease of \$1.6 million related to COVID-19 deep cleaning performed at various GLWA facilities.
- Decrease of \$1.6 million in Fleet Operations for the cancellation of the fleet management shared services agreement (OPS-001) with DWSD. GLWA assumed the fleet management responsibility beginning July 2020 (FY 2021),
- Decrease of \$3.1 million related to a credit received from AT&T for overcharges on telecom services that were not billed at the contract rate.
- Decrease of \$1.4 million in Systems Planning upon completion of the Wastewater Master Plan in FY 2020.
- Decrease of \$3.0 million in Capital Improvement Planning with the operations & maintenance work wrapping up AECOM Contract (CS-272). The work is now shifting to Capital.

Administrative contractual services increased \$8.4 million in 2022. The major variances which total \$8.2 million are detailed below.

- Increase of \$1.3 million related to the GLWA Board requested independent investigations for the wet weather events.
- Increase of \$5.5 million due to the change in the legal claims and adjustment accrual from FY 2021 to FY 2022 of \$2.9 million, claims process and other legal services related to the wet weather events of \$2.2 million, and increase of non-wet weather event legal services during the fiscal year of \$0.4 million.
- Increase of \$1.4 million for the increase in business insurance premiums.

Administrative contractual services decreased \$3.6 million in 2021. The majority of this decrease was due to a decrease of the claims and adjustment accrual of \$2.1 million and a decrease of legal services during the fiscal year of \$1.4 million.

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Management's Discussion and Analysis

Capital Assets and Debt Administration

GLWA's investment in capital assets is \$4.4 billion (net of accumulated depreciation) with \$1.9 billion assigned to the Water Fund and \$2.5 billion assigned to the Sewage Disposal Fund. The investment in capital assets includes land, buildings, plants, transmission lines, vehicles, machinery and equipment, raw water rights, right to use assets and prepaid subscription assets. Total net capital assets decreased in 2022 and 2021. The net decrease is primarily attributable to depreciation in excess of current year additions for both years. See Note 10 to the financial statements for more information on capital assets. The Authority implemented GASB 89 during FY 2018 and no longer capitalizes interest expense.

	Capital Assets, Net (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Land	\$ 63,302	\$ 62,311	\$ 61,801	\$ 991	1.6%	\$ 509	0.8%
Easements	357,448	355,202	354,844	2,247	0.6%	358	0.1%
Construction in progress	466,055	395,973	303,220	70,081	17.7%	92,753	30.6%
Site improvements	49,413	58,815	69,475	(9,403)	-16.0%	(10,660)	-15.3%
Buildings and structures	1,285,452	1,322,619	1,378,065	(37,168)	-2.8%	(55,446)	-4.0%
Infrastructure	956,329	1,002,945	1,040,603	(46,617)	-4.6%	(37,658)	-3.6%
Machinery and equipment	1,123,750	1,144,125	1,186,649	(20,375)	-1.8%	(42,524)	-3.6%
Vehicles	7,198	7,077	3,477	121	1.7%	3,600	103.5%
Leasehold improvements	10,297	10,444	10,777	(148)	-1.4%	(333)	-3.1%
Intangible assets	95,782	98,653	97,786	(2,871)	-2.9%	867	0.9%
Total capital assets (net of depreciation and amortization)	<u>\$ 4,415,024</u>	<u>\$ 4,458,165</u>	<u>\$ 4,506,699</u>	<u>\$ (43,141)</u>	-1.0%	<u>\$ (48,533)</u>	-1.1%

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Management's Discussion and Analysis

Water Fund

There are ten major categories used for classification of capital assets for financial reporting purposes.

	Water Fund Capital Assets, Net (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Land	\$ 34,907	\$ 34,168	\$ 34,167	\$ 739	2.2%	\$ 1	0.0%
Easements	259,139	258,990	258,632	149	0.1%	358	0.1%
Construction in progress	272,954	204,853	126,198	68,101	33.2%	78,656	62.3%
Site improvements	29,415	36,449	43,752	(7,033)	-19.3%	(7,303)	-16.7%
Buildings and structures	409,923	420,686	438,686	(10,763)	-2.6%	(18,000)	-4.1%
Infrastructure	419,969	458,734	483,428	(38,765)	-8.5%	(24,694)	-5.1%
Machinery and equipment	424,120	397,660	414,684	26,460	6.7%	(17,024)	-4.1%
Vehicles	2,992	3,230	1,582	(238)	-7.4%	1,648	104.1%
Leasehold improvements	7,240	7,796	7,998	(556)	-7.1%	(202)	-2.5%
Intangible assets	91,067	94,219	97,786	(3,153)	-3.3%	(3,567)	-3.6%
Total water fund capital assets (net of depreciation and amortization)	<u>\$ 1,951,726</u>	<u>\$ 1,916,784</u>	<u>\$ 1,906,912</u>	<u>\$ 34,942</u>	1.8%	<u>\$ 9,872</u>	0.5%

Water Fund additions in 2022 and 2021 were mainly due to transfers out of construction in progress to the applicable asset category. Total additions in FY 2022 to construction in progress was \$158.7 million and transfers out of \$90.6 million. The total additions in FY 2021 to the construction in progress were \$129.8 million with \$51.2 million transferred to capital assets. The table below summarizes major projects for the last two years. Comprehensive project plan details can be found within Capital Improvement Plan documents available at <https://www.glwater.org/cip/>.

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Management's Discussion and Analysis

Water Fund (millions)								
Project Number	Description	Expected Completion Date	Project Plan Estimate	Expenditures		Placed in Service		CIP at 6/30/2022
				FY 2021	FY 2022	FY 2021	FY 2022	
116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements	FY 2026	\$ 99.0	\$ 12.1	\$ 25.5	\$ 4.7	\$ -	\$ 51.4
122013	14 Mile Transmission Main Loop	FY 2025	111.4	6.7	18.2	0.4	-	28.2
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	FY 2024	45.6	6.6	19.1	-	-	28.2
114011	Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements	FY 2023	25.9	8.4	5.5	-	-	23.9
114002	Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements	FY 2032	281.9	7.4	9.5	-	-	22.5
122004	96" Main Relocation, Isolation Valve Ins	FY 2023	15.1	7.9	6.5	-	-	16.1
122003	Water Works Park to Northeast Transmission Main	FY 2028	147.8	16.1	13.6	-	29.8	5.2
122005	Schoolcraft Road Water Transmission Main	FY 2022	15.0	4.9	8.0	-	13.7	0.6
122006	Wick Road Water Transmission Main	FY 2022	25.7	11.2	5.4	-	20.8	1.8
111002	Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements	FY 2021	8.7	-	-	8.6	-	-
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells Water Treatment Plants	FY 2021	8.2	-	-	8.2	-	-
122011	Park-Merriman Road Water Transmission Main	FY 2022	9.6	1.5	0.4	6.4	-	0.7
	Other projects			47.0	47.0	22.9	26.3	94.4
	Total			\$ 129.8	\$ 158.7	\$ 51.2	\$ 90.6	\$ 273.0

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund

There are ten major categories used for classification of capital assets for financial reporting purposes.

Sewage Disposal Fund Capital Assets, Net (\$000)							
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Land	\$ 28,395	\$ 28,143	\$ 27,635	\$ 252	0.9%	\$ 508	1.8%
Easements	98,310	96,211	96,211	2,098	2.2%	-	0.0%
Construction in progress	193,100	191,120	177,023	1,980	1.0%	14,097	8.0%
Site improvements	19,997	22,367	25,723	(2,369)	-10.6%	(3,357)	-13.0%
Buildings and structures	875,529	901,933	939,379	(26,405)	-2.9%	(37,446)	-4.0%
Infrastructure	536,359	544,212	557,175	(7,852)	-1.4%	(12,964)	-2.3%
Machinery and equipment	699,630	746,466	771,966	(46,836)	-6.3%	(25,500)	-3.3%
Vehicles	4,206	3,847	1,895	359	9.3%	1,952	103.0%
Leasehold improvements	3,056	2,648	2,779	408	15.4%	(131)	-4.7%
Intangible assets	4,716	4,434	-	282	6.4%	4,434	100.0%
Total sewage disposal fund capital assets (net of depreciation and amortization)	<u>\$ 2,463,298</u>	<u>\$ 2,541,381</u>	<u>\$ 2,599,786</u>	<u>\$ (78,083)</u>	<u>-3.1%</u>	<u>\$ (58,406)</u>	<u>-2.2%</u>

Sewage Disposal Fund additions in 2022 and 2021 were mainly due to transfers out of construction in progress to the applicable asset category. Total additions for FY 2022 to construction in progress was \$67.4 million and transfers out of \$65.5 million. The total additions for FY 2021 to the construction in progress were \$81.5 million with \$67.4 million transferred to capital assets. Much of the activity for the year is related to the water resource recovery facility (WRRF). The table below summarizes major projects for the last two years. Comprehensive project plan details can be found within Capital Improvement Plan documents available at <https://www.glwater.org/cip/>.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund (millions)								
Project Number	Description	Expected Completion Date	Project Plan Estimate	Expenditures		Placed in Service		CIP at 6/30/2022
				FY 2021	FY 2022	FY 2021	FY 2022	
222002	Detroit River Interceptor Evaluation and Rehabilitation	FY 2028	\$ 77.2	\$ 16.9	\$ 5.2	\$ -	\$ -	\$ 42.3
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	FY 2023	39.8	16.1	8.4	-	-	38.8
213007	WRRF Modification to Incinerator Sludge Systems at Complex - II	FY 2022	23.8	3.2	1.7	-	-	21.8
260201	Conveyance System Interceptor Rehabilitation	FY 2023	38.3	9.6	5.8	-	-	16.4
232002	Freud and Connor Creek Pump Station Improvements	FY 2031	262.8	3.2	6.0	5.9	-	10.6
260614	CSO Structural Inspection and Improvements	FY 2025	13.6	2.0	4.6	-	-	6.9
211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	FY 2022	28.5	0.3	-	-	27.9	-
214001	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations	FY 2021	14.3	3.6	0.1	-	12.0	-
260603	Conner Creek CSO RTB Automation Improvements	FY 2022	8.2	0.5	0.2	-	7.7	0.1
211001	Rehabilitation of Primary Clarifiers, Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	FY 2021	55.0	1.9	6.0	54.7	-	-
260616	Baby Creek Toward Treatment Sewer Improvements	FY 2021	1.0	0.1	-	1.0	-	-
260504	Rehabilitation of Outfalls - Phase 2 Other projects	FY 2022	5.0	2.7	-	4.9	-	-
				21.4	29.4	0.9	17.9	56.2
	Total			\$ 81.5	\$ 67.4	\$ 67.4	\$ 65.5	\$ 193.1

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Long-term Debt

The Authority's long-term debt consists of revenue bonds and loans as well as an obligation payable related to the City of Detroit's Financial Recovery bonds and a liability related to raw water rights that the Authority will own at the end of the agreement. See Note 13 for a complete analysis of the long-term debt. The following analysis focuses on the revenue bonds and loans. At year-end, the Authority had \$5.06 billion of long-term debt for revenue bonds, including capital appreciation bonds and state revolving fund loans. Of the total, \$2.24 billion is assigned to the Water System and \$2.82 billion is assigned to the Sewage Disposal System.

	Revenue Bonds and Loans (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Revenue bonds	\$ 4,568,635	\$ 4,707,965	\$ 4,840,155	\$ (139,330)	-3.0%	\$ (132,190)	-2.7%
Capital appreciation bonds	-	5,675	11,335	(5,675)	-100.0%	(5,660)	-49.9%
State revolving loans	489,078	488,027	488,985	1,051	0.2%	(958)	-0.2%
Total revenue bonds and loans	<u>\$ 5,057,713</u>	<u>\$ 5,201,667</u>	<u>\$ 5,340,475</u>	<u>\$ (143,954)</u>	-2.8%	<u>\$ (138,808)</u>	-2.6%

Water Fund

The total outstanding debt for the Water System is \$2.24 billion, decreasing by \$25.5 million from the prior year.

Approximately 4.9 percent of the total indebtedness is issued through the State of Michigan revolving fund loan program for the benefit of the Water System. The Water System received \$43.7 million in new state revolving fund loans and received \$2.5 million in loan forgiveness. The amount of state revolving fund loans pass-through to DWSD for local system improvements was \$18 million as well as the \$2.5 million in loan forgiveness.

	Water Fund Revenue Bonds and Loans (\$000)						
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Revenue bonds	\$ 2,128,890	\$ 2,192,510	\$ 2,261,935	\$ (63,620)	-2.9%	\$ (69,425)	-3.1%
State revolving loans	109,429	71,260	39,318	38,169	53.6%	31,942	81.2%
Total water revenue bonds and loans	<u>\$ 2,238,319</u>	<u>\$ 2,263,770</u>	<u>\$ 2,301,253</u>	<u>\$ (25,451)</u>	-1.1%	<u>\$ (37,483)</u>	-1.6%

Repayment of GLWA bonds issued are funded by charges to all member partners. Repayment of the debt service assigned to DWSD for Local System improvements are paid from retail customer collections by DWSD.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund

The total outstanding debt for the Sewage Disposal System is \$2.82 billion, decreasing by \$118.5 million from the prior year.

Approximately 13.5 percent of the total indebtedness is issued through the State of Michigan revolving fund loan program for the benefit of the Sewage Disposal System. The Sewage Disposal System received \$10.5 million in new state revolving fund loans and received \$0.8 million in loan forgiveness. The amount of state revolving fund loans pass-through to DWSD for local system improvements was \$1.3 million as well as the \$0.8 million in loan forgiveness.

Sewage Disposal Fund Revenue Bonds and Loans (\$000)							
	Fiscal Year			Change 2022 vs 2021		Change 2021 vs 2020	
	2022	2021	2020	Amount	Percent	Amount	Percent
Revenue bonds	\$ 2,439,745	\$ 2,515,455	\$ 2,578,220	\$ (75,710)	-3.0%	\$ (62,765)	-2.4%
Capital appreciation bonds	-	5,675	11,335	(5,675)	-100.0%	(5,660)	-49.9%
State revolving loans	<u>379,648</u>	<u>416,768</u>	<u>449,667</u>	<u>(37,120)</u>	-8.9%	<u>(32,899)</u>	-7.3%
Total sewer revenue bonds and loans	<u>\$ 2,819,393</u>	<u>\$ 2,937,898</u>	<u>\$ 3,039,222</u>	<u>\$ (118,505)</u>	-4.0%	<u>\$ (101,324)</u>	-3.3%

Repayment of GLWA bonds issued are funded by charges to all member partners. Repayment of the debt service assigned to DWSD for Local System improvements is paid from retail customer collections by DWSD.

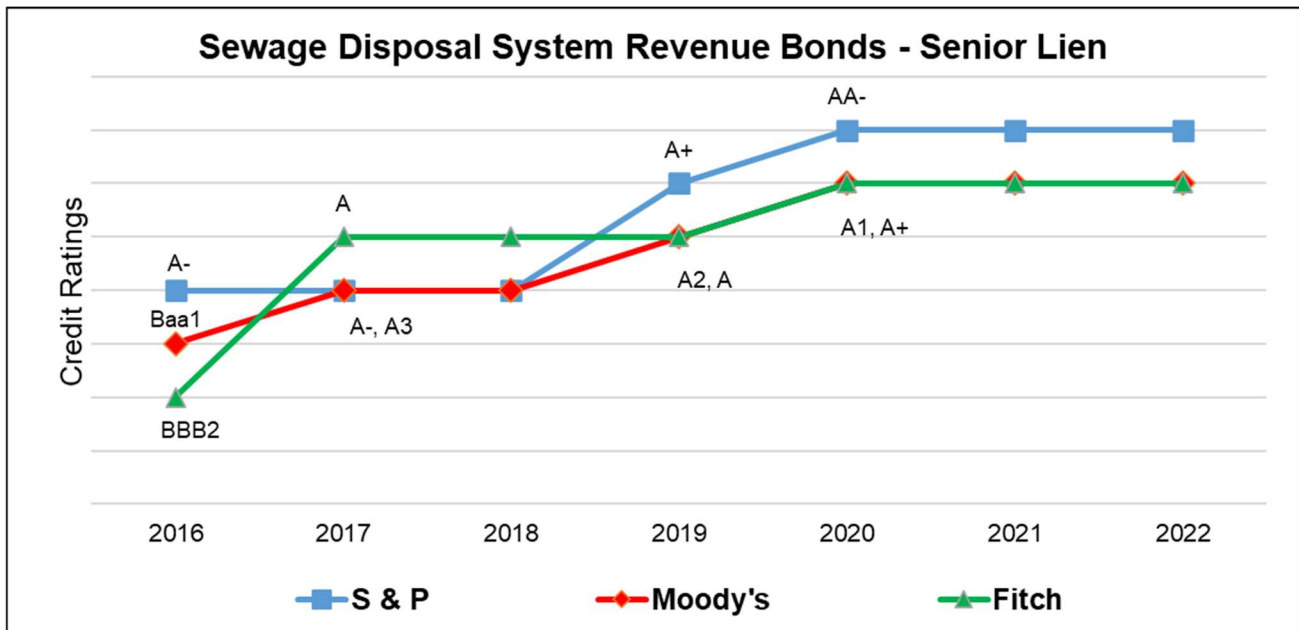
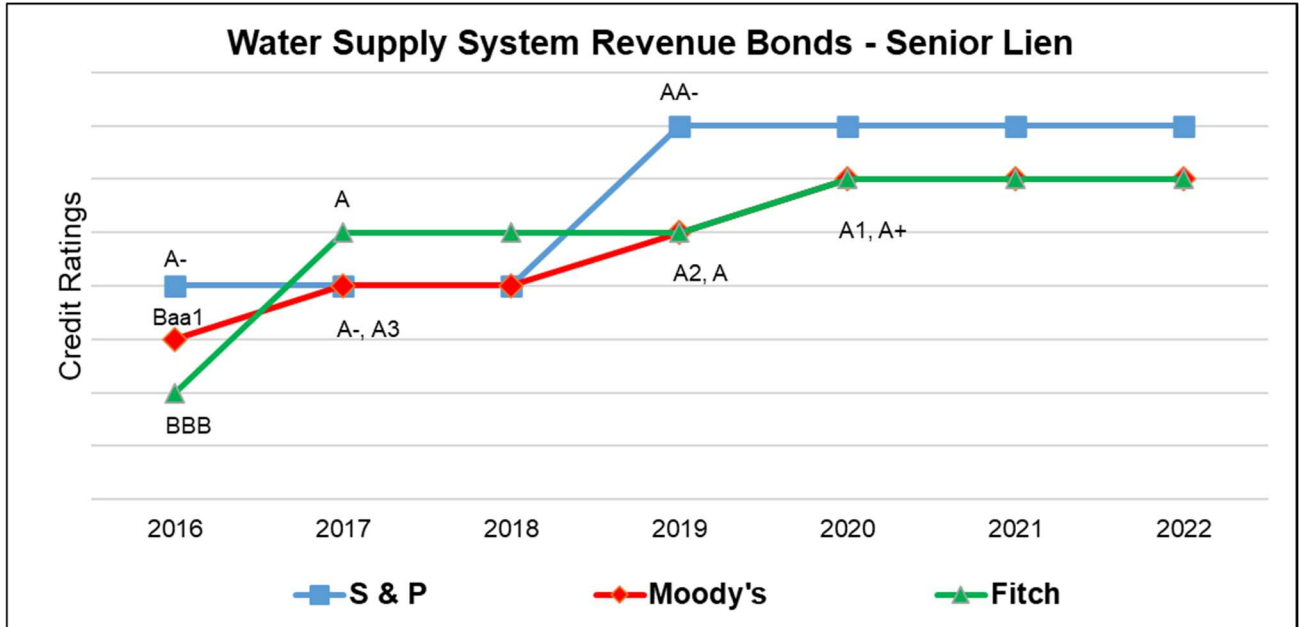
Credit Ratings

In August 2022, the Authority's ratings were upgraded or affirmed. For both the water system and the sewage disposal system Fitch Ratings affirmed the ratings with senior lien debt at A+ and second lien at A, the water system remained a stable outlook with the sewage disposal system upgraded to a positive outlook; Standard & Poor's affirmed the Authority's ratings with senior lien debt at AA- and second lien at A+, all with a stable outlook; and Moody's affirmed the Authority's ratings of senior lien debt at A1 and second lien at A2, the outlook was moved from stable to positive for both the water system and the sewage disposal system.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

The following charts provide the credit rating history for senior lien revenue bonds since the GLWA began operations in 2016.



Additional information on the Authority's long-term debt can be found in Note 13.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Economic Factors Affecting Next Year's Operations and Rates

On February 23, 2022, the GLWA Board adopted the biennial budget for the Authority for fiscal years 2023 and 2024. That two-year financial plan remains true to a foundational commitment to control the budget within a 4 percent revenue cap as further described below.

Water Fund

For FY 2023 the budget increased by 3.5 percent. This translated into a regional system average charge increase of 3.7 percent and suburban wholesale member partner average charge increase of 3.5 percent depending on each customer's usage in relation to other customers. The local system charge increased 3.0 percent.

Sewage Disposal Fund

For FY 2022 budget increased by 1.3 percent. This translated into a regional system average charge increase of 2.4 percent and suburban wholesale member partner average charge increase of 3.2 percent. The local system charge decreased 1.2 percent.

City of Highland Park

In June 2022, the Board approved an adjustment to service charges for fiscal year 2023 that removed \$1.25 million for the water charges and \$5.4 million from the sewer charges for expected non-payment by the City of Highland Park. This adjustment was the result of a May 10, 2022 Wayne County Circuit Court order requiring the City of Highland Park to resume payments. Further, in August 2022, the Michigan Court of Appeals reinstated the 21 million dollar judgment against the City of Highland Park. The City of Highland Park has since filed an application with the Michigan Supreme Court to consider the case, which is pending. While these litigation successes are a big step forward, the litigation will continue for the foreseeable future. GLWA will pursue the recovery of amounts due from Highland Park and manage the Highland Park litigation through their final resolution. The resulting difference between revenues and revenue requirements for fiscal year 2023 will be balanced via the quarterly budget amendments.

Requests for Information

This financial report is designed to provide a general overview of GLWA's finances for all those with an interest in the Authority's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to Great Lakes Water Authority, Office of the Chief Financial Officer, 735 Randolph, Detroit, Michigan 48226. This report is also available on the Authority's website at www.glwater.org.

BASIC FINANCIAL STATEMENTS

GREAT LAKES WATER AUTHORITY

STATEMENT OF NET POSITION

As of June 30, 2022

With Comparative Amounts at June 30, 2021

	Enterprise Funds		Total Business-type Activities	2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Assets				
Current Assets				
Cash and cash equivalents	\$ 147,191,020	\$ 200,464,397	\$ 347,655,417	\$ 354,351,132
Restricted cash and cash equivalents	49,069,747	38,574,227	87,643,974	151,186,044
Restricted cash for the benefit of DWSD	11,371,285	9,098,348	20,469,633	6,064,197
Investments	91,499,859	93,709,233	185,209,092	322,929,971
Restricted investments	30,711,544	73,042,550	103,754,094	31,690,982
Receivables, net	70,897,955	46,858,599	117,756,554	112,325,889
Due from other governments	11,246,188	2,208,272	13,454,460	13,240,859
Due from other funds	2,328,086	-	2,328,086	2,948,712
Contractual obligation receivable	18,126,021	15,403,674	33,529,695	31,195,900
Shortfall receivable - DWSD	-	-	-	8,296,578
Prepaid items and other assets	8,701,487	4,920,898	13,622,385	11,744,542
Inventories	-	8,366,771	8,366,771	7,795,152
Total Current Assets	441,143,192	492,646,969	933,790,161	1,053,769,958
Noncurrent Assets				
Restricted cash and cash equivalents	2,773,291	2,491,300	5,264,591	5,395,501
Restricted investments	9,506,991	31,184,328	40,691,319	38,533,910
Contractual obligation receivable	549,493,189	369,794,921	919,288,110	936,811,819
Prepaid lease	11,250,000	13,750,000	25,000,000	25,000,000
Assets not subject to depreciation or amortization	567,414,021	320,526,307	887,940,328	813,485,421
Capital assets being depreciated, net	1,293,659,589	2,138,777,595	3,432,437,184	3,546,026,747
Intangible assets, net	90,652,709	3,993,977	94,646,686	98,653,054
Prepaid insurance on debt	6,649,782	10,124,011	16,773,793	18,357,442
Total Noncurrent Assets	2,531,399,572	2,890,642,439	5,422,042,011	5,482,263,894
Total Assets	2,972,542,764	3,383,289,408	6,355,832,172	6,536,033,852
Deferred Outflows of Resources				
Deferred charge on refunding	41,997,055	110,341,248	152,338,303	163,387,050
Deferred pension amounts	10,810,800	19,347,900	30,158,700	61,687,252
Total Deferred Outflows of Resources	52,807,855	129,689,148	182,497,003	225,074,302

	Enterprise Funds			2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund	Total Business-type Activities	
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 56,890,771	\$ 37,488,263	\$ 94,379,034	\$ 85,221,415
Accrued salaries, wages and benefits	1,046,674	1,013,356	2,060,030	6,028,598
Accrued liabilities	15,261,427	9,743,206	25,004,633	11,573,811
Due to other governments	17,610,601	3,750,000	21,360,601	19,443,993
Due to other funds	-	2,328,086	2,328,086	2,948,712
Interest payable	36,398,995	34,566,553	70,965,548	71,811,380
Current portion of				
Revenue bonds and loans	40,091,255	87,312,545	127,403,800	119,909,733
Raw water rights obligation	2,845,282	-	2,845,282	2,734,246
BC Note obligation	203,954	458,756	662,710	631,153
Regional system leases	5,686,745	6,950,466	12,637,211	12,121,951
Other liabilities	3,378,083	3,435,863	6,813,946	5,867,203
Total Current Liabilities	<u>179,413,787</u>	<u>187,047,094</u>	<u>366,460,881</u>	<u>338,292,195</u>
Noncurrent Liabilities				
Revenue bonds and loans	2,359,238,286	2,790,722,856	5,149,961,142	5,319,896,659
Raw water rights obligation	92,515,774	-	92,515,774	95,361,056
BC Note obligation	16,338,339	36,750,113	53,088,452	53,751,162
Regional system leases	400,095,662	489,005,809	889,101,471	901,738,681
Other liabilities	4,132,979	16,989,290	21,122,269	21,514,839
Net pension liability	23,379,480	41,841,847	65,221,327	144,305,198
Total Noncurrent Liabilities	<u>2,895,700,520</u>	<u>3,375,309,915</u>	<u>6,271,010,435</u>	<u>6,536,567,595</u>
Total Liabilities	<u>3,075,114,307</u>	<u>3,562,357,009</u>	<u>6,637,471,316</u>	<u>6,874,859,790</u>
Deferred Inflows of Resources				
Deferred gain on refunding	48,216,421	40,566,648	88,783,069	96,296,284
Deferred amounts for swap terminations	61,438	457	61,895	84,205
Deferred pension amounts	11,224,189	20,087,733	31,311,922	-
Total Deferred Inflows of Resources	<u>59,502,048</u>	<u>60,654,838</u>	<u>120,156,886</u>	<u>96,380,489</u>
Net Position (Deficit)				
Net investment in capital assets	(109,163,683)	(85,551,623)	(194,715,306)	(302,012,473)
Restricted for debt service	31,660,045	91,754,608	123,414,653	114,544,694
Restricted for payment assistance program	5,272,708	7,045,715	12,318,423	11,043,109
Unrestricted	(37,034,806)	(123,281,991)	(160,316,797)	(33,707,455)
TOTAL NET POSITION (DEFICIT)	<u>\$ (109,265,736)</u>	<u>\$ (110,033,291)</u>	<u>\$ (219,299,027)</u>	<u>\$ (210,132,125)</u>

The accompanying notes are an integral part of these financial statements.

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GREAT LAKES WATER AUTHORITY

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

For the Year Ended June 30, 2022

With Comparative Amounts for the Year Ended June 30, 2021

	Enterprise Funds		Total Business-type Activities	2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Operating Revenues				
Wholesale customer charges	\$ 323,026,213	\$ 268,813,369	\$ 591,839,582	\$ 589,991,584
Local system charges	21,697,300	188,662,200	210,359,500	209,885,200
Industrial waste charges	-	8,300,278	8,300,278	8,004,939
Pollutant surcharges	-	5,181,816	5,181,816	6,719,964
Other revenues	<u>234,462</u>	<u>429,491</u>	<u>663,953</u>	<u>766,943</u>
Total Operating Revenues	<u>344,957,975</u>	<u>471,387,154</u>	<u>816,345,129</u>	<u>815,368,630</u>
Operating Expenses				
Operating expenses before depreciation and amortization				
Personnel	44,892,622	62,160,768	107,053,390	106,945,131
Contractual services	50,683,897	63,410,109	114,094,006	103,324,025
Utilities	28,725,292	30,930,459	59,655,751	52,749,654
Chemicals	7,788,784	12,593,379	20,382,163	13,982,136
Supplies and other expenses	9,157,367	19,911,985	29,069,352	31,097,071
Capital program allocation	(1,618,459)	(1,013,677)	(2,632,136)	(3,191,809)
Intergovernmental reimbursements	<u>(1,813,535)</u>	<u>(1,074,346)</u>	<u>(2,887,881)</u>	<u>(3,166,692)</u>
Total operating expenses before depreciation and amortization	137,815,968	186,918,677	324,734,645	301,739,516
Depreciation	123,196,027	158,013,629	281,209,656	274,043,606
Amortization of intangible assets	<u>3,566,664</u>	<u>439,704</u>	<u>4,006,368</u>	<u>3,676,590</u>
Total Operating Expenses	<u>264,578,659</u>	<u>345,372,010</u>	<u>609,950,669</u>	<u>579,459,712</u>
Operating Income	<u>80,379,316</u>	<u>126,015,144</u>	<u>206,394,460</u>	<u>235,908,918</u>
Nonoperating Revenues (Expenses)				
Earnings (loss) on investments	(2,361,396)	(3,022,882)	(5,384,278)	1,259,624
Interest on shortfall and obligations receivable	25,107,207	17,157,558	42,264,765	43,722,511
Interest expense	(125,086,379)	(131,110,125)	(256,196,504)	(263,485,014)
Amortization of debt related items and cost of issuance	15,610,434	(2,292,419)	13,318,015	12,965,639
Legacy pension expense	(4,988,132)	(8,927,171)	(13,915,303)	(22,527,961)
WRAP (Water Residential Assistance Program)	(1,049,908)	(1,742,929)	(2,792,837)	(1,517,453)
Other	<u>388,656</u>	<u>(234,915)</u>	<u>153,741</u>	<u>(840,886)</u>
Total Nonoperating Expenses	<u>(92,379,518)</u>	<u>(130,172,883)</u>	<u>(222,552,401)</u>	<u>(230,423,540)</u>
Income (loss) before capital contributions	(12,000,202)	(4,157,739)	(16,157,941)	5,485,378
Capital Contributions	<u>-</u>	<u>6,991,039</u>	<u>6,991,039</u>	<u>5,960,000</u>
Change in net position	(12,000,202)	2,833,300	(9,166,902)	11,445,378
NET POSITION (DEFICIT), Beginning of Year	<u>(97,265,534)</u>	<u>(112,866,591)</u>	<u>(210,132,125)</u>	<u>(221,577,503)</u>
NET POSITION (DEFICIT), END OF YEAR	<u>\$ (109,265,736)</u>	<u>\$ (110,033,291)</u>	<u>\$ (219,299,027)</u>	<u>\$ (210,132,125)</u>

The accompanying notes are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

STATEMENT OF CASH FLOWS For the Year Ended June 30, 2022 With Comparative Amounts for the Year Ended June 30, 2021

	Enterprise Funds		Total Business-type Activities	2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Cash Flows From Operating Activities				
Cash received from customers	\$ 335,022,666	\$ 470,114,343	\$ 805,137,009	\$ 802,115,043
Cash received from intergovernmental reimbursements	2,694,534	588,645	3,283,179	10,668,673
Cash payments for intergovernmental services provided	(1,813,536)	(1,074,346)	(2,887,882)	(3,166,693)
Cash payments to suppliers for goods and services	(98,259,357)	(121,676,647)	(219,936,004)	(200,268,869)
Cash payments for employee services	(46,681,790)	(62,331,347)	(109,013,137)	(102,255,393)
Cash payments to other governments for obligation payable	(875,509)	(1,969,294)	(2,844,803)	(2,844,803)
Cash payments for WRAP	(1,049,908)	(1,742,930)	(2,792,838)	(1,517,453)
Cash payments for GLWA share pension agreement	(11,440,800)	(20,475,400)	(31,916,200)	(31,916,200)
Cash received from insurance claims	72,709	592,797	665,506	1,695,458
Cash received nonoperating income	435,044	428	435,472	22,524
Cash received for DWSD nonoperating pension	4,427,400	3,066,700	7,494,100	7,494,200
Cash paid for DWSD nonoperating pension	(4,427,394)	(3,066,805)	(7,494,199)	(7,494,200)
Cash received for DWSD WRAP	671,100	1,510,400	2,181,500	2,004,000
Cash payments for DWSD WRAP	(671,100)	(1,510,400)	(2,181,500)	(3,682,547)
Cash increase from DWSD budgetary surplus (1)	7,470,103	6,024,896	13,494,999	14,466,362
Principal payments received on obligation receivable	15,820,056	14,244,900	30,064,956	28,499,200
Interest received on obligation receivable	26,069,023	17,500,600	43,569,623	45,031,354
Advanced payments received on obligation receivable	475,121	55,310	530,431	-
Payments received from DWSD for previous year budget shortfall	-	8,296,578	8,296,578	18,206,431
Interest payments received on previous year budget shortfall	-	144,918	144,918	635,284
Cash received from DWSD for cost of issuance fees	49,500	49,500	99,000	-
Cash payments for issuance costs on DWSD obligation receivable	(79,000)	(49,500)	(128,500)	(20,328)
Payments of state revolving fund loan proceeds to DWSD	(11,851,337)	(1,288,152)	(13,139,489)	(15,741,109)
Net Cash Provided by Operating Activities	<u>216,057,525</u>	<u>307,005,194</u>	<u>523,062,719</u>	<u>561,930,934</u>
Cash Flows From Noncapital Financing Activities				
Proceeds from state revolving fund loans for DWSD	18,043,834	1,288,152	19,331,986	15,741,109
Cash received from grants	147,288	149,018	296,306	-
Principal payments	(15,820,056)	(14,244,900)	(30,064,956)	(28,454,200)
Interest payments	(25,787,369)	(17,430,450)	(43,217,819)	(42,651,558)
Net Cash Used in Noncapital Financing Activities	<u>(23,416,303)</u>	<u>(30,238,180)</u>	<u>(53,654,483)</u>	<u>(55,364,649)</u>
Cash Flows From Capital and Related Financing Activities				
Proceeds from insurance claims	-	345,645	345,645	-
Proceeds from sale of assets	15,857	239,128	254,985	82,050
Proceeds from state revolving fund loans	25,642,083	9,215,214	34,857,297	37,447,847
Payment of bond issuance costs	(204,225)	(37,500)	(241,725)	(684,403)
Principal payments on bonds	(50,798,000)	(113,955,100)	(164,753,100)	(161,510,800)
Principal payments on regional system leases	(5,454,878)	(6,667,073)	(12,121,951)	(11,627,700)
Principal payments on right to use lease	-	(189,119)	(189,119)	(96,310)
Interest payments	(95,078,335)	(112,599,419)	(207,677,754)	(200,707,390)
Purchase of capital assets	(158,973,426)	(75,575,344)	(234,548,770)	(215,507,276)
Net Cash Used in Capital and Related Financing Activities	<u>(284,850,924)</u>	<u>(299,223,568)</u>	<u>(584,074,492)</u>	<u>(552,603,982)</u>

	Enterprise Funds		Total Business-type Activities	2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Cash Flows From Investing Activities				
Investment purchases	\$ (213,527,072)	\$ (307,745,971)	\$ (521,273,043)	\$ (435,022,177)
Investment sales and maturities	279,775,191	296,101,125	575,876,316	668,047,000
Interest received	2,259,942	1,839,782	4,099,724	7,238,185
Net Cash Used in Investing Activities	68,508,061	(9,805,064)	58,702,997	240,263,008
Net change in cash and cash equivalents	(23,701,641)	(32,261,618)	(55,963,259)	194,225,311
CASH AND CASH EQUIVALENTS, Beginning of Year	234,106,984	282,889,890	516,996,874	322,771,563
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 210,405,343</u>	<u>\$ 250,628,272</u>	<u>\$ 461,033,615</u>	<u>\$ 516,996,874</u>
STATEMENT OF NET POSITION CLASSIFICATION OF CASH				
Cash and cash equivalents	\$ 147,191,020	\$ 200,464,397	\$ 347,655,417	\$ 354,351,132
Restricted cash and cash equivalents	49,069,747	38,574,227	87,643,974	151,186,044
Restricted cash for the benefit of DWSD	11,371,285	9,098,348	20,469,633	6,064,197
Noncurrent restricted cash and cash equivalents	2,773,291	2,491,300	5,264,591	5,395,501
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 210,405,343</u>	<u>\$ 250,628,272</u>	<u>\$ 461,033,615</u>	<u>\$ 516,996,874</u>
NONCASH OPERATING ACTIVITIES				
Credits given on billings-Flint KWA obligation	\$ (6,496,428)	\$ -	\$ (6,496,428)	\$ (6,652,253)
Interest income obligation receivable premium amortization	\$ (738,660)	\$ (392,284)	\$ (1,130,944)	\$ (1,162,290)
NONCASH INVESTING, CAPITAL AND FINANCING ACTIVITIES				
Increase in assets from contributed capital	\$ -	\$ 6,991,039	\$ 6,991,039	\$ -
Increase in lease liability right to use asset	\$ -	\$ -	\$ -	\$ 4,543,607
Increase in intangible right to use asset	\$ -	\$ -	\$ -	\$ 4,543,607
Decrease in raw water rights obligation	\$ 2,734,246	\$ -	\$ 2,734,246	\$ 2,624,820
Interest paid for raw water rights obligation	\$ 3,762,182	\$ -	\$ 3,762,182	\$ 4,027,433
Increase in unrealized loss on investments	\$ 860,822	\$ 2,530,920	\$ 3,391,742	\$ 11,752,226
Interest expense due to accretion	\$ -	\$ 170,931	\$ 170,931	\$ 496,509
Amortization income (expense)	\$ 15,815,659	\$ (2,254,919)	\$ 13,560,740	\$ 13,650,042

The accompanying notes are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

STATEMENT OF CASH FLOWS
For the Year Ended June 30, 2022
With Comparative Amounts for the Year Ended June 30, 2021

Continued From
Previous Page

	Enterprise Funds		Total Business-type Activities	2021 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Reconciliation of Operating Income to Net				
Cash Provided by Operating Activities:				
Operating income	\$ 80,379,316	\$ 126,015,144	\$ 206,394,460	\$ 235,908,918
Adjustments to reconcile operating income to net cash provided by operating activities:				
Depreciation	123,196,027	158,013,629	281,209,656	274,043,606
Amortization of intangible assets	3,566,664	439,704	4,006,368	3,676,590
Credits for raw water rights	(6,496,427)	-	(6,496,427)	(6,652,253)
Miscellaneous nonoperating income (expense)	435,044	281,926	716,970	22,524
Legacy pension expense and administrative fee	(5,150,550)	(9,217,846)	(14,368,396)	(23,026,334)
WRAP (Water Residential Assistance Program)	(1,049,908)	(1,742,929)	(2,792,837)	(1,517,453)
Loan forgiveness pass-through to DWSD	(2,518,000)	(808,000)	(3,326,000)	(2,031,300)
Interest income on contractual obligation receivable	25,107,207	17,012,640	42,119,847	43,087,227
Interest income on shortfall receivable	-	144,918	144,918	635,284
Interest expense on obligation payable	(681,267)	(1,532,384)	(2,213,651)	(2,243,706)
Changes in:				
Receivables	(3,613,279)	(1,817,386)	(5,430,665)	(6,602,963)
Due from other governments	602,303	(900,148)	(297,845)	18,210,185
Due from other funds	458,258	162,368	620,626	(814,521)
Contractual obligation receivable	1,032,882	14,157,032	15,189,914	15,951,680
Shortfall receivable	-	8,296,578	8,296,578	18,206,431
Prepaid items and other assets (operating)	(1,561,979)	(902,781)	(2,464,760)	(2,417,019)
Inventories	794,521	(1,366,140)	(571,619)	(787,944)
Accounts payable (operating)	1,113,432	6,585,172	7,698,604	1,567,813
Accrued salaries, wages and benefits	(3,845,359)	(123,209)	(3,968,568)	706,734
Accrued liabilities	8,302,871	5,127,951	13,430,822	6,216,755
Due to other governments	1,916,608	-	1,916,608	(588,261)
Due to other funds	(162,368)	(458,258)	(620,626)	814,521
Obligation payable including accrued interest	(194,242)	(436,911)	(631,153)	(601,097)
Other noncurrent liabilities	248,439	494,853	743,292	(2,203,744)
Net pension liability and deferred items	(5,822,668)	(10,420,729)	(16,243,397)	(7,630,739)
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>\$ 216,057,525</u>	<u>\$ 307,005,194</u>	<u>\$ 523,062,719</u>	<u>\$ 561,930,934</u>

(1) Represents local system retail receipts received in excess of DWSD's current year budget requirements. Amounts will be used to meet future budget requirements.

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

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GREAT LAKES WATER AUTHORITY

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GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Great Lakes Water Authority (GLWA or the Authority) is the regional wholesale provider of water and sewage disposal services in southeast Michigan. The Authority was incorporated by the counties of Macomb, Oakland, Wayne and the City of Detroit (the City) on November 26, 2014 pursuant to Act 233, Public Acts of Michigan, 1955, as amended (Act 233). Pursuant to Regional System Leases that became effective on January 1, 2016, the Authority assumed possession and control of the regional assets of both the water supply and sewage disposal systems owned by the City, which were previously operated by the Detroit Water and Sewerage Department (DWSD). The City, acting through DWSD, will continue to manage and operate its own local retail water and sewage disposal system infrastructure. The Regional System Leases assigned all revenues of both systems to the Authority for an initial term of 40 years and, pursuant to bondholder consent, replaced the City with GLWA as the obligor on all outstanding debt obligations of the City related to the systems.

The term “Regional System Leases” is used throughout the financial statements to represent the agreements that transferred the regional water system and sewage disposal system assets and operations from the City of Detroit to GLWA. The Regional System Leases are not considered a lease as defined by the Government Auditing Standards Board (GASB) in GASB Statement No. 87, *Leases*.

The Authority’s water system is one of the largest in the United States, both in terms of water produced and population served. The water system currently serves an area of 1,698 square miles located in eight Michigan counties and an estimated population of approximately 3.8 million or approximately 38% of Michigan’s population. Suburban wholesale customers comprise approximately 82% of the population in the service area, and the DWSD retail water customers comprise the remainder.

The Authority’s sewage disposal system is one of the largest in the United States, both in terms of treatment capacity and population served. The sewer disposal system currently serves an area of 944 square miles located in three Michigan counties and an estimated population of approximately 2.8 million or approximately 28% of Michigan’s population. Suburban customers comprise approximately 76% of the population in the service area, and the DWSD retail sewer customers comprise the remainder.

The Authority’s Board is authorized to establish rates, fees and charges for its water supply and sewage disposal services. Under the Water and Sewer Services Agreement, the City is appointed as agent of the Authority for setting retail rates and for billing, collecting and enforcing the collection of charges from retail water and sewer customers. As an agent of the Authority, the City, through the Board of Water Commissioners and without further approval by the City Council, is required to set retail rates to meet the revenue requirements that the Authority establishes for the retail system for regional commitments as well as other reasonable costs of the local DWSD systems. Under certain conditions, the Authority may terminate the City’s appointment.

The financial statements of the Authority have been prepared in conformity with generally accepted accounting principles (GAAP) as applied to government units. The Governmental Accounting Standards Board (GASB) is the accepted standard setting body for establishing governmental accounting and financial reporting principles. The more significant of the Authority’s accounting policies are described below.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

REPORTING ENTITY

The GLWA Board is composed of six voting members. Two members are residents of the City of Detroit and are appointed by the Mayor of the City of Detroit. The chief executive of the counties of Macomb, Oakland and Wayne each appoint one member who is a resident of the county from which appointed and the Governor of the State of Michigan appoints one member who is a resident of an area served by the Authority outside of the counties. All members of the GLWA Board must have at least seven years of experience in a regulated industry, a utility, engineering, finance, accounting or law firm. After the initial term specified in its Articles of Incorporation, each GLWA Board member is appointed for a four-year term and serves at the pleasure of the appointing government.

The GLWA Board has adopted a committee structure. Four committees have been established: Audit, Capital Improvement Planning, Operations and Resources, and Legal.

BASIS OF PRESENTATION

The Authority presents a water enterprise fund and a sewage disposal enterprise fund for its basic financial statements which consists of a statement of net position, statement of revenues, expenses and changes in net position, a statement of cash flows and these notes to the financial statements.

BASIS OF ACCOUNTING

The accounting policies of the Authority conform to GAAP as applicable to governmental entities. The accounts of the Authority are used to account for its activities, which are financed and operated in a manner similar to a private business enterprise. Accordingly, the Authority maintains its records on the accrual basis of accounting. Revenues from operations, investments and other sources are recorded when earned. Expenses (including depreciation) of providing services to the public are accrued when incurred.

Nonexchange transactions, in which the Authority receives value without directly giving equal value in return, include contributions and grants. On an accrual basis, revenue from contributions and grants is recognized in the fiscal year in which all eligibility requirements have been satisfied, including timing and expense requirements. Timing requirements specify the year when the resources are required to be used or the fiscal year when use is first permitted. Expense requirements specify the year in which the resources are provided to the Authority on a reimbursement basis.

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION

Cash and Cash Equivalents and Investments

The Authority's cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with original maturities of three months or less from the date of acquisition. Investments are reported at fair value or estimated value. The Authority maintains and adheres to a formal investment policy in accordance with Michigan Public Act 20 of 1943, Investment of Surplus Funds of Political Subdivisions. Michigan State law allows the Authority to deposit in the accounts of federally insured banks, credit unions and savings and loan associations and to invest in obligations of the U.S. Treasury, certain commercial paper, repurchase agreements, bankers' acceptances and mutual funds composed of otherwise legal investments. These investments are subject to interest rate risk and credit risk which may affect the value at which these investments are recorded.

Restricted Assets

Restricted assets are those assets set aside as required by the Authority's Master Bond Ordinance (MBO), funds held on behalf of another entity, or where legally restricted for a particular purpose such as bond proceeds for the capital program. See Note 4 for further details.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Accounts Receivable, Net

The Authority records unbilled revenues for services provided prior to year-end by accruing actual revenues billed in the subsequent month. The Authority recognizes an estimate of uncollectible accounts for its customer accounts receivable related to its water and sewage disposal services.

Due from and Due to Other Governments

The due from other governments includes amounts owed to the Authority by DWSD for shared services and intergovernmental agreements, accrued interest receivable on the contractual obligation receivable and grants. The due to other governments includes amounts owed by the Authority to DWSD for shared services, the green infrastructure program and state revolving fund pass through to DWSD that were received by the Authority but not disbursed to DWSD by June 30, 2022.

Due from and Due to Other Funds

An amount owed between the Water and Sewage Disposal Funds based on shared centralized and administrative services administered by the Water Fund and allocated to the Sewage Disposal Fund. Any water system usage of inventory in the Sewage Disposal Fund is charged through an interfund payable to the Sewage Disposal Fund.

Contractual Obligation Receivable

Pursuant to the Water and Sewer Services Agreement, the City through DWSD is responsible for paying the portion of debt service on the bonds assumed by the Authority that were issued to finance the cost of improvements to the Detroit local facilities. The resulting contractual obligation is a receivable recorded by the Authority and is repaid by DWSD based upon an agreed upon schedule. Any new debt issued on behalf of the City for DWSD is also included in the contractual obligation receivable.

Shortfall Receivable – DWSD

A shortfall arises when the local system cash receipts are insufficient to meet the MBO obligations. Pursuant to the 2018 Memorandum of Understanding (MOU) dated June 27, 2018 executed between DWSD and the Authority any DWSD shortfall not cured by the end of the fiscal year following the year in which the shortfall arises shall be repaid in full, in installments, over a period not to exceed three fiscal years, plus a surcharge. Prior year shortfalls were paid off during the current fiscal year. There was no shortfall of local revenue requirements for the year ending June 30, 2022.

Prepaid Items and Other Assets

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in the financial statements. Prepaid insurance on debt is amortized over the life of the debt. Other assets include accrued interest receivable on investments.

Inventories

Inventories consist of operating, maintenance and repair parts for sewage disposal system assets and are valued at the lower of cost or market, with cost being determined on an average cost method. Inventory is recorded as expense when consumed rather than when purchased. The water fund does not report inventory because the amounts are insignificant and for efficiency are recorded in the sewage disposal fund. Any inventory usage by the water fund is charged through an interfund payable to the sewage disposal fund.

Prepaid Lease

As described in Note 14, the Authority has recorded a prepaid lease for cash paid to DWSD on the date GLWA began operations equivalent to six months of lease payments. As noted in the 2018 MOU dated June 2018, this amount will be applied at the end of the 40-year term and, hence, it is classified as a noncurrent asset.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Capital Assets

Capital assets are recorded at historical cost. All acquisitions of land and land improvements are capitalized regardless of cost. The capitalization threshold is \$5,000 for capital assets with an estimated useful life greater than one year, except for information technology assets and the right to use leased assets. The capitalization threshold for information technology assets is \$1,000,000 with an estimated useful life greater than three years. Subscription-Based Information Technology Arrangement (SBITA) contracts greater than \$1,000,000 are analyzed for the both the quantitative and qualitative aspects of materiality to determine if they will be recorded as an intangible asset under GASB 96. Right to use leased assets have a capitalization threshold of \$1,000,000 for leases greater than one year. The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend assets' lives are not capitalized. Major outlays for capital assets and improvements are capitalized as projects are constructed.

Capital assets acquired after January 1, 2016 are depreciated on the straight-line basis over the useful life of the assets as follows:

	<u>Useful Lives (In Years)</u>
Site improvements	15
Buildings and structures	20-50
Infrastructure	80
Machinery and equipment	3-20
Vehicles	5-7
Leasehold improvements	15

Capital assets acquired as of the operational effective date of the Authority at January 1, 2016 are depreciated over their estimated remaining useful lives at that time as determined by a third-party valuation. These remaining lives differ from the years cited above for newly acquired capital assets and, in most instances, are significantly shorter.

Intangible Assets

The Authority has recorded an intangible asset for raw water rights which are being amortized on a straight-line basis over 30 years in the water fund. See Note 10 for a description of these rights. The Authority has recorded a right to use intangible asset for the lease of a warehouse in the sewage disposal fund. See Note 15 for a description of the leased right to use asset.

Prepaid Insurance on Debt

Prepaid insurance on debt represents insurance costs incurred in connection with the issuance of long-term debt. Such costs are being amortized over the term of the respective debt using the straight-line method.

Deferred Outflows of Resources

In addition to assets, the statement of net position reports a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net assets that applies to future periods. At that time, the activity will be recognized as an outflow of resources (or expense). The Authority reports deferred outflows of resources for two items: deferred charges on refunding and pension amounts. Deferred charges on refunding results from the difference in the carrying value of refunded debt and its reacquisition price; these amounts are deferred and amortized over the shorter of the life of the refunded or refunding debt. Deferred outflows of resources from pension amounts relate to contributions to the plan subsequent to the plan measurement date. More detailed information on pension amounts can be found in Note 18.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Accrued Liabilities

Accrued liabilities represent amounts held for specific purposes or other parties as described below:

- Under the terms of the MBO, the Authority retains cash on hand for the benefit of DWSD to be used for current revenue requirements.
- Pursuant to the water service contract with a customer, the Authority holds a security deposit for \$3,750,000 plus interest earned net of bank fees.
- Advanced billings on rentals
- Insurance proceeds received that have not been spent

Revenue Bonds and Loans

The Authority issues revenue bonds to finance capital improvement projects, refund outstanding bonds to reduce future debt service payment and pay the cost of issuance. Loans are direct borrowings through the State of Michigan revolving fund loan program. Bond premiums and discounts are deferred and amortized over the life of the bonds using the effective interest method. Bonds payable are reported net of the applicable bond premium or discount. See Note 13 for the details on revenue bonds and loans.

Raw Water Rights Obligation

The Authority has recorded a liability for the purchase obligation on raw water rights. See Note 13 for the details of this obligation.

BC Note Obligation

Under the terms of the lease agreements with the City, the Authority is required to pay a portion of the City's B and C notes allocated to the regional water and sewage disposal systems. See "BC Note Obligation" in Note 13.

Regional System Leases

The effective date of the Regional System leases by the City to the Authority for the leased water and sewage disposal facilities was January 1, 2016. See Note 14 for the details of the regional system leases.

Other Liabilities

Other liabilities include the following liabilities which are discussed in Note 15:

- Lease payable – right to use asset
- Compensated absences
- Workers' compensation
- Claims and judgements
- Cash held for the benefit of DWSD budget stabilization

Net Pension Liability

Under the terms of the Regional System leases, the Authority is a nonemployer contributing entity in the City of Detroit General Employee's Retirement system (GRS) Component II plan in a special funding situation. For the purposes of measuring the net pension liability, deferred outflows, and pension expense, information about the fiduciary net position of the Component II plan of the GRS and additions to/ deductions from the plan's net position have been determined on the same basis as they are reported by GRS. The GRS combined plan 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. Plan member contributions are recognized in the period in which the contributions are due. Benefits are recognized when due and payable in accordance with the terms of the plan. Investments are reported at fair value or estimated fair value. Refer to Note 18 for additional information on the net pension liability.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Deferred Inflows of Resources

In addition to liabilities, the statement of net position includes a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net assets that applies to future periods. At that time, the activity will be recognized as an inflow of resources (or revenues). The Authority has included the deferred gain on refunding, deferred amounts on swap terminations and deferred pension amounts in this reporting category. Deferred gain on refunding results from the difference in the carrying value of refunded debt and its reacquisition price; these amounts are deferred and amortized over the shorter of the life of the refunded or refunding debt. The deferred amounts on swap terminations were assumed as part of the regional system lease agreements with the City. The amounts will be fully amortized for both funds by fiscal 2035. Deferred inflows of resources from pension amounts relate to differences between expected and actual investment returns. More detailed information on pension amounts can be found in Note 18.

Net Position (Deficit)

Net position, which represents the difference between assets, deferred outflows of resources, liabilities and deferred inflows of resources, is reported in three components as follows:

Net Investment in Capital Assets - consists of capital assets, net of accumulated depreciation and reduced by the balance of outstanding related debt including the share of the regional system lease liability allocable to the net investment in capital assets acquisition value of the regional systems recorded under GASB 69.

Restricted – consists of amounts that are legally restricted by outside parties or by law through constitutional provisions or enabling legislation. The restricted net position consists of restricted assets reduced by liabilities related to those assets.

Unrestricted – is the residual balance of net position after net investment in capital assets and restricted.

When both restricted and unrestricted resources are available for use, generally it is the Authority's policy to use restricted resources first and then unrestricted resources when they are needed.

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

Classification of Revenues and Expenses

The Authority classifies its revenues and expenses as either operating or nonoperating.

Operating revenues are those revenues generated from providing services in connection with the Authority's principal ongoing operations. The principal operating revenues of the Authority are wholesale charges for providing water and wastewater treatment. The local system charges are the charges to the City of Detroit under the Water and Sewer Services Agreement (WSSA), dated June 12, 2015. Wholesale customer charges are shown net of loss contingency expense of \$2,354,715 for the Water Fund and \$3,612,517 for the Sewage Disposal Fund.

Operating expenses include the direct costs of operating the water and sewage disposal systems, centralized support, utilities, administrative expenses, depreciation on capital assets and amortization of intangible assets. The following items are shown as a reduction to operating expenses:

- The capital program allocation represents personnel costs that support the project delivery of the Capital Improvement Plan and have been capitalized.
- Intergovernmental reimbursements represent reimbursement of costs related to shared facilities and personnel which the Authority provides to DWSD through a shared services agreement or separate interlocal agreement. It also includes reimbursement of costs for contracted services that are billed to member partners under an intergovernmental agreement.

All revenue and expenses not meeting these definitions above are reported as nonoperating revenues and expenses.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Taxes

The Authority pays no direct federal, state or local taxes, except local taxes on excess property and federal Social Security and Medicare taxes.

Interest Income on Shortfall and Obligations Receivable

Interest income is the interest earned on the shortfall receivable and the contractual obligation receivable.

Amortization of Debt Related Items and Cost of Issuance

Bond premiums, discounts, and gains or losses on refunding are deferred and amortized over the life of the bonds. Bond premiums, discounts and GASB 69 debt value adjustment are amortized using the effective interest method. The deferred amounts on refunding are amortized using the straight-line method. Debt cost of issuance is expensed when incurred.

Legacy Pension Expense

GLWA is legally responsible for making substantial contributions to a legacy pension plan of another entity, see Note 18 for additional information on this Plan.

Water Residential Assistance Program (WRAP)

The Water Residential Assistance Program is a unique program that started with the formation of GLWA. The program provides that an amount equal to half of one percent of GLWA Regional Systems revenue be set aside to provide assistance to qualified residents in participating communities across southeast Michigan. The amount expensed represents the amount expended for this purpose during the year. Amounts set aside and not spent are shown as restricted cash. Information on restricted assets is disclosed in Note 4.

Centralized Services and Administrative Services

Certain costs incurred by the Authority are allocated between the Water and Sewer Disposal Funds. The allocations are based on an annual cost allocation analysis. The following table shows the allocation of these common costs for the year ended June 30, 2022:

<u>Common Costs</u>	<u>Water % Allocation</u>	<u>Water Allocation</u>	<u>Sewer % Allocation</u>	<u>Sewer Allocation</u>	<u>Total Common Costs</u>
Centralized services	51.5%	\$ 47,258,919	48.5%	\$ 44,463,100	\$ 91,722,019
Administrative services	43.8%	\$ 14,636,708	56.2%	\$ 18,754,698	\$ 33,391,406

Centralized services includes the following operating areas: planning services, systems control, facility operations, fleet operations, field service operations, energy research and innovation, transformation, information technology and security and integrity.

Administrative services includes the following operating areas: board of directors, chief executive officer, chief administrative and compliance officer, general counsel, public affairs, organizational development, and financial services.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Capital Contribution

The current wastewater disposal service contract with the Oakland-Macomb Interceptor Drain Drainage District (OMIDD) provides for OMIDD to maintain, repair, and improve Interceptor PCI-5, the Northeast Sewer Pump Station and the North Interceptor East Arm, which are related to the capital assets in the Regional Sewage Disposal System Lease (See Note 14). During the fiscal year ending June 30, 2022, OMIDD transferred to GLWA and GLWA accepted and placed into service capital assets of \$6,991,039 which has been recognized as a capital contribution.

USE OF ESTIMATES

The preparation of basic financial statements in conformity with GAAP 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 basic financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

ADOPTION OF NEW ACCOUNTING STANDARDS

GASB Statement No. 96, Subscription-Based Information Technology Arrangements (SBITA) is effective for years beginning after June 15, 2022. The Authority has implemented this statement early for the fiscal year ending June 30, 2022. This implementation did not have any effect on previous reporting periods as the existing or amended SBITA contracts terms did not result in recording a subscription asset or the contracts started during the current fiscal year.

The following GASB pronouncements were implemented in the current fiscal year with no effect on the financial statements as a result of implementation:

- Statement No. 92, *Omnibus 2020*
- Statement No. 93, *Replacement of Interbank Offer Rates*
- Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans - an amendment of GASB Statements No. 14 and No.84, and a supersession of GASB Statement No. 32*
- Statement No. 99, *Omnibus 2022*

NEW ACCOUNTING PRONOUNCEMENTS TO BE IMPLEMENTED IN THE FUTURE

The following GASB pronouncements will be implemented in the future. The Authority has not completed its assessment of the future impact of the adoption of these statements, if any.

- * Statement No. 91, *Conduit Debt Obligations* (effective for fiscal years beginning after December 15, 2021)
- * Statement 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* (effective for fiscal years beginning after June 15, 2022)
- * Statement No. 100, *Accounting Changes and Error Corrections-an amendment of GASB Statement No. 62 (effective for fiscal years beginning after June 15, 2023)*
- * Statement No. 101, *Compensated Absences (effective for fiscal years beginning after December 15, 2023)*

RECLASSIFICATIONS

Certain prior year amounts have been reclassified to conform to current year presentation.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 2 – BUDGETARY INFORMATION

The financial activity of the Authority is presented in two enterprise funds. While enterprise funds are not required under State statutes to adopt appropriated budgets, the Authority's Articles of Incorporation outlines a budget adoption process. Budget to actual schedules for revenues and expenses are presented in the Supplementary Information section of this report. This schedule is not required by GAAP or subject to audit procedures. It is presented strictly for informational purposes.

BUDGET PROCESS

GLWA adopts a biennial budget for the regional water and sewage disposal systems as required by its Articles of Incorporation. The revenue requirements budget is adopted separately for the water and sewerage disposal systems. It is the sum of: a) operation and maintenance expenses; b) amounts necessary to pay the principal of and interest on all bonds and to fund any reserves required by the Master Bond Ordinance; c) the lease payment, which shall be a common-to-all charge; d) GLWA's portion of the GRS net pension liability and the BC Note obligation; e) the required deposit to the Water Residential Assistance Program (WRAP) Fund; f) the amounts needed to make the required deposits to the regional Extraordinary Repair and Replacement Reserve Fund and the regional Improvement and Extension Fund as defined in the Master Bond Ordinance; and g) the amount necessary to satisfy the coverage ratios required by the rate covenant in the Master Bond Ordinance.

As provided in the Regional System leases, through the fiscal year ending June 30, 2025, the water and sewerage disposal systems are limited to annual increases in the regional revenue requirement of not more than 4%. This limitation shall not be applicable, however, if the regional revenue requirement must increase beyond the 4% assumption in order to satisfy the rate covenant or to pay the cost of improvements to the leased water and/or sewerage disposal facilities that are required to be made by applicable laws.

In the Regional System leases, the City acknowledges that all local water and sewer system revenues received from customers in the City are the property of GLWA and will be deposited as received in the Receiving Fund as defined in the Master Bond Ordinance and applied as provided in the Bond Ordinance. As a result, the City agrees to provide the Authority with a budget for the local water and sewerage disposal system as required in the Water and Sewer Services Agreement.

SCHEDULE OF CHARGES PROCESS

The GLWA Wholesale Customer Model Water Contract and GLWA Wholesale Customer Model Sewer Contract requires that GLWA provide wholesale customers with written notice of a proposed charge, meet to review the proposed charge, and the underlying data used to calculate the charge not less than 30 calendar days prior to a public hearing. Further, the contract requires that a public hearing be held no less than 120 days prior to the date that proposed charges take effect.

The Water and Sewer Services Agreement between GLWA and DWSD requires that GLWA provide the City with written notice of the proposed charge and the underlying data used to calculate the charge not less than 120 calendar days prior to the effective date of any new charge.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 3 – CASH DEPOSITS AND INVESTMENTS

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended) authorizes the Authority to make deposits and invest in the accounts of federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. The law also allows investments outside the state of Michigan when fully insured. The Authority is allowed to invest in bonds, securities, and other direct obligations of the United States or any agency or instrumentality of the United States; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications that matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions that are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

The deposits and investments of the Authority at June 30, 2022 are reported in the basic financial statements as follows:

	Water Fund	Sewage Disposal Fund	Total
Statement of Net Position			
Cash and cash equivalents	\$ 147,191,020	\$ 200,464,397	\$ 347,655,417
Restricted cash and cash equivalents	49,069,747	38,574,227	87,643,974
Restricted cash for the benefit of DWSD	11,371,285	9,098,348	20,469,633
Investments	91,499,859	93,709,233	185,209,092
Restricted investments	30,711,544	73,042,550	103,754,094
Noncurrent restricted cash and cash equivalents	2,773,291	2,491,300	5,264,591
Noncurrent restricted investments	9,506,991	31,184,328	40,691,319
Total	\$ 342,123,737	\$ 448,564,383	\$ 790,688,120
Cash Deposits and Investments			
Bank deposits – checking and savings accounts	\$ 44,666,252	\$ 16,225,280	\$ 60,891,532
Money market accounts	165,739,091	234,402,992	400,142,083
Investments in securities	131,718,394	197,936,111	329,654,505
Total	\$ 342,123,737	\$ 448,564,383	\$ 790,688,120

CUSTODIAL RISK OF BANK DEPOSITS

Deposits and money market accounts are exposed to custodial credit risk if they are not covered by depository insurance. At year-end, the carrying amount of the Authority's deposits and money market accounts was \$210,405,342 for the water fund and \$250,628,272 for the sewage disposal fund. The bank balance of the water fund deposits and money market accounts was \$212,293,856 of which \$198,211,298 was uninsured and uncollateralized. The bank balance of the sewage disposal fund deposits and money market accounts was \$250,628,272 of which \$250,378,272 was uninsured and uncollateralized.

In accordance with the Authority's investment policy and State law, all deposits are held in the Authority's name, and evidenced by a safekeeping receipt. Also, due to the dollar amounts of cash deposits and the limits of FDIC insurance, the Authority believes it is impractical to insure all bank deposits. As a result, the Authority evaluates each financial institution and assesses the level of risk of each institution; only those institutions with an acceptable estimated risk level are used as depositories.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 3 – CASH DEPOSITS AND INVESTMENTS (cont.)

INVESTMENTS

Following is a summary of the Authority's investments as of June 30, 2022:

	Water Fund	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 55,845,338	AA+	1.38
U.S. government agencies	43,932,520	AA+	0.88
Commercial paper	31,940,536	A1	0.04
Total	\$ 131,718,394		
	Sewage Disposal Fund	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 102,953,175	AA+	1.34
U.S. government agencies	26,201,191	AA+	0.90
Commercial paper	68,781,745	A1	0.09
Total	\$ 197,936,111		
	Total	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 158,798,513	AA+	1.35
U.S. government agencies	70,133,711	AA+	0.89
Commercial paper	100,722,281	A1	0.07
Total	\$ 329,654,505		

CUSTODIAL RISK OF INVESTMENTS

Investments are exposed to custodial credit risk if the securities are uninsured, unregistered or held by a counterparty or its agent but not in the government's name. In accordance with the Authority's investment policy, all investments are held in the name of the Authority and are evidenced by a safekeeping receipt confirmation, and thus not exposed to custodial credit risk.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 3 – CASH DEPOSITS AND INVESTMENTS (cont.)

CREDIT RISK

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Authority's investment policy and State law require that commercial paper be rated in the top two ratings by at least two nationally recognized statistical rating organizations.

As of June 30, 2022, all of the Authority's investments in securities of U.S. agencies were rated AA+ by Standard & Poor's and Aaa by Moody's. The Authority's investment in commercial paper was rated A1 by Standard and Poor's and P1 by Moody's. U.S Treasury notes are explicitly guaranteed by the U.S. government and not considered to have credit risk. The Authority's money market accounts were not rated.

CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. In order to manage its exposure risk, the Authority's investment policy requires diversification by security type to no more than 50% of the total investment portfolio.

At June 30, 2022, the Authority had greater than 5% of its total investment portfolio concentrated as follows:

<u>Investment Type</u>	<u>Issuer</u>	<u>% of Portfolio</u>
Water Fund		
U.S. government agencies	Federal National Mortgage Association	24.47%
U.S. government agencies	Federal Home Loan Mortgage Company	10.89
Commercial paper	Nordea Bank Abp	10.94
Sewage Disposal Fund		
U.S. government agencies	Federal National Mortgage Association	8.72
Commercial paper	Goldman Sachs	7.62
Commercial paper	Nordea Bank Abp	7.53

INTEREST RATE RISK

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of investments. As a means of limiting its exposure to fair value losses due to rising interest rates, the Authority's investment policy limits the maximum maturity period to no more than five years, unless matched to a particular cash flow need. The Authority's investment policy further provides risk will be minimized by matching investments with short and long-term cash flow requirements and monitoring the maturity dates of individual securities and the weighted average maturity of the investment portfolio, to ensure duration is commensurate with the cash flow requirements.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 3 – CASH DEPOSITS AND INVESTMENTS (cont.)

FAIR VALUE MEASUREMENTS

The Authority categorizes investments measured at fair value within the fair value hierarchy established by generally accepted accounting principles. The Authority is required to classify certain assets and liabilities based on the following fair value hierarchy:

Level 1: Quoted price in active markets for identical assets.

Level 2: Inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly. Debt securities are priced based on a compilation of primarily observable market information or broker quote in non-active market.

Level 3: Inputs are significant unobservable inputs.

	<u>Level 2</u>
Water Fund	
Investments by fair value:	
U.S. treasury notes	\$ 55,845,338
U.S. government agencies	43,932,520
Commercial paper	<u>31,940,536</u>
Water Fund Total Investments	<u>131,718,394</u>
Sewage Disposal Fund	
Investments by fair value:	
U.S. treasury notes	102,953,175
U.S. government agencies	26,201,191
Commercial paper	<u>68,781,745</u>
Sewage Disposal Fund Total Investments	<u>197,936,111</u>
Total Investments – Business-type activities	<u>\$ 329,654,505</u>

The Authority has no Level 1 or 3 inputs on June 30, 2022.

NOTE 4 – RESTRICTED ASSETS

Restricted assets, comprised of cash and investments, are available for debt service on revenue bonds and to provide funds for improvements, enlargements, extensions and construction. In accordance with the provisions of the Master Bond Ordinance and Regional System Leases, the Authority follows a sequential flow of funds in segregated accounts through which revenue receipts are deposited and are maintained at certain levels in satisfaction of all legal requirements.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 4 – RESTRICTED ASSETS (cont.)

The following schedules provide, in the order of the flow of funds per the Master Bond Ordinance, the assignment of Water and Sewage Disposal Funds cash and investments between restricted and unrestricted assets based on the source of the monies as of June 30, 2022.

	Funded from Revenue and Other		Funded from	Total
	Unrestricted	Restricted	Debt Issuance Restricted	
Water Fund				
Receiving fund	\$ 58,356,061 *	\$ -	\$ -	\$ 58,356,061
Operations and maintenance	36,503,245	-	-	36,503,245
Operations and maintenance – legacy pension	-	194,425	-	194,425
Senior lien debt service	-	28,520,884	-	28,520,884
Senior lien bond reserve	-	-	101,636,783	101,636,783
Second and junior lien debt service	-	32,625,470	-	32,625,470
Second lien bond reserve	-	-	47,802,189	47,802,189
Legacy pension obligation	-	374,283	-	374,283
Water residential assistance program (WRAP)	-	5,272,708	-	5,272,708
Budget stabilization	-	1,913,873	-	1,913,873
Extraordinary repair and replacement	26,197,651	-	-	26,197,651
Improvement and extension – regional	94,497,370	-	-	94,497,370
Subtotal – Reserves Defined by Ordinance	215,554,327	68,901,643	149,438,972	433,894,942
Less: Funded by surety (noncash)	-	-	(144,345,270)	(144,345,270)
Total – Reserves Defined by Ordinance (net of surety coverage)	215,554,327	68,901,643	5,093,702	289,549,672
Cash held for the benefit of DWSD	-	11,371,285	-	11,371,285
Construction retainage and deposits	-	18,066,228	-	18,066,228
Construction fund	23,136,552	-	-	23,136,552
Total Cash, Cash Equivalents and Investments Water Fund	\$ 238,690,879	\$ 98,339,156	\$ 5,093,702	\$ 342,123,737

*Balance for two months required transfers

Surety coverage includes series specific policies; therefore, this represents the lesser of the maximum amount of the policy or amount of reserve requirement allocated to the specific series covered by such policy.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 4 – RESTRICTED ASSETS (cont.)

	Funded from Revenue and Other		Funded from Debt Issuance	Total
	Unrestricted	Restricted	Restricted	
Sewage Disposal Fund				
Receiving fund	\$ 90,384,914*	\$ -	\$ -	\$ 90,384,914
Operations and maintenance	41,582,851	-	-	41,582,851
Operations and maintenance – legacy pension	-	348,391	-	348,391
Senior lien debt service	-	45,370,355	-	45,370,355
Senior lien bond reserve	-	-	111,010,076	111,010,076
Second and junior lien debt service	-	57,602,462	-	57,602,462
Second lien bond reserve	-	-	48,722,008	48,722,008
Legacy pension obligation	-	522,310	-	522,310
Water residential assistance program (WRAP)	-	7,045,715	-	7,045,715
Budget stabilization	-	5,256,209	-	5,256,209
Extraordinary repair and replacement	41,908,281	-	-	41,908,281
Improvement and extension – regional	104,295,207	-	-	104,295,207
Subtotal – Reserves Defined by Ordinance	278,171,253	116,145,442	159,732,084	554,048,779
Less: Funded by surety (noncash)	-	-	(138,358,380)	(138,358,380)
Total – Reserves Defined by Ordinance (net of surety coverage)	278,171,253	116,145,442	21,373,704	415,690,399
Cash held for the benefit of DWSD	-	9,098,348	-	9,098,348
Construction retainage	-	7,773,259	-	7,773,259
Construction funds	16,002,377	-	-	16,002,377
Total Cash, Cash Equivalents and Investments Sewage Disposal Fund	294,173,630	133,017,049	21,373,704	448,564,383
Total Cash, Cash Equivalents and Investments –Business-type Activities	<u>\$ 532,864,509</u>	<u>\$ 231,356,205</u>	<u>\$ 26,467,406</u>	<u>\$ 790,688,120</u>

*Balance for two months required transfers

Surety coverage includes series specific policies; therefore, this represents the lesser of the maximum amount of the policy or amount of reserve requirement allocated to the specific series covered by such policy.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 4 – RESTRICTED ASSETS (cont.)

A reconciliation of restricted assets to restricted net position is as follows:

	Water Fund	Sewage Disposal Fund	Total Business-type Activities
Restricted assets from schedule above:			
From revenue and other	\$ 98,339,156	\$ 133,017,049	\$ 231,356,205
From debt issuance	5,093,702	21,373,704	26,467,406
Amounts payable to liabilities and debt	(66,500,105)	(55,590,430)	(122,090,535)
 Restricted Net Position	 \$ 36,932,753	 \$ 98,800,323	 \$ 135,733,076
 Restricted net position for:			
Debt service	\$ 31,660,045	\$ 91,754,608	\$ 123,414,653
Payment assistance program	5,272,708	7,045,715	12,318,423
 Total Restricted Net Position	 \$ 36,932,753	 \$ 98,800,323	 \$ 135,733,076

The following summary reconciles the above cash and investment balances with the balances per the Statement of Net Position. The allocation of restricted balances to current and noncurrent categories is not intended to directly align with the funding source allocation included in the schedule.

	Unrestricted	Restricted Current	Restricted Noncurrent	Total
Water Fund				
Cash and cash equivalents	\$ 147,191,020	\$ 49,069,747	\$ 2,773,291	\$ 199,034,058
Cash held for the benefit of DWSD	-	11,371,285	-	11,371,285
Investments	91,499,859	30,711,544	9,506,991	131,718,394
Total Water Fund	238,690,879	91,152,576	12,280,282	342,123,737
 Sewage Disposal Fund				
Cash and cash equivalents	200,464,397	38,574,227	2,491,300	241,529,924
Cash held for the benefit of DWSD	-	9,098,348	-	9,098,348
Investments	93,709,233	73,042,550	31,184,328	197,936,111
Total Sewage Disposal Fund	294,173,630	120,715,125	33,675,628	448,564,383
 Total Business-type Activities	 \$ 532,864,509	 \$ 211,867,701	 \$ 45,955,910	 \$ 790,688,120

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 5 – RECEIVABLES, NET

The following is a summary of the net receivables as of June 30, 2022:

	Water Fund	Sewage Disposal Fund	Total
Receivables, net:			
Billed	\$ 54,169,640	\$ 64,722,773	\$ 118,892,413
Unbilled	30,349,758	24,045,449	54,395,207
Other	295,791	996,875	1,292,666
Subtotal	84,815,189	89,765,097	174,580,286
 Allowance for doubtful accounts	 (13,917,234)	 (42,906,498)	 (56,823,732)
 Total Receivables, net	 \$ 70,897,955	 \$ 46,858,599	 \$ 117,756,554

NOTE 6 – DUE FROM OTHER GOVERNMENTS

Due from other governments in the statement of net position are as follows:

	Water Fund	Sewage Disposal Fund
DWSD-Billed shared services	\$ 14,707,170	\$ 884,783
DWSD-Unbilled shared services	(4,388,634)	-
DWSD-Accrued interest on obligation receivable	221,885	2,774
DWSD-Intergovernmental agreement and other	-	618,967
State of Michigan FEMA	705,767	701,748
 Total Due From Other Governments	 \$ 11,246,188	 \$ 2,208,272

NOTE 7 – DUE TO AND DUE FROM OTHER FUNDS

Interfund balances result from the time lag between the dates the interfund reimbursements occur and the payment between the funds are made. Interfund balances for the year ended June 30, 2022 consisted of the following:

	Water Fund - Due from Sewage Disposal Fund	Sewage Disposal Fund - Due from Water Fund	Total Due To
Water Fund - Due to Sewage Disposal Fund	\$ -	\$ -	\$ -
Sewage Disposal Fund - Due to Water Fund	2,328,086	-	2,328,086
 Total Due From	 \$ 2,328,086	 \$ -	 \$ 2,328,086

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 8 – CONTRACTUAL OBLIGATION RECEIVABLE

As part of the regional system lease transaction, in which GLWA leased the regional water and sewage disposal system from the City of Detroit, all DWSD revenue bonds outstanding as of December 31, 2015, including those purchased by the Michigan Finance Authority under its state revolving loan program, were assumed by GLWA with the consent of bondholders. The total bonds assumed by GLWA on January 1, 2016 totaled \$2,313,683,761 for the Water Fund and \$3,291,282,050 for the Sewage Disposal Fund.

Per the lease agreements, the WSSA and the MBO, the Detroit retail class continues to pay its common-to-all share of debt service revenue requirements and its allocated share of debt service revenue requirements associated with improvements to the local water and sewage disposal systems. Payments on the debt service incurred by GLWA on the outstanding revenue bonds assumed as of December 31, 2015 are to be allocated using an agreed-upon percentage of total debt service associated with bond-financed local improvements over the life of such bonds, though the bonds themselves continue to be secured by the net revenue of GLWA, and the revenues of the Detroit retail class. The MOU dated June 27, 2018 defines an agreed upon allocation and amortization schedule. This allocated debt is referred to as “Bifurcated debt” in the table below. Any additional debt issued by GLWA on behalf of the local system is also included in the obligation receivable. DWSD is billed monthly for the debt requirements on a debt set-aside basis so the funds are available when the associated debt payment is due.

Changes in obligation receivable for the year ended June 30, 2022 were as follows:

	Beginning Balance	Increase	Decrease	Debt Forgiveness	Ending Balance	Due Within One Year
Water Fund						
Obligation Receivable						
Bifurcated debt	\$ 383,840,900	\$ -	\$ (15,168,000)	\$ -	\$ 368,672,900	\$ 15,890,000
New money bonds	136,320,000	-	-	-	136,320,000	-
State revolving funds	28,885,586	18,043,834	(652,056)	(2,518,000)	43,759,364	1,468,850
Total Obligation Receivable	549,046,486	18,043,834	(15,820,056)	(2,518,000)	548,752,264	17,358,850
Deferred amounts for:						
Unamortized premiums	19,605,606	-	(738,660)	-	18,866,946	767,171
Total Water Fund	568,652,092	18,043,834	(16,558,716)	(2,518,000)	567,619,210	18,126,021
Sewage Disposal Fund						
Obligation Receivable						
Bifurcated debt	311,583,900	-	(12,779,900)	-	298,804,000	13,333,300
New money bonds	78,810,000	-	(1,465,000)	-	77,345,000	1,530,000
State revolving funds	-	1,288,152	-	(808,000)	480,152	132,000
Total Obligation Receivable	390,393,900	1,288,152	(14,244,900)	(808,000)	376,629,152	14,995,300
Deferred amounts for:						
Unamortized premiums	8,961,727	-	(392,284)	-	8,569,443	408,374
Total Sewage Disposal Fund	399,355,627	1,288,152	(14,637,184)	(808,000)	385,198,595	15,403,674
Total Business-type Activities	\$ 968,007,719	\$ 19,331,986	\$ (31,195,900)	\$ (3,326,000)	\$ 952,817,805	\$ 33,529,695

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 8 – CONTRACTUAL OBLIGATION RECEIVABLE (cont.)

The current obligation receivable payment schedule is as follows:

	Year Ended June 30	Principal	Interest	Total
Water Fund				
	2023	\$ 17,358,850	\$ 25,993,471	\$ 43,352,321
	2024	19,811,500	25,265,471	45,076,971
	2025	21,209,050	24,389,351	45,598,401
	2026	22,163,300	23,467,041	45,630,341
	2027	23,171,000	22,502,129	45,673,129
	2028 - 2032	130,230,719	96,486,253	226,716,972
	2033 - 2037	162,851,100	64,883,885	227,734,985
	2038 - 2042	67,851,279	30,037,327	97,888,606
	2043 - 2047	72,100,399	12,247,416	84,347,815
	2048 - 2050	12,005,067	859,014	12,864,081
		<u>548,752,264</u>	<u>326,131,358</u>	<u>874,883,622</u>
Total Water Fund				
		<u>548,752,264</u>	<u>326,131,358</u>	<u>874,883,622</u>
Sewage Disposal Fund				
	2023	14,995,300	17,352,206	32,347,506
	2024	15,635,600	16,734,563	32,370,163
	2025	16,317,900	16,075,013	32,392,913
	2026	16,964,552	15,387,332	32,351,884
	2027	17,637,000	14,670,600	32,307,600
	2028 - 2032	100,526,900	61,457,150	161,984,050
	2033 - 2037	124,685,200	38,176,750	162,861,950
	2038 - 2042	42,561,700	12,743,650	55,305,350
	2043 - 2047	22,180,000	4,716,250	26,896,250
	2048 - 2049	5,125,000	256,250	5,381,250
		<u>376,629,152</u>	<u>197,569,764</u>	<u>574,198,916</u>
Total Sewage Disposal Fund				
		<u>376,629,152</u>	<u>197,569,764</u>	<u>574,198,916</u>
Total Business-type Activities		<u>\$ 925,381,416</u>	<u>\$ 523,701,122</u>	<u>\$ 1,449,082,538</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 9 – SHORTFALL RECEIVABLE – DWSD

Under the terms of the WSSA and the 2018 MOU, if DWSD experiences a cumulative negative variance of more than two percent (2%) of the total budget for either local system (a budget shortfall) from its adopted budget, DWSD, as the agent of GLWA, shall, within thirty (30) days thereafter, schedule a meeting of the Reconciliation Committee to discuss a remedy for the shortfall.

In accordance with the 2018 MOU, budget shortfalls not cured by the end of the fiscal year following the year in which they arise shall be repaid in full, in installments, over a period not to exceed the next three fiscal years, plus a surcharge calculated as provided below. The surcharge factor on the portion of the budget shortfall for the Sewage Disposal Fund, which remains unpaid, shall be based on the three-year U.S. Treasury note rate plus 150 basis points. The 2018 budget shortfall was paid off during the year. The surcharge factor for the 2018 budget shortfall was 3.209%.

The following is the shortfall receivable activity for the year ended June 30, 2022:

	Beginning Balance	Increase	Decrease	Ending Balance	Due Within One Year
Sewage Disposal Fund					
2018 DWSD budget shortfall	\$ 8,296,578	\$ -	\$ (8,296,578)	\$ -	-

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 10 – CAPITAL ASSETS

Capital assets activity for the year ended June 30, 2022 was as follows:

	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Water Fund					
Nondepreciable and nonamortizable capital assets					
Land	\$ 34,167,736	\$ -	\$ -	\$ 739,355	\$ 34,907,091
Easements	258,990,205	-	-	148,741	259,138,946
Construction in progress	204,853,029	158,706,458	-	(90,605,427)	272,954,060
Prepaid subscription assets	-	413,924	-	-	413,924
Total Nondepreciable and Nonamortizable Capital Assets	<u>498,010,970</u>	<u>159,120,382</u>	<u>-</u>	<u>(89,717,331)</u>	<u>567,414,021</u>
Depreciated capital assets					
Site improvements	84,054,180	-	-	-	84,054,180
Buildings and structures	592,346,952	-	-	14,829,124	607,176,076
Infrastructure	668,116,959	-	-	-	668,116,959
Machinery and equipment	714,473,237	2,237,151	(6,015)	74,888,207	791,592,580
Vehicles	5,069,512	352,904	(141,287)	-	5,281,129
Leasehold improvements	8,407,125	-	-	-	8,407,125
Total Depreciable Assets	<u>2,072,467,965</u>	<u>2,590,055</u>	<u>(147,302)</u>	<u>89,717,331</u>	<u>2,164,628,049</u>
Less: Accumulated depreciation					
Site improvements	(47,605,667)	(7,033,332)	-	-	(54,638,999)
Buildings and structures	(171,661,110)	(25,592,114)	-	-	(197,253,224)
Infrastructure	(209,383,033)	(38,764,658)	-	-	(248,147,691)
Machinery and equipment	(316,813,627)	(50,659,410)	492	-	(367,472,545)
Vehicles	(1,839,523)	(590,716)	140,953	-	(2,289,286)
Leasehold improvements	(610,918)	(555,797)	-	-	(1,166,715)
Total Accumulated Depreciation	<u>(747,913,878)</u>	<u>(123,196,027)</u>	<u>141,445</u>	<u>-</u>	<u>(870,968,460)</u>
Total Depreciated Capital Assets, Net	<u>1,324,554,087</u>	<u>(120,605,972)</u>	<u>(5,857)</u>	<u>89,717,331</u>	<u>1,293,659,589</u>
Intangible asset – raw water rights					
	106,999,919	-	-	-	106,999,919
Less: Accumulated amortization	<u>(12,780,546)</u>	<u>(3,566,664)</u>	<u>-</u>	<u>-</u>	<u>(16,347,210)</u>
Total Intangible Assets, Net	<u>94,219,373</u>	<u>(3,566,664)</u>	<u>-</u>	<u>-</u>	<u>90,652,709</u>
Water Fund Net Capital Assets	<u>\$1,916,784,430</u>	<u>\$ 34,947,746</u>	<u>\$ (5,857)</u>	<u>\$ -</u>	<u>\$1,951,726,319</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 10 – CAPITAL ASSETS (cont.)

	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Sewage Disposal Fund					
Nondepreciable and nonamortizable capital assets					
Land	\$ 28,142,843	\$ -	\$ -	\$ 251,764	\$ 28,394,607
Easements	96,211,323	-	-	2,098,190	98,309,513
Construction in progress	191,120,285	67,449,150	-	(65,468,972)	193,100,463
Prepaid subscription assets	-	721,724	-	-	721,724
Total Nondepreciable and Nonamortizable Capital Assets	<u>315,474,451</u>	<u>68,170,874</u>	<u>-</u>	<u>(63,119,018)</u>	<u>320,526,307</u>
Depreciated capital assets					
Site improvements	51,660,505	75,308	-	770,375	52,506,188
Buildings and structures	1,156,499,808	146,437	-	10,802,868	1,167,449,113
Infrastructure	619,819,263	-	-	5,888,382	625,707,645
Machinery and equipment	1,311,290,921	11,414,594	(779,079)	45,030,675	1,366,957,111
Vehicles	5,953,693	1,134,531	(170,319)	-	6,917,905
Leasehold improvements	3,137,248	-	-	626,718	3,763,966
Total Depreciable Assets	<u>3,148,361,438</u>	<u>12,770,870</u>	<u>(949,398)</u>	<u>63,119,018</u>	<u>3,223,301,928</u>
Less: Accumulated depreciation					
Site improvements	(29,293,587)	(3,215,117)	-	-	(32,508,704)
Buildings and structures	(254,566,401)	(37,353,917)	-	-	(291,920,318)
Infrastructure	(75,607,745)	(13,740,637)	-	-	(89,348,382)
Machinery and equipment	(564,825,107)	(102,709,676)	207,755	-	(667,327,028)
Vehicles	(2,106,753)	(775,741)	170,319	-	(2,712,175)
Leasehold improvements	(489,185)	(218,541)	-	-	(707,726)
Total Accumulated Depreciation	<u>(926,888,778)</u>	<u>(158,013,629)</u>	<u>378,074</u>	<u>-</u>	<u>(1,084,524,333)</u>
Total Depreciated Capital Assets, Net	<u>2,221,472,660</u>	<u>(145,242,759)</u>	<u>(571,324)</u>	<u>63,119,018</u>	<u>2,138,777,595</u>
Intangible asset – right to use asset					
	4,543,607	-	-	-	4,543,607
Less: Accumulated amortization	(109,926)	(439,704)	-	-	(549,630)
Total Intangible Assets, Net	<u>4,433,681</u>	<u>(439,704)</u>	<u>-</u>	<u>-</u>	<u>3,993,977</u>
Sewage Disposal Fund Net Capital Assets	<u>2,541,380,792</u>	<u>(77,511,589)</u>	<u>(571,324)</u>	<u>\$ -</u>	<u>2,463,297,879</u>
Business-type Activities Capital Assets, Net	<u>\$4,458,165,222</u>	<u>\$ (42,563,843)</u>	<u>\$ (577,181)</u>	<u>\$ -</u>	<u>\$4,415,024,198</u>

ASSET IMPAIRMENT

Capital assets are evaluated annually to determine if any asset impairments exist, defined as a significant, unexpected decline in the service utility of a capital asset. There were no recorded impairments for the Authority for the year ended June 30, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 10 – CAPITAL ASSETS (cont.)

RAW WATER RIGHTS ASSET

Effective December 1, 2017, the Authority, the City of Flint, Karegnondi Water Authority (KWA), Genesee County Drain Commission (GCDC) and State of Michigan entered into a long-term partnership agreement to satisfy a number of critical water service needs across the region. Key provisions of a master agreement includes: 1) a 30-year water service contract with the City of Flint that establishes the Authority as the long-term water source for the City of Flint and credits the City of Flint for its debt service payment obligations on existing KWA bonds for the building of its raw water intake and supply line; 2) a license to the Authority of the 72-inch line serving the City of Flint; and 3) a 30-year contract for reciprocal, emergency water services between the Authority and GCDC.

The 30-year water service contract with the City of Flint includes a license to raw water rights on 17.46 MGD of the 18 MGD purchased by Flint as part of KWA bond obligation. These license rights constitute an intangible asset under governmental accounting standards. Therefore, the Authority has recorded an intangible asset and purchase obligation liability of approximately \$107 million associated with this agreement in the accompanying financial statements. The Authority is amortizing the intangible asset over 30 years. As the City of Flint satisfies its monthly bond payment obligations to KWA, the Authority credits Flint's water invoice for that payment and reduces the Authority's purchase obligation. This process will continue each year over the 30-year life of the asset.

PREPAID SUBSCRIPTION ASSETS

The Authority has entered into two contracts for Subscription-Based Information Technology Arrangements (SBITA) that will be recorded under GASB 96. The SBITA's are in the initial implementation stage, therefore costs associated with these SBITA's have been recorded as prepaid subscription assets. Once the subscription assets are placed in service, the costs incurred and any future subscription liability (present value of expected future payments) will be recognized as an intangible right-to-use subscription asset and amortized over the subscription term.

NOTE 11 – ACCRUED LIABILITIES

As described in Note 1, other accrued liabilities in the statement of net position are as follows:

	Water Fund	Sewage Disposal Fund
	<u> </u>	<u> </u>
Cash held for the benefit of DWSD	\$ 11,371,285	\$ 9,098,348
Advanced insurance proceeds	-	644,858
Advanced billings	74,649	-
Customer deposit	<u>3,815,493</u>	<u>-</u>
Total Other Accrued Liabilities	<u>\$ 15,261,427</u>	<u>\$ 9,743,206</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 12 – DUE TO OTHER GOVERNMENTS

Due to other governments, which consists entirely of amounts due to the DWSD, in the statement of net position is as follows:

	Water Fund	Sewage Disposal Fund
Shared services	\$ 11,418,104	\$ -
State revolving fund loan proceeds due to DWSD	6,192,497	-
Green infrastructure	-	3,750,000
Total Due to Other Governments	\$ 17,610,601	\$ 3,750,000

NOTE 13 – LONG-TERM DEBT

Changes in long-term debt for the year ended June 30, 2022 were as follows:

	Beginning Balance	Increase	Decrease	Debt Forgiveness	Ending Balance	Due Within One Year
Water Fund						
Bonds and Loans						
Revenue bonds	\$2,192,510,000	\$ -	\$ (63,620,000)	\$ -	\$2,128,890,000	\$20,165,000
Notes from direct borrowings and direct placements - State revolving loan	71,259,601	43,685,917	(2,998,056)	(2,518,000)	109,429,462	5,096,750
Total Bonds and Loans	2,263,769,601	43,685,917	(66,618,056)	(2,518,000)	2,238,319,462	25,261,750
Deferred amounts for:						
Unamortized premiums	183,719,225	-	(16,248,084)	-	167,471,141	15,727,022
Unamortized discounts	(7,596,752)	-	1,135,690	-	(6,461,062)	(897,517)
Total Bonds and Loans, Net	2,439,892,074	43,685,917	(81,730,450)	(2,518,000)	2,399,329,541	40,091,255
Other Debt						
Raw water rights obligation	98,095,302	-	(2,734,246)	-	95,361,056	2,845,282
BC Note obligation	16,736,535	-	(194,242)	-	16,542,293	203,954
Total Water Fund Debt	\$2,554,723,911	\$ 43,685,917	\$ (84,658,938)	\$(2,518,000)	\$2,511,232,890	\$43,140,491

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

	Beginning Balance	Increase	Decrease	Debt Forgiveness	Ending Balance	Due Within One Year
Sewage Disposal Fund						
Bonds and Loans						
Revenue bonds	\$ 2,515,455,000	\$ -	(75,710,000)	\$ -	\$ 2,439,745,000	\$ 35,665,000
Capital appreciation bonds	5,675,000	-	(5,675,000)	-	-	-
Notes from direct borrowings and direct placements-State revolving loan	<u>416,767,850</u>	<u>10,503,366</u>	<u>(46,815,000)</u>	<u>(808,000)</u>	<u>379,648,216</u>	<u>47,936,430</u>
Total Bonds and Loans	2,937,897,850	10,503,366	(128,200,000)	(808,000)	2,819,393,216	83,601,430
Discount on capital appreciation bonds	(170,931)	-	170,931	-	-	-
Deferred amounts for:						
Unamortized premiums	130,678,706	-	(12,720,139)	-	117,958,567	12,504,194
Unamortized discounts	<u>(68,491,307)</u>	<u>-</u>	<u>9,174,925</u>	<u>-</u>	<u>(59,316,382)</u>	<u>(8,793,079)</u>
Total Bonds and Loans, Net	2,999,914,318	10,503,366	(131,574,283)	(808,000)	2,878,035,401	87,312,545
Other Debt						
BC Note obligation	<u>37,645,780</u>	<u>-</u>	<u>(436,911)</u>	<u>-</u>	<u>37,208,869</u>	<u>458,756</u>
Total Sewage Disposal Fund Debt	<u>3,037,560,098</u>	<u>10,503,366</u>	<u>(132,011,194)</u>	<u>(808,000)</u>	<u>2,915,244,270</u>	<u>87,771,301</u>
Total Business-type Activities	<u>\$ 5,592,284,009</u>	<u>\$ 54,189,283</u>	<u>\$ (216,670,132)</u>	<u>\$ (3,326,000)</u>	<u>\$ 5,426,477,160</u>	<u>\$ 130,911,792</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

As of June 30, 2022, aggregate debt service requirements of the Authority's bonds and loans (fixed and variable-rate) were as follows. These amounts assume that current interest rates on variable-rate bonds will remain the same for their respective terms. As these rates vary, interest payments on variable-rate bonds will vary.

Year Ended June 30	Bonds		Notes from Direct Borrowings and Direct Placements		Total
	Principal	Interest	Principal	Interest	
Water Fund					
2023*	\$ 20,165,000	\$ 83,194,422	\$ 5,096,750	\$ 2,217,281	\$ 110,673,453
2024	76,930,000	96,484,833	5,565,000	2,131,857	181,111,690
2025	82,590,000	92,746,039	11,008,950	1,965,336	188,310,325
2026	86,340,000	88,879,460	9,594,223	1,760,803	186,574,486
2027	90,325,000	84,650,908	6,927,820	1,594,236	183,497,964
2028-2032	527,010,000	351,936,257	23,017,928	6,430,861	908,395,046
2033-2037	632,475,000	209,310,447	22,368,516	4,134,090	868,288,053
2038-2042	322,955,000	102,464,151	17,021,934	1,906,071	444,347,156
2043-2047	273,890,000	39,623,500	7,793,699	606,294	321,913,493
2048-2050	16,210,000	1,242,000	1,034,642	25,904	18,512,546
Total Water Fund	2,128,890,000	1,150,532,017	109,429,462	22,772,733	3,411,624,212
Sewage Disposal Fund					
2023*	35,665,000	81,137,536	47,936,430	8,210,746	172,949,712
2024	83,475,000	96,974,031	40,360,000	7,188,734	227,997,765
2025	98,650,000	92,838,983	41,265,870	6,271,040	239,025,893
2026	101,895,000	88,197,970	27,373,152	5,471,828	222,937,950
2027	111,945,000	83,397,094	24,805,000	4,917,078	225,064,172
2028 - 2032	672,355,000	338,564,893	108,248,511	16,814,924	1,135,983,328
2033 - 2037	831,540,000	182,552,944	71,643,260	6,493,521	1,092,229,725
2038 - 2042	399,565,000	44,946,983	16,965,993	731,375	462,209,351
2043 - 2047	94,650,000	9,172,617	1,050,000	10,500	104,883,117
2048 - 2049	10,005,000	506,375	-	-	10,511,375
Total Sewage Disposal Fund	2,439,745,000	1,018,289,426	379,648,216	56,109,746	3,893,792,388
Total Business-type Activities	\$ 4,568,635,000	\$ 2,168,821,443	\$ 489,077,678	\$ 78,882,479	\$ 7,305,416,600

* For bonds issued through the Michigan Finance Authority (MFA) in 2014 and 2015, the Authority is required to make payment on these obligations to the MFA depository account five business days prior to the actual due date of the bond principal and interest payments. Therefore, the payments for principal and interest due on July 1, 2022 are not included in the debt service requirements amounts above as they were paid on June 24, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

REVENUE BONDS

Net revenues of the Authority are pledged to repayment of bonds; following are the revenue bonds payable at June 30, 2022:

Issue	Bond Date	Original Issue Amount	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance	Callable at Par
Water Fund						
Series 2003A	1/30/03	\$ 234,805,000	5.00%	7/01/34	\$ 100,000	\$ 100,000
Series 2003B	1/30/03	172,945,000	5.00%	7/01/34	100,000	100,000
Series 2005B	5/14/08	194,900,000	5.25%	7/01/35	100,000	100,000
Series 2006A	8/16/06	280,000,000	5.00%	7/01/34	100,000	100,000
Series 2006B	4/01/09	120,000,000	6.25%	7/01/36	100,000	100,000
Series 2014D-1	9/04/14	206,540,000	5.00%	7/01/23-37	71,225,000	44,190,000
Series 2014D-2	9/04/14	188,455,000	5.00%	7/01/23-28	188,455,000	136,925,000
Series 2014D-4	9/04/14	307,645,000	5.00%	7/01/29-34	209,360,000	209,360,000
Series 2014D-6	9/04/14	65,425,000	5.00%	7/01/23-36	49,490,000	43,690,000
Series 2015D-1	12/15/15	89,430,000	5.00%	7/01/27-35	69,275,000	69,275,000
Series 2015D-2	12/15/15	37,235,000	5.00%	7/01/34	37,235,000	37,235,000
Series 2016A	10/27/16	88,000,000	5.00%	7/01/22-46	87,995,000	87,970,000
Series 2016B	10/27/16	163,830,000	5.00%	7/01/22-46	163,825,000	163,800,000
Series 2016C	10/27/16	443,930,000	5.00-5.25%	7/01/22-35	443,930,000	367,685,000
Series 2016D	10/27/16	222,045,000	4.00-5.00%	7/01/24-36	222,045,000	217,380,000
Series 2018A	10/3/18	155,595,000	5.00%	7/01/22-29	122,460,000	-
Series 2020A	5/12/20	42,445,000	5.00%	7/1/24-49	42,445,000	35,685,000
Series 2020B	5/12/20	43,135,000	5.00%	7/1/24-49	43,135,000	36,265,000
Series 2020C**	5/12/20	377,515,000	1.684-3.473%	7/1/22-41	377,515,000	317,530,000
Total Water Fund Revenue Bonds Payable					<u>\$ 2,128,890,000</u>	

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

Issue	Bond Date	Original Issue Amount	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance	Callable at Par
Sewage Disposal Fund						
Series 2001B	9/15/01	110,550,000	5.50%	7/01/23-29	\$ 78,895,000	\$ -
Series 2003B	6/17/09	150,000,000	7.50%	7/01/33	100,000	100,000
Series 2004A	2/12/04	101,435,000	5.25%	7/01/22-24	12,640,000	-
Series 2005A	3/17/05	273,355,000	4.50%	7/01/35	100,000	100,000
Series 2005B	3/17/05	40,215,000	5.50%	7/01/22	6,695,000	-
Series 2005C	4/05/05	63,160,000	5.00%	7/01/25	100,000	100,000
Series 2006B	8/10/06	250,000,000	5.00%	7/01/36	100,000	100,000
Series 2006D	12/14/06	370,000,000	Variable(*)	7/01/26-32	239,475,000	239,475,000
Series 2012A	6/26/12	659,780,000	5.00%	7/01/21-23	32,105,000	17,985,000
Series 2014C-3	9/04/14	446,170,000	5.00%	7/01/23-33	381,800,000	303,570,000
Series 2014C-6	9/04/14	143,880,000	5.00%	7/01/32-33	88,900,000	88,900,000
Series 2014C-7	9/04/14	76,715,000	5.00%	7/01/23-36	50,000,000	44,065,000
Series 2015C	12/15/15	197,660,000	5.00%	7/01/26-35	197,160,000	197,160,000
Series 2016B	10/27/16	126,105,000	5.00%	7/01/24-34	126,105,000	111,660,000
Series 2016C	10/27/16	295,190,000	4.00-5.00%	7/01/27-36	295,190,000	295,190,000
Series 2018A	10/03/18	81,595,000	5.00%	7/1/22-48	78,810,000	67,040,000
Series 2018B	10/03/18	131,690,000	5.00%	7/1/24-49	131,690,000	-
Series 2018C**	10/03/18	44,180,000	3.4-3.613%	7/1/22-24	37,350,000	-
Series 2020A**	6/16/20	594,930,000	1.503-3.506%	7/01/23-44	594,930,000	108,540,000
Series 2020B**	6/16/20	92,525,000	1.492-3.606%	7/1/22-44	<u>87,600,000</u>	15,325,000
Total Sewage Disposal Fund Revenue Bonds Payable					<u>2,439,745,000</u>	
Total Business-type Activities					<u>\$ 4,568,635,000</u>	

* Interest rates are reset quarterly based upon a formula specified in the bond using the three-month LIBOR rate.

** Taxable bond

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

Refunded Debt – Sewage Disposal Fund

In prior years, the Authority's Sewage Disposal Fund defeased certain bonds by placing the proceeds of new bonds in irrevocable trusts for the purpose of generating resources for all future debt service payments on the refunded debt. As a result, the refunded bonds are considered to be defeased and the trust fund assets and related liabilities have been removed from the statement of net position. At June 30, 2022, the balance of the bonds considered to be defeased is \$570,460,000. These defeased bonds include the following revenue bonds: \$419,810,000 Series 2012A, \$123,200,000 Series 2014C-1 and \$27,450,000 2014C-2. As a result, the refunded bonds are considered to be defeased and the trust fund assets and related liabilities have been removed from the statement of net position. These bonds were called July 1, 2022.

Arbitrage

Certain bonds are subject to arbitrage rebate requirements in accordance with regulations issued by the U.S. Treasury Department. The requirements generally stipulate that earnings from the investment of the tax-exempt bond proceeds that exceeds related interest costs on the bonds must be remitted to the Federal government on every fifth anniversary of each bond issue. The Authority did not have an arbitrage rebate liability as of June 30, 2022.

STATE REVOLVING FUND LOANS

The Authority participates in direct borrowings through the State of Michigan Drinking Water State Revolving Fund (DWSRF) to finance qualified water supply system projects and the Clean Water State Revolving Fund (CWSRF) to finance qualified sewage disposal system projects. As GLWA draws additional amounts, the outstanding principal amounts of such loans will correspondingly increase. All loans are callable under terms specified in the loan agreements.

The Authority received direct borrowing loans from the State of Michigan Revolving Loan Fund during the year ended June 30, 2022 for the Water Fund totaling \$43,685,917 of which \$2,518,000 has been forgiven, and the Sewage Disposal Fund received \$10,503,366 of which \$808,000 has been forgiven. The water loans forgiven and \$18,043,834 of the proceeds of the Water Fund loans were a pass through to DWSD, the subrecipient of the loans. The remaining proceeds of the Water Fund loans were used to pay costs of acquiring, constructing extensions, and making certain repairs and improvements to the regional water system. The sewer loans forgiven and \$1,288,152 of the Sewage Disposal Fund loans were a pass through to DWSD the subrecipient of the loans. The remaining proceeds of the Sewage Disposal Fund loans were used to pay costs of acquiring, constructing extensions, and making certain repairs and improvements to the regional sewage disposal system. At June 30, 2022, the Authority has not fully drawn the amounts of authorized State of Michigan revolving fund bond issues. The amount of undrawn is \$142,864,641 for the Water Fund and \$64,624,532 for the Sewage Disposal Fund. Of these undrawn amounts, \$25,081,003 for the Water Fund and \$9,633,098 of the Sewage Disposal Fund, are for pass through loans to DWSD.

Net revenues of the Authority are pledged for repayment of the loans.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

The following is a schedule of the state revolving loans payable at June 30, 2022:

Issue	Bond Date	Amount Issued	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance
Water Fund					
Series 2005 SRF-1	9/22/05	\$ 13,805,164	2.125%	10/01/22-26	\$ 3,875,164
Series 2005 SRF-2	9/22/05	8,891,730	2.125%	10/01/22-26	2,446,730
Series 2006 SRF-1	9/21/06	5,180,926	2.125%	10/01/22-26	1,445,926
Series 2008 SRF-1	9/29/08	2,590,941	2.50%	10/01/22-28	750,941
Series 2016 SRF-1	9/16/16	8,273,168	2.50%	4/01/23-48	7,463,168
Series 2016 SRF-2	9/16/16	3,393,543	2.50%	4/01/23-48	3,053,543
Series 2017 SRF-1	6/23/17	5,807,931	2.50%	10/1/22-48	5,347,931
Series 2019 SRF-1	6/7/19	8,330,000	2.00%	10/1/22-40	7,985,000
Series 2019 SRF-2	8/30/19	29,950,000	2.00%	4/1/23-41	27,115,556
Series 2019 SRF-3	8/30/19	11,788,056	2.00%	10/1/22-43	7,742,932
Series 2020 SRF-1	7/31/20	20,538,700	2.00%	4/1/23-47	15,869,467
Series 2020 SRF-2	8/28/20	9,000,000	2.00%	10/1/23-32	3,623,516
Series 2020 SRF-3	8/28/20	8,960,000	2.00%	4/1/23-38	6,753,599
Series 2020 SRF-4	9/30/20	12,153,050	2.00%	4/1/23-38	5,325,829
Series 2021 SRF-1	6/21/21	11,940,000	1.875%	10/1/24-27	1,774,468
Series 2021 SRF-2	8/30/21	104,725,000	1.875%	10/1/24-25	7,154,223
Series 2021 SRF-3	8/30/21	11,528,950	1.875%	10/1/24-27	1,701,469
Total Water Fund State Revolving Loans Payable					<u>109,429,462</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

Issue	Bond Date	Amount Issued	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance
Sewage Disposal Fund					
Series 1999 SRF-2	9/30/99	\$ 46,000,000	2.50%	10/01/22	\$ 2,885,000
Series 2000 SRF-1	3/30/00	44,197,995	2.50%	10/01/22	2,667,995
Series 2000 SRF-2	9/28/00	64,401,066	2.50%	10/01/22	4,016,066
Series 2001 SRF-1	6/28/01	82,200,000	2.50%	10/01/22-24	15,095,000
Series 2001-SRF-2	12/20/01	59,850,000	2.50%	10/01/22-24	10,990,000
Series 2002 SRF-1	6/27/02	18,985,000	2.50%	4/01/23	1,190,000
Series 2002 SRF-2	6/27/02	1,545,369	2.50%	4/01/23	95,369
Series 2002 SRF-3	12/19/02	31,549,466	2.50%	10/01/22-24	5,329,466
Series 2003 SRF-1	6/26/03	48,520,000	2.50%	10/01/22-25	11,735,000
Series 2003 SRF-2	9/25/03	25,055,370	2.50%	4/01/23-25	4,565,370
Series 2004 SRF-1	6/24/04	2,910,000	2.125%	10/01/22-24	520,000
Series 2004 SRF-2	6/24/04	18,353,459	2.125%	4/01/23-25	3,263,459
Series 2004 SRF-3	6/24/04	12,722,575	2.125%	4/01/23-25	2,252,575
Series 2007 SRF-1	9/20/07	167,540,598	1.625%	10/01/22-29	73,570,598
Series 2009 SRF-1	4/17/09	13,970,062	2.50%	4/01/23-30	6,215,062
Series 2010 SRF-1	1/22/10	4,214,763	2.50%	4/01/23-31	2,120,763
Series 2012 SRF-1	8/30/12	14,950,000	2.50%	10/01/22-34	10,535,000
Series 2015A SRF	3/20/15	79,500,000	2.50%	4/01/23-36	59,625,000
Series 2015B SRF	3/20/15	27,175,304	2.50%	10/01/22-35	20,005,304
Series 2015D SRF	12/11/15	15,321,478	2.50%	10/01/22-35	11,061,478
Series 2016 SAW-1	5/25/16	10,000,000	2.50%	10/01/22-38	8,800,000
Series 2016 SRF-1	9/16/16	15,463,628	2.50%	4/01/23-38	12,733,628
Series 2016 SRF-2	9/16/16	48,315,683	2.50%	4/01/23-39	42,145,683
Series 2017 SRF-1	6/23/17	33,566,682	2.50%	10/01/22-38	29,746,682
Series 2018 SRF-2	9/14/18	17,510,000	2.00%	10/01/23-42	17,510,000
Series 2020 SRF-1	3/27/20	28,350,000	2.00%	10/1/23-35	16,456,478
Series 2020 SRF-2	9/30/20	3,232,000	2.00%	10/1/22-25	480,152
Series 2021 SRF-1	3/26/21	12,940,000	1.875%	10/1/23-30	4,037,088
Series 2021 SRF-2*	9/24/21	6,881,250	1.875%	-	-
Series 2022 SRF-1*	6/6/22	34,195,000	1.875%	-	-
Total Sewage Disposal Fund State Revolving Loans Payable					<u>379,648,216</u>
Total Business-type Activities					<u>\$ 489,077,678</u>

* Loan has been authorized, no draws on loan as of June 30, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

PLEDGES OF FUTURE REVENUE

The Authority has pledged assets to secure the repayment of the revenue bonds and State of Michigan revolving fund loans. The Water System bonds and loans are paid solely from the net revenues of the Water System and the Sewer System bonds and loans are paid solely from the net revenues of the Sewer System. Net revenues are defined in the Great Lakes Water Authority Water and Sewer Master Bond Ordinances as all revenues except those transferred to the Operation and Maintenance funds. These revenues are further defined to include the revenues from the Retail Customers who are serviced under the Water and Sewer Services Agreement with the City of Detroit which are reported in the financial statements of the City of Detroit Water and Sewerage Department. The pledged revenues calculation for the fiscal year ending June 30, 2022 includes revenues reported by the Great Lakes Water Authority and the City of Detroit Water and Sewerage Department as this revenue is pledged for payment of the bonds and loans of the Great Lakes Water Authority.

The general purpose of the Water System debt is to provide funding for various water treatment and transmission capital improvements, refund certain water revenue bonds, pay termination amounts for interest rate swap agreements and fund reserve requirements. The general purpose of the Sewer System bonds is to provide funding for various wastewater treatment and collection activities, capital improvements, refund certain sewage disposal revenue bonds, pay termination amounts for interest rate swap agreements and fund reserve requirements. The term of pledge commitment for the water bonds is through fiscal year 2050 and the sewage disposal bonds is through 2049.

The table below has the pledged revenue coverage as of June 30, 2022:

	Water Fund	Sewage Disposal Fund
Remaining principal and interest requirement	\$ 3,411,624,212	\$ 3,893,792,388
Principal and interest funding requirement for the year ending June 30, 2022 (calculated on a debt set aside basis consistent with rate covenant basis for rate determination)	\$ 176,589,315	\$ 235,847,946
Pledged revenue for the year ending June 30, 2022	\$ 248,350,508	\$ 344,749,187
Pledged revenue collected as a percentage of funding requirement	141%	146%

At the of the issuance of the GLWA financial report, DWSD's audited financial report had not been released. The local system amounts used for the calculation above reflect DWSD's management representation of preliminary financial results for the year ended June 30, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

DEBT RATINGS

In March 2020, Standard & Poor's Global Ratings Services affirmed the ratings on the water system senior lien debt of AA- and the water system second lien debt of A+ and assigned a stable outlook. It also upgraded the ratings on the sewage disposal system senior lien debt by one notch to AA- and the sewage disposal system second lien debt by one notch to A+. Both were assigned a stable outlook. Moody's Investor Services upgraded the ratings on the water and sewage disposal system senior lien debt by one notch to A1 and second lien debt by one notch to A2. The ratings outlook for both remained stable. Fitch upgraded the ratings on the water system and sewage disposal system senior lien debt by one notch to A+ and second lien debt by one notch to an A. Both with a stable outlook.

In November 2018, S&P Global Ratings assigned an A+ rating to the Authority's junior lien water system SRF bonds and in March 2020 the junior lien sewage disposal system SRF bonds were upgraded to A+ from an A rating.

See Note 21 for rating agency upgrades received in August 2022.

RAW WATER RIGHTS OBLIGATION

An obligation has been recorded related to the license of the raw water rights that were part of the 30-year service contract with the City of Flint. This obligation represents the future credits to the City of Flint's water bills as the City of Flint satisfies its monthly bond payment obligations to KWA. See related footnote for the raw water rights intangible asset (Note 10).

The future credits to be issued are detailed below:

	Year Ended June 30	Principal	Interest	Total
Water Fund				
	2023	\$ 2,845,282	\$ 3,806,495	\$ 6,651,777
	2024	2,963,619	3,689,208	6,652,827
	2025	3,085,994	3,567,008	6,653,002
	2026	3,212,750	3,439,803	6,652,553
	2027	3,345,194	3,307,356	6,652,550
	2028 - 2032	18,909,553	14,351,041	33,260,594
	2033 – 2037	23,142,653	10,118,496	33,261,149
	2038 - 2042	27,813,547	4,943,999	32,757,546
	2043 - 2046	10,042,464	462,187	10,504,651
Total Water Fund		\$ 95,361,056	\$ 47,685,593	\$ 143,046,649

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

BC NOTE OBLIGATION

Under the terms of the lease agreements with the City, the Authority is required to pay a portion of the City's Financial Recovery Bonds, Series 2014-B and 2014-C allocated to the regional water and sewage disposal systems. The Financial Recovery Bonds, Series 2014-B are federally taxable. The Series 2014-B bonds have two components: B(1) which has a 4.0 percent per annum interest rate and B(2) which has a variable interest rate until the maturity date of April 1, 2044. The bonds were delivered to classes of creditors in satisfaction of: (1) Class 12 OPEB claims the bonds were distributed to the new Voluntary Employee Beneficiary Associations (VEBA) for the general retirees and police and fire retirees; (2) Class 9 Pension Obligation Certificate (POC) claims; and (3) other unsecured bankruptcy claims. GLWA has a contractual obligation to pay a portion of the bonds based on an agreed-upon allocation percentage.

The Financial Recovery Bonds, Series 2014-C were issued with interest at 5.0 percent per annum. The 2014-C bonds were issued as part of the Syncora Settlement and FGIC/POC Settlement in the bankruptcy plan. GLWA has a contractual obligation to pay a portion of the bonds based on an agreed-upon allocation percentage.

In 2018, the governing body of the City of Detroit authorized the use of general funds for the full redemption of the General Obligation Bonds, 2014 Series C, including the amount allocated to the Authority. The 2014 Series C debt was fully redeemed on April 13, 2018. In addition, on December 13, 2018, the City issued Financial Recovery Refunding Bonds to redeem a portion of the 2014 Series B. The Authority will repay the City of Detroit General Fund under the terms of the original debt payment schedules for the 2014 Series B & C General Obligation Bonds, with principal and interest due on June 30 each year.

The following is a schedule of the BC Note obligation for the Financial Recovery Bonds at June 30, 2022:

Bond Issue (GLWA share)	Original Issue Amount (GLWA share)	Range of Interest Rates	Maturity Date	Outstanding Ending Balance
Water Fund				
Series 2014-B	\$ 26,540,080	4.00% and variable	4/1/44	\$ 15,556,025
Series 2014-C	3,829,794	5.00%	6/30/27	986,268
Total Water Fund				<u>16,542,293</u>
Sewage Disposal Fund				
Series 2014-B	44,233,463	4.00% and variable	4/1/44	34,990,439
Series 2014-C	6,382,990	5.00%	6/30/27	2,218,430
Total Sewage Disposal Fund				<u>37,208,869</u>
Total Business-type Activities				<u>\$ 53,751,162</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

BC NOTE OBLIGATION (cont.)

As of June 30, 2022, debt service requirements of the BC Note obligation for the Financial Recovery Bonds were as follows:

	Year Ended June 30	Principal	Interest	Total
Water Fund				
2023		\$ 203,954	\$ 671,554	\$ 875,508
2024		214,151	661,357	875,508
2025		1,002,661	650,649	1,653,310
2026		1,013,904	608,294	1,622,198
2027		885,004	565,378	1,450,382
2028 - 2032		3,889,008	2,333,405	6,222,413
2033 - 2037		3,889,008	1,975,616	5,864,624
2038 - 2042		3,889,008	1,166,702	5,055,710
2043 - 2044		1,555,595	140,004	1,695,599
Total Water Fund		16,542,293	8,772,959	25,315,252
Sewage Disposal Fund				
2023		458,756	1,510,539	1,969,295
2024		481,694	1,487,601	1,969,295
2025		2,255,301	1,463,516	3,718,817
2026		2,280,590	1,368,246	3,648,836
2027		1,990,655	1,271,712	3,262,367
2028 - 2032		8,747,608	5,248,564	13,996,172
2033 - 2037		8,747,608	4,443,785	13,191,393
2038 - 2042		8,747,608	2,624,282	11,371,890
2043 - 2044		3,499,049	314,914	3,813,963
Total Sewage Disposal Fund		37,208,869	19,733,159	56,942,028
Total Business-type Activities		\$ 53,751,162	\$ 28,506,118	\$ 82,257,280

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 13 – LONG-TERM DEBT (cont.)

INTEREST EXPENSE

The following represents the amounts recorded as interest expense for the year ended June 30, 2022:

	Water Fund	Sewage Disposal Fund	Total Business-type Activities
Revenue bonds and loans	\$ 103,645,614	\$ 108,637,990	\$ 212,283,604
Regional System Lease	17,026,165	20,809,759	37,835,924
Raw water rights obligation	3,733,333	-	3,733,333
BC Note obligation	681,267	1,532,384	2,213,651
Lease-right to use asset	-	129,992	129,992
	<hr/>	<hr/>	<hr/>
Total Interest Expense	<u>\$ 125,086,379</u>	<u>\$ 131,110,125</u>	<u>\$ 256,196,504</u>

NOTE 14 – REGIONAL SYSTEMS LEASES PAYABLE AND RELATED PREPAID LEASE

On January 1, 2016, the Authority effectuated lease agreements with the City for the regional water and sewage disposal systems for a term of 40 years, to be extended automatically to coincide with the final maturity of any bonds issued to finance improvements to the regional or local sewage disposal systems. The agreements collectively provide for an annual lease payment of \$50 million. Currently, \$22,500,000 is allocated to the Water Fund and \$27,500,000 is allocated to the Sewage Disposal Fund. The lease for the water system provides service to the wholesale customers and the retail water customers of the City up to the point of connection to the local water system facilities of the City. The lease for the sewage disposal system provides service to the wholesale customers and the retail sewage disposal customers of the City up to the point of connection to the local sewage disposal system facilities of the City. In addition, both leases provide that certain other assets including cash and investments held by DWSD as of December 31, 2015 be transferred to GLWA, all revenues of the regional and local water and sewage disposal systems are assigned to GLWA, and that GLWA assumes all DWSD bonded debt and certain other liabilities. The long-term leases are recorded as the present value of all future debt payments.

The regional system leases were recorded under GASB 69 to record the acquisition of the operations of the City of Detroit water and sewage disposal systems. The liability for the leases is allocated in the computation of net position based upon the components of net position acquired. Under the definitions of the regional system leases all improvements, additions and replacements to the original facilities acquired are considered to be leased facilities.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 14 – REGIONAL SYSTEMS LEASES PAYABLE AND RELATED PREPAID LEASE (cont.)

Amounts reported as a liability at year-end represent the net present value of all future lease payments. Changes in the Regional Systems leases payable for the year ended June 30, 2022 were as follows:

	Beginning Balance	Increase	Decrease	Ending Balance	Amount due Within One Year*
Water Fund	\$ 411,237,284	\$ -	\$ (5,454,877)	\$ 405,782,407	\$ 5,686,745
Sewage Disposal Fund	502,623,348	-	(6,667,073)	495,956,275	6,950,466
Total Business-type Activities	\$ 913,860,632	\$ -	\$ (12,121,950)	\$ 901,738,682	\$ 12,637,211

* The current portion of the Regional Systems leases payable represents the 12 monthly payments required from July 1, 2022 through June 30, 2023. Future revenues are intended to cover these payments.

As of June 30, 2022, aggregate requirements of the Regional Systems leases were as follows:

	Year Ended June 30	Principal	Interest	Total
Water Fund				
	2023	\$ 5,686,745	\$ 16,813,255	\$ 22,500,000
	2024	5,928,467	16,571,533	22,500,000
	2025	6,180,464	16,319,536	22,500,000
	2026	6,443,173	16,056,827	22,500,000
	2027	6,717,048	15,782,952	22,500,000
	2028 - 2032	38,118,590	74,381,410	112,500,000
	2033 - 2037	46,938,614	65,561,386	112,500,000
	2038 - 2042	57,799,449	54,700,551	112,500,000
	2043 - 2047	71,173,304	41,326,696	112,500,000
	2048 - 2052	87,641,652	24,858,348	112,500,000
	2053 - 2056	73,154,901	5,595,099	78,750,000
Total Water Fund		\$ 405,782,407	\$ 347,967,593	\$ 753,750,000

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 14 – REGIONAL SYSTEMS LEASES PAYABLE AND RELATED PREPAID LEASE (cont.)

	Year Ended June 30	Principal	Interest	Total
Sewage Disposal Fund				
2023	\$	6,950,466	\$ 20,549,534	\$ 27,500,000
2024		7,245,904	20,254,096	27,500,000
2025		7,553,901	19,946,099	27,500,000
2026		7,874,989	19,625,011	27,500,000
2027		8,209,726	19,290,274	27,500,000
2028 - 2032		46,589,388	90,910,612	137,500,000
2033 - 2037		57,369,417	80,130,583	137,500,000
2038 - 2042		70,643,770	66,856,230	137,500,000
2043 - 2047		86,989,594	50,510,406	137,500,000
2048 - 2052		107,117,575	30,382,425	137,500,000
2053 - 2056		89,411,545	6,838,455	96,250,000
Total Sewage Disposal Fund		495,956,275	425,293,725	921,250,000
Total Business-type Activities		\$ 901,738,682	\$ 773,261,318	\$ 1,675,000,000

As part of the 2018 MOU, the MBO requirement for six months of lease payments made to DWSD on January 1, 2016 will be treated as a prepaid lease payment. The initial term of the regional system leases began on the effective date and ends on December 31, 2055. GLWA's last monthly payment shall be June 1, 2055 and GLWA's \$25 million lease pre-payment on January 1, 2016 shall be applied to the period of July 1, 2055 through December 31, 2055. Of the \$25 million recorded as a prepaid on the statement of net position, \$11,250,000 is recorded in the Water Fund and \$13,750,000 is in the Sewage Disposal Fund.

NOTE 15 – OTHER LIABILITIES

Changes in other liabilities for the year ended June 30, 2022 were as follows:

	Beginning Balance	Increase	Decrease	Ending Balance	Due Within One Year
Water Fund					
Compensated absences	\$ 4,781,806	\$ 3,519,343	\$ (3,503,387)	\$ 4,797,762	\$ 2,739,783
Workers' compensation	330,817	717,963	(835,480)	213,300	138,300
Claims and judgements	150,000	425,000	(75,000)	500,000	500,000
Cash held for the benefit of DWSD budget stabilization	2,000,000	-	-	2,000,000	-
Total Water Fund	7,262,623	4,662,306	(4,413,867)	7,511,062	3,378,083

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 15 – OTHER LIABILITIES (cont.)

	Beginning Balance	Increase	Decrease	Ending Balance	Due Within One Year
Sewage Disposal Fund					
Lease payable – right to use asset	\$ 4,447,297	\$ -	\$ (189,119)	\$ 4,258,178	\$ 366,784
Compensated absences	847,122	1,592,356	(1,622,503)	816,975	719,079
Claim and judgements	9,325,000	525,000	-	9,850,000	2,350,000
Cash held for the benefit of DWSD budget stabilization	5,500,000	-	-	5,500,000	-
Total Sewage Disposal Fund	20,119,419	2,117,356	(1,811,622)	20,425,153	3,435,863
Total Business-type Activities	\$ 27,382,042	\$ 6,779,662	\$ (6,225,489)	\$ 27,936,215	\$ 6,813,946

LEASE PAYABLE – RIGHT TO USE ASSET

The Authority entered into a lease agreement for a warehouse to store inventory for operational needs which began on April 1, 2021. The lease was recorded under GASB 87 using a discount rate of 3%. The lease term is for 5 years and 4 months with one five-year renewal option. The Authority has included the renewal period when recording the lease. An estimate of a 2.5% CPI at the time of renewal was used in calculating the payments for the renewal period.

The future lease payments are detailed below:

	Year Ended June 30	Principal	Interest	Total
Sewage Disposal Fund				
2023		\$ 366,784	\$ 122,762	\$ 489,546
2024		390,070	111,443	501,513
2025		414,719	99,404	514,123
2026		436,958	86,622	523,580
2027		462,398	73,181	535,579
2028 - 2032		2,187,249	141,717	2,328,966
Total Sewage Disposal Fund		\$ 4,258,178	\$ 635,129	\$ 4,893,307

The right to use assets acquired through the lease are summarized below:

	Cost	Accumulated Amortization	Ending Book Value
Sewage Disposal Fund			
Warehouse	\$ 4,543,607	\$ (549,630)	\$ 3,993,977

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 15 – OTHER LIABILITIES (cont.)

COMPENSATED ABSENCES

The Authority has a paid time off (PTO) policy which has an annual accrual period ending September 30 each year. Employees are allowed to carry over a maximum bank of 80 hours to the next accrual period. Balances greater than 80 hours up to a maximum of 160 hours are converted to the retiree health saving program at 50% of the value of the PTO time. Hours in excess of 160 hours are forfeited if unused by September 30 of each accrual period. Due to Covid, an additional Reserve PTO account was created in September 2020 to allow team members to set aside an additional 80 hours of their PTO balance to be used through September 30, 2022. In August 2022, a change was made allowing employees an option to elect a payout of all or a partial amount of this Reserve PTO balance by September 30, 2022. Any amounts not paid out will remain in the Reserve PTO account until September 30, 2023 at which point any unused remaining hours will expire. The accrued compensated absences on June 30, 2022 for PTO accruals are \$2,754,143 for the Water Fund of which \$2,472,131 is current and \$816,975 for the Sewage Disposal Fund of which \$719,079 is current.

The Authority also has an accrued compensated absence liability assumed on January 1, 2016 relating to the accumulated unpaid vacation and sick leave balances for those employees who retired from the City or resigned from the City and accepted employment with the Authority on January 1, 2016. The June 30, 2021 balance of the accrued compensated absences for the liability assumed on January 1, 2016 is approximately \$2,043,619 of which \$267,652 is current. This liability is recorded in the Water Fund as the disbursements for payment will be processed from the Water Fund with reimbursement from the Sewage Disposal Fund. The accrued compensated absences include the employers' share of Social Security and Medicare taxes.

WORKERS' COMPENSATION

Workers' compensation is discussed in Note 16 Risk Management/Self-Insurance Programs.

CLAIMS AND JUDGEMENTS

The Authority has accrued in its financial statements for known asserted claims in which future settlements may be necessary. See Note 16 for discussion of risk of loss and insurance coverages.

CASH HELD FOR THE BENEFIT OF DWSD BUDGET STABILIZATION

Under the terms of the Master Bond Ordinance (MBO), the Authority retains cash on hand for the benefit of DWSD for budget stabilization funds to be used if DWSD has cash shortfalls. The 2018 Memorandum of Understanding set the balance to be retained in the Budget Stabilization Funds at \$7,500,000 for the life of the Regional System Leases. The Water Fund has retained \$2,000,000 and the Sewage Disposal Fund has \$5,500,000.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 16 – RISK MANAGEMENT/SELF-INSURANCE PROGRAMS

The Authority is exposed to various types of risk of loss including torts; theft of, damage to, or destruction of assets; errors or omissions; occupationally related illnesses or injuries to employees; natural disasters; and environmental occurrences. Also included are risk of loss associated with providing medical and prescription drug benefits to employees.

The Authority transfers risk via the purchase of a variety of insurance policies the most significant of which are shown in the table below (alphabetical by coverage):

Coverage	Coverage Limits	Maximum Retention Per Occurrence
Aviation	\$5,000,000	\$0
Fiduciary	\$15,000,000	\$10,000
General Liability	\$750,000,000	\$1,000,000
Pollution Legal Liability	\$25,000,000	\$500,000
Property Damage	\$750,000,000	\$1,000,000/\$3,500,000 for conveyor operations
Public Officials and Employment Practices	\$25,000,000	\$500,000
Underground Storage Tanks	\$2,000,000	\$5,000
Workers' Compensation	Statutory/ \$2,000,000	\$1,250,000

The Authority assumes all risk for motor vehicle physical damage.

Settled claims relating to commercial insurance have not exceeded the amount of insurance coverage since inception of the Authority.

A liability for claims is reported when it is probable that a loss has occurred, and the amount of the loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported. The Authority estimates the liability for medical and worker's compensation claims that have been incurred through the end of the fiscal year, including claims that have been reported as well as those that have not yet been reported, which includes estimates of both future payments of losses and related claim adjustments expense. The liability is based on individual claims and management's evaluation of experience with respect to the probable number and nature of claims.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 16 – RISK MANAGEMENT/SELF-INSURANCE PROGRAMS (cont.)

MEDICAL AND PRESCRIPTION DRUG INSURANCE

The Authority provides medical and prescription drug benefits to a significant number of employees through a self-insured health plan that is administered by third party administrators. The Authority has stop loss insurance for its self-insured medical and prescription drug plans with terms of \$300,000 per contract to reduce risk exposure. The self-insured program is administered by a third-party administrator who provides claims review and processing services as well as illustrated premium rates, which are anticipated, over time, to approximate the actual cost of benefits. Claim payments are reported net of rebates received for negotiated pricing for pharmacy benefits and stop loss reimbursements. The unpaid claims estimate is accrued within the Water Fund's accrued salaries, wages and benefits payable account on the Statement of Net Position. Although the liability is recorded in the Water Fund, the Sewage Disposal Fund's share of these costs are allocated through the Centralized and Administrative Services allocation.

	2022	2021
Unpaid claims, beginning of year	\$ 917,531	\$ 1,376,431
Incurred claims (including change in IBNR provisions)	10,510,451	11,113,461
Claims payments	(10,662,187)	(11,572,361)
Unpaid Claims, End of Year	\$ 765,795	\$ 917,531

WORKERS' COMPENSATION

The Authority maintains a self-insurance program for workers' compensation coverage up to statutory limits. The program is administered by a third-party who provides claim review and medical bill review services. Claim liabilities are calculated considering the effects of recent claim settlement trends including frequency and amount of payouts and other economic and social factors. The claim liabilities also include estimated costs for claim administration fees and outside legal and medical assistance costs. The liabilities for workers' compensation current year claims is based on estimates and payments are based on actuals. The unpaid claims estimate is accrued within the Water Fund's accrued workers' compensation account (See Note 15). Although the liability is recorded in the Water Fund, the Sewage Disposal Fund's share of these costs are allocated through the Centralized and Administrative Services allocation.

Changes in the balances of claims liabilities during the past two years are as follows:

	2022	2021
Unpaid claims, beginning of year	\$ 330,817	\$ 251,834
Incurred claims (including change in IBNR provisions)	717,963	337,010
Claims payments	(835,480)	(258,027)
Unpaid Claims, End of Year	\$ 213,300	\$ 330,817

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 17 – DEFINED CONTRIBUTION PENSION PLANS

DEFINED CONTRIBUTION PLANS

The Great Lakes Water Authority Defined Contribution Retirement Plan is a 401(a) governmental money purchase plan administered by ICMA Retirement Corporation (the “Administrator”) to provide benefits at retirement to all full-time employees of the Authority. The Authority contributes 6.0% of earnings to the plan. The Authority will make an additional contribution to the 401(a) plan to match employee contributions under the Great Lakes Water Authority 457 Plan up to 3% of compensation. Employees are 100% vested after three years of service (cliff vesting). Employees who transferred to the Authority on or around January 1, 2016 from DWSD retain their years of service for vesting purposes. The Authority recognized expense of \$5,154,140, which is net of forfeitures of \$349,255, for the year ended June 30, 2022. The Authority has accrued approximately \$60,000 of expense on the accrued payroll at June 30, 2022. At June 30, 2022, there were 1,175 plan members.

The Great Lakes Water Authority Defined Contribution Plan Make-Up Benefit is a 401(a) governmental money purchase plan administered by ICMA Retirement Corporation (the “Administrator”) to provide benefits at retirement to all employees who terminated employment with DWSD on or around January 1, 2016 and were not vested in the City of Detroit General Retirement System (GRS). Eligible employees were required to rollover to the Authority’s Section 457 Deferred Compensation Plan their refunded employee mandatory contribution from GRS. The amount of the make-up benefit was determined by an actuary based on the present value of the lost GRS benefit. It was accrued in fiscal year 2018 and funded during fiscal year 2019. No additional contributions are required for this plan. Employees are 100% vested after one year of service. At June 30, 2022 there are 28 participants in the plan.

The Authority has a Section 457 Deferred Compensation Plan which employees can make pre-tax or post-tax (Roth) contributions which are immediately 100% vested. At June 30, 2022 there were 1,196 plan members.

The Authority has a Roth IRA Plan which allows employees to make post-tax contributions which are immediately 100% vested. At June 30, 2022 there were 87 plan members.

RETIREMENT HEALTH SAVINGS PLAN

The Authority also provides a Retirement Health Savings Program for full-time employees. Employees are required to contribute \$10 per pay period and the Authority contributes \$80 per pay period. Employees are 100% vested after three years of service (cliff vesting). Employees who transferred to the Authority on or around January 1, 2016 from DWSD retain their years of service for vesting purposes. The Authority recognized an expense \$1,937,556, which is net of forfeitures of \$195,586, for the year ended June 30, 2022. The Authority has accrued approximately \$21,000 of expense on the accrued payroll at June 30, 2022. Employee contributions were \$256,640 for the year ended June 30, 2022. At June 30, 2022, there were 1,648 plan members.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 18 – NET PENSION LIABILITY (SPECIAL FUNDING SITUATION)

As part of the City of Detroit bankruptcy plan of adjustment (POA) and the Regional System Leases (Section 4.3), the City, the City of Detroit General Employees' Retirement system (GRS or the System) and the Authority entered into an agreement on December 1, 2015 that set forth the terms for contributions and reporting of the DWSD share of the GRS pension pool. GRS provides the information necessary for the Authority and DWSD to report the proportionate share separately in their respective statements. On January 24, 2017, DWSD and the Authority provided a supplement to the agreement whereby GRS is directed to allocate investments and pension liabilities of the DWSD division on the basis of 70.3% to the Authority and 29.7% to DWSD effective January 1, 2016. This agreement constitutes a special funding situation pursuant to the provisions of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. As such, while no Authority employees earn service credit in the legacy or hybrid plans, GLWA is legally responsible for making substantial contributions to a legacy pension plan of another entity and, accordingly, must record a net pension liability for its proportion and make the following disclosures regarding the plan as required by the standard. Information is available in a separate audit report for the "General Retirement System of the City of Detroit Financial Report with Supplemental Information" as well as "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" as of June 30, 2021 which are available by contacting the Authority's management.

Plan Administration. The Authority contributes to (and DWSD participates in) the System. The System is a single employer plan composed of a defined benefit plan component and a defined contribution annuity plan component. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. The plan is administered by its own board of trustees. Plan members include active employees, retirees and beneficiaries from various departments within the City. Benefit terms have been established by contractual agreements between the City and the employees' collective bargaining units; amendments are subject to the same process.

The System issues publicly available financial reports that include financial statements and the required supplementary information. The reports can be obtained from City of Detroit Retirement Systems, One Detroit Center, 500 Woodward Avenue, Suite 3000, Detroit, MI 48226 or obtained from the Systems' website (www.rscd.org). Detailed information about the pension plan's fiduciary net position is available in the separately issued financial reports.

Benefits Provided. Plan members may retire at age 55 or 60 with 5, 8, 10 or 25 years of credited service depending on which group the employee is in. Members are vested after completing 5, 8 or 10 years of credited service. Retirement options that provide for survivor benefits are available to members. The Plan also provides death and disability benefits. If a member leaves employment or dies before vesting, accumulated member contributions plus interest are refunded to the member or designated beneficiary.

Component II is the legacy plan, 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. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. 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, a part of Component II and established as a provision of the POA, was established for the sole purpose of paying the income stabilization benefits to eligible pensioners. Complete details regarding the Component II benefits and changes in those benefits by virtue of the POA are presented in the System financial statements.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 18 – NET PENSION LIABILITY (SPECIAL FUNDING SITUATION) (cont.)

Employer Contributions. Employer contributions, including the Authority's nonemployer contribution, for the respective components are as follows:

During the Plan's fiscal year 2021, employer contributions were not actuarially determined, but are determined by the provisions of the POA. Included within contributions for fiscal year 2021 are contributions from the Foundation for Detroit's Future in the amount of \$375,000 and approximately \$47.9 million of contributions from the City, City-related entities, and GLWA.

The POA obligates DWSD to pay \$2,500,000 per year towards administrative costs and annual plan contributions of \$42,900,000 per year in total for both water and sewer employees, until 2023. Pursuant to the Regional System leases, the Authority is obligated to pay its allocable share of such liability. The portion allocated to the Authority is \$31,916,200 for fiscal year 2022. This includes a contribution to the GRS pension plan of \$10,810,800 for the Water Fund and \$19,347,900 for the Sewage Disposal Fund for a total pension contribution of \$30,158,700. The contribution was made subsequent to the measurement date and has been recorded as a deferred outflow. It also includes an administrative fee of \$1,757,500, with \$630,000 paid by the Water Fund and \$1,127,500 paid by the Sewage Disposal Fund. Part of the administrative fee is considered a prepayment based on actual administrative expenses incurred by the plan as reported in the other supplemental information of the audited financial report of the GRS Plan.

Subsequent to 2023, DWSD and the Authority will be responsible for paying their allocable share of any additional amounts that are actuarially determined to be payable. An estimate of the 2024 contribution was included in the GRS annual actuarial valuation of Component II dated June 30, 2021. The total share for the DWSD is estimated to be \$0.6 million. GLWA's share of the 2024 estimated contribution will be between \$0.42 million with approximately \$0.15 million allocated to the Water Fund and approximately \$0.27 million allocated to the Sewage Disposal Fund.

The information below represents the Authority's share of pension liability activity. DWSD separately reports its pro rata share of activity in its separate financial statements.

DWSD Employee Contributions. Contribution requirements of plan members are established and may be amended by the GRS Board of Trustees in accordance with the City Charter, union contracts, and plan provisions. For the year ended June 30, 2021, there were no employee contributions into Component II, as the plan was frozen as of June 30, 2014; contributions into Component I began thereafter.

Actuarial Assumptions. The total pension liability was actuarial determined as of June 30, 2020, which used updated procedures to roll forward the estimated liability to June 30, 2021. The actuarial valuation used the following actuarial assumptions applied to all periods included in the measurement.

Inflation	Not applicable
Salary increases	No inflation assumption or salary increases due to plan freeze as of June 30, 2014
Investment rate of return	6.50%, net of investment expense and including inflation

Based on an experience study from 2008-2013 issued in February 2015; the mortality table assumption was based on RP-2014 Blue Collar Annuitant Table for males and females. The tables are projected to be fully generational, based on two-dimensional sex distinct mortality scale MP-2014.

The actuarial assumptions, other than mortality and the investment rate of return were based on the results of an actuarial experience study for the period from 2002-2007.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 18 – NET PENSION LIABILITY (SPECIAL FUNDING SITUATION) (cont.)

Investment Rate of Return. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates 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 arithmetic real rates of return as of June 30, 2021, for each major asset class included in the pension plan's target allocation, and those target allocations, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global equity	46.0%	5.80%
Global fixed income	33.0%	3.28%
Real estate	13.0%	5.94%
Diversifying strategies	8.0%	3.22%
	100.0%	

Single Discount Rate. A Single Discount Rate of 6.50%, net of investment expenses, was used to measure the total pension liability as of June 30, 2021. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.50% as directed by the System and approved by the System's Auditor. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions ceased as of June 30, 2014, and that employer contributions will be made at rates equal to those set by the final Plan of Adjustment through June 30, 2023 and contributions consistent with PERSIA and the intention to fully fund the System by 2053 as determined in the bankruptcy (POA). 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.

Net Pension Liability. As permitted by GASB Statement No. 68, the net pension liability was measured as of June 30, 2021, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date.

Changes in the Net Pension Liability. The components of the change in the Authority's share of the net pension liability are summarized as follows:

	Water	Sewage Disposal	Total
Total pension liability	\$ 183,593,989	\$ 328,574,957	\$ 512,168,946
Plan fiduciary net position	(160,214,509)	(286,733,110)	(446,947,619)
Authority's Net Pension Liability	\$ 23,379,480	\$ 41,841,847	\$ 65,221,327

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 18 – NET PENSION LIABILITY (SPECIAL FUNDING SITUATION) (cont.)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Water Fund			
Balances at June 30, 2021	\$ 182,181,063	\$ 130,452,884	\$ 51,728,179
Changes for the year:			
Interest	12,299,693	-	12,299,693
Difference between expected and actual experience	(3,299,415)	-	(3,299,415)
Changes in assumptions	8,341,534	-	8,341,534
Employer contributions	-	10,810,800	(10,810,800)
Net investment income	-	34,407,230	(34,407,230)
Benefit payments, including refunds of employee contributions	(15,928,886)	(15,928,886)	-
Other changes	-	472,481	(472,481)
Net changes	1,412,926	29,761,625	(28,348,699)
Balances at June 30, 2022	\$ 183,593,989	\$ 160,214,509	\$ 23,379,480
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Sewage Disposal Fund			
Balances at June 30, 2021	\$ 326,046,271	\$ 233,469,252	\$ 92,577,019
Changes for the year:			
Interest	22,012,546	-	22,012,546
Difference between expected and actual experience	(5,904,906)	-	(5,904,906)
Changes in assumptions	14,928,696	-	14,928,696
Employer contributions	-	19,347,900	(19,347,900)
Net investment income	-	61,578,019	(61,578,019)
Benefit payments, including refunds of employee contributions	(28,507,650)	(28,507,650)	-
Other changes	-	845,589	(845,589)
Net changes	2,528,686	53,263,858	(50,735,172)
Balances at June 30, 2022	\$ 328,574,957	\$ 286,733,110	\$ 41,841,847

Sensitivity of the Net Pension Liability to Changes in the Discount Rate. The following presents the net pension liability of the Authority, calculated using the discount rate of 6.50%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is 1% lower (5.50%) or 1% higher (7.50%) than the current rate:

	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Water Fund	\$ 29,783,783	\$ 23,379,480	\$ 17,911,167
Sewage Disposal Fund	53,303,517	41,841,847	32,055,303
Authority's Net Pension Liability	\$ 83,087,300	\$ 65,221,327	\$ 49,966,470

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 18 – NET PENSION LIABILITY (SPECIAL FUNDING SITUATION) (cont.)

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued plan financial statements.

Pension Expense and Deferred Outflows and Inflows of Resources Related to Pensions. For the year ended June 30, 2022, the Authority recognized pension expense of \$4,988,132 and \$8,927,171 for the Water and Sewage Disposal Funds, respectively. At June 30, 2022, the Authority reported deferred outflows and inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows (Inflows) of Resources
Water Fund			
Net difference between projected and actual earnings on pension plan investments	\$ -	\$ 11,224,189	\$ (11,224,189)
Employer contributions to the plan subsequent to the measurement date	10,810,800	-	10,810,800
Total Water Fund	10,810,800	11,224,189	(413,389)
Sewage Disposal Fund			
Net difference between projected and actual earnings on pension plan investments	-	20,087,733	(20,087,733)
Employer contributions to the plan subsequent to the measurement date	19,347,900	-	19,347,900
Total Sewage Disposal Fund	19,347,900	20,087,733	(739,833)
Total Business-type Activities	\$ 30,158,700	\$ 31,311,922	\$ (1,153,222)

The amount reported as deferred outflows of resources resulting from contributions subsequent to the measurement date will be recognized as a reduction in the net pension liability for the year ending June 30, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

Year Ended June 30	Water	Sewage Disposal	Total
2023	\$ (1,840,794)	\$ (3,294,438)	\$ (5,135,232)
2024	(1,479,001)	(2,646,942)	(4,125,943)
2025	(2,832,144)	(5,068,638)	(7,900,782)
2026	(5,072,250)	(9,077,715)	(14,149,965)
Total	\$ (11,224,189)	\$ (20,087,733)	\$ (31,311,922)

Payable to the Pension Plan. At June 30, 2022, the Authority did not have any outstanding contributions payable to the pension plan for the year then ended.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 19 – COMMITMENTS AND CONTINGENCIES

CAPITAL IMPROVEMENT PROGRAM

The Authority is engaged in a variety of projects that are part of its five-year capital improvement program (the Program). The total cost of this Program for the Water Fund is anticipated to be approximately \$965.6 million with an 80% spend rate assumption of \$772.5 million through fiscal year 2027. The total cost for the Sewage Disposal Fund is anticipated to be approximately \$761.8 million with a 75% spend rate assumption of \$571.3 million through fiscal year 2027. The Program is being financed from revenue bond and state revolving fund proceeds in addition to the Improvement and Extension Funds.

The total amount of construction contract commitments outstanding at June 30, 2022 was approximately \$332 million for the Water Fund and \$134 million for the Sewage Disposal Fund.

The current wastewater disposal service contract with the Oakland-Macomb Interceptor Drain Drainage District (OMIDD) provides for OMIDD to maintain, repair, and improve Interceptor PCI-5, the Northeast Sewer Pump Station and the North Interceptor East Arm, which are related to the capital assets in the Regional Sewage Disposal System Lease (See Note 14). The amount of capital improvements in progress related to the contract are estimated by OMIDD to be worth \$57.6 million for the Sewage Disposal Fund at June 30, 2022. At a future date, in accordance with the contract, OMIDD will offer and transfer the assets, following GLWA's acceptance, as the assets are placed in service.

SUBSCRIPTION-BASED INFORMATION TECHNOLOGY ARRANGEMENTS (SBITA)

The Authority has two SBITA's that are in the implementation phase. A summary of the commitments for each SBITA are detailed below:

NEXGEN is an enterprise asset management system subscription service. The contract is a \$1.7 million purchase for a duration of five years with one two-year renewal. The contract ends November 30, 2026 with a two-year renewal which would end November 30, 2028. The anticipated in-service date is expected during fiscal year 2024. There is a separate implementation contract for three years ending early in fiscal year 2025 for a not to exceed cost of \$4.6 million. The Authority's remaining commitment under this contract is \$4.3 million. Implementation costs incurred up to the date placed in service will be capitalized.

Workday is an enterprise resource planning system subscription service which is an integrated financial, HR, payroll and analytic system service. The contract is for eight years ending in fiscal year 2030. The cost for the SBITA for the eight-year period is \$5.1 million. The remaining commitment under this contract is \$4.8 million. The anticipated in-service date for HR and payroll is January 2024, and the financial system in July 2024. There is a separate implementation contract which terminates in 2029 for a not to exceed cost of \$4.6 million. The Authority's remaining commitment under this contract is \$4 million. Implementation costs incurred up to the date placed in service will be capitalized.

2021 RAIN EVENTS

During the Summer of 2021, GLWA's service area experienced several intense rain events. These rain events resulted in sewer backups, causing property damage. GLWA received over 23,000 property damage claims from these intense rain events. Most of the claims relate to rain events occurring on June 25-26, 2021 and July 16, 2021.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 19 – COMMITMENTS AND CONTINGENCIES (cont.)

The Board hired an independent investigative team to review the rain events. In June 2022, the Independent Investigative Team reviewing the rain events of June and July 2021 presented its final report to the Great Lakes Water Authority (GLWA) Board of Directors. The report concluded that heavy and historic rainfalls exceeded the design capacity of the wastewater system, making surface flooding and basement backups inevitable. For the June 25/26 rain event, the report also stated that even if every piece of piping and equipment in the regional system worked in an ideal manner, basement backups and surface flooding would still have occurred in GLWA's system, or any other collection system designed to today's standard. This standard reflects a collection system designed to handle 1.7 inches of rain in one hour (with no rain before/no rain after) or 3.31 inches in 24 hours. On June 25, more than six inches was experienced in only half that time, which is double the maximum design standard for 24 hours.

In July 2022, GLWA announced that it is denying all claims submitted to the Authority related to the historic rain events that took place in the summer of 2021. Official notification was mailed to the claimants. This decision was based on the findings of the independent investigation and that under Michigan's Governmental Liability for Negligence Act, a public entity such as GLWA can only be liable for a sewage disposal system event (a basement backup) if a defect in its sewage disposal system was the substantial proximate cause (50 percent or more of the cause) of the event and property damage or physical injury.

The Authority has submitted an initial insurance claim for repairs and maintenance costs incurred from the flood damage and has received a payment of \$1 million during the fiscal year. This payment was net of the \$1 million deductible on the policy. The Authority expects future additional costs for repairs and maintenance and debris removal from the interceptors as a result of the heavy rains. The amount is not able to be estimated at this time. Claims will be submitted to the insurance as these costs are incurred.

CONTINGENCIES

The Authority is subject to various government environmental laws and regulations. GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, established accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remedial activities such as site assessments and cleanups. The standard excludes pollution prevention or control obligations with respect to current operations, and future pollution remediation activities that are required upon retirement of an asset, such as landfill closure and post-closure care. The Authority determined that there were no estimated pollution remediation obligations to be recorded at June 30, 2022.

GASB Statement No. 83, *Certain Asset Retirement Obligations*, established accounting and financial reporting standards for legally enforceable liabilities related to the retirement of tangible capital asset(s) where the tangible capital asset is permanently removed from service. The retirement of a tangible capital asset can occur via sale, abandonment, recycling or disposal in some other manner and excludes the temporary idling of a tangible capital asset. An asset retirement obligation does not apply to obligations resulting from the disposal, or plan to dispose, of a tangible capital asset; obligation(s) associated with using a tangible capital asset for a different purpose; obligation(s) for pollution remediation; obligation(s) from regular maintenance or the cost to replace a component. The Authority determined there were no legally enforceable asset retirement obligations to be recorded at June 30, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 19 – COMMITMENTS AND CONTINGENCIES (cont.)

The Sewage Disposal Fund's operations are subject to regulation pursuant to the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987 (collectively, the Clean Water Act). Included in the regulatory framework established by the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) permit program, which requires operation of wastewater system facilities according to discharge limitations and other requirements as set forth in permits issued to each facility. The Environmental Protection Agency (EPA) has authorized the Michigan Department of Environmental Quality (MDEQ) to implement and enforce the federal NPDES permit program. The Sewage Disposal Fund operates pursuant to the NPDES Permit. The Authority's current NPDES permit was issued July 1, 2019 and expired on October 1, 2022. A new permit application was submitted in March 2022. The Authority will continue to operate under the old permit until the new permit is issued.

The Authority is a defendant in numerous alleged claims, lawsuits, billing disputes, and other stated and pending demands. The Authority's Legal Department has estimated a reserve of \$500,000 for the Water Fund and \$9,850,000 for the Sewage Disposal Fund, which are included in the accompanying financial statements, for the potential outcome of such claims or the amount of potential damages in the event of an unfavorable outcome for each of the above contingencies. The Authority's management believes that any differences in reserved amounts and final settlement, after consideration of claims covered by insurance, resulting from such litigation will not materially impact the Authority's financial position or results of operations.

The Authority holds various commercial insurance policies to cover other potential loss exposures.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2022

NOTE 20 – NET INVESTMENT IN CAPITAL ASSETS

The composition of net investment in capital assets as of June 30, 2022 was as follows:

	Water Fund	Sewage Disposal Fund	Total Business-type Activities
Capital Assets and Intangible Asset			
Capital assets not being depreciated	\$ 567,414,021	\$ 320,526,307	\$ 887,940,328
Capital assets being depreciated, net	1,293,659,589	2,138,777,595	3,432,437,184
Intangible asset – net	90,652,709	3,993,977	94,646,686
Total Capital Assets and Intangible Asset	1,951,726,319	2,463,297,879	4,415,024,198
Less: Related Debt			
Total bonds and loans, net (Note 13)	2,399,329,541	2,878,035,401	5,277,364,942
Less: Portion of bonds used for SWAP termination agreements	(168,094,391)	(222,813,324)	(390,907,715)
Less: Obligation receivable-local share of debt (Note 8)	(567,619,210)	(385,198,595)	(952,817,805)
Deferred charge on refunding	(41,997,055)	(110,341,248)	(152,338,303)
Deferred gain on refunding	48,216,421	40,566,648	88,783,069
Capital portion of regional system lease	295,693,640	344,342,442	640,036,082
Lease obligation-raw water rights (Note 13)	95,361,056	-	95,361,056
Lease obligation-right to use asset (Note 15)	-	4,258,178	4,258,178
Total Related Debt	2,060,890,002	2,548,849,502	4,609,739,504
Net Investment in Capital Assets	\$ (109,163,683)	\$ (85,551,623)	\$ (194,715,306)

The capital portion of the regional system lease payable is the percentage of the lease liability that has been determined to be allocated to the net investment in capital assets acquired. The lease is described in Note 14.

NOTE 21 – SUBSEQUENT EVENTS

WATER MAIN BREAK

On August 13, 2022, the Authority's System Control Center identified that there was a break in the system and notified the Lake Huron Water Treatment Facility Team (LH) to go find the physical location of the break. The LH Team found the break in a farm field on a 120-inch water transmission main about a mile from the plant. This main is the largest in the regional water transmission system – providing water to the northern most communities in our service area. The transmission main was repaired and returned to service during the weekend of October 1st, 2022. GLWA was able to increase production at the Northeast and Springwells Water Treatment plants and made changes to how water is routed in the system to restore water flow and pressure in the system. The City of Flint water was sourced under a back-up agreement with the Genesee County Drain Commission starting August 13, 2022. Normal operations with the City of Flint were restored on October 13, 2022. Repair costs are expected to be between \$2 million and \$3 million and will be paid for from unallocated reserves in the Water Fund.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2022

NOTE 21 – SUBSEQUENT EVENTS (cont.)

JUNIOR LIEN REVENUE BONDS

The Authority received an order of approval from EGLE in August 2022, for \$34.1 million for regional water system improvements. This order of approval is for the \$40 million SRF Junior Lien Water Supply System Revenue Bonds (Ordinance No. 2022-03) approved by the GLWA Board in June 2022.

The Authority received two orders of approvals from EGLE in August 2022, one for \$50.3 million and one for \$19 million, both for regional sewage disposal system improvements. These order of approvals are for the \$66 million SRF Junior Lien Sewage Disposal System Revenue Bonds (Ordinance No. 2022-04) approved by the GLWA Board in June 2022 and \$21 million SRF Junior Lien Sewage Disposal System Revenue Bonds (Ordinance No. 2022-05) approved by the GLWA Board in July 2022.

The above SRF loans bear a fixed interest rate of 1.875% for a term of twenty (20) years.

RATING AGENCY UPGRADES

In August 2022, S&P Global Ratings affirmed the Authority's senior lien water and sewage disposal systems rating of AA- and its second lien water system rating of A+. The outlook remained stable. Moody's Investors Service affirmed the Authority's water system and sewer disposal system senior lien ratings of A1, and its second lien ratings of A2. The outlook was moved to positive from stable for both. Fitch affirmed the Authority's ratings for its water system and sewer disposal system senior lien bonds at an A+, and its second lien bonds at an A. The outlook was moved to positive from stable for the sewage disposal system. The water system outlook remained stable.

WATER BOND NEW MONEY, SEWER BOND REFUNDING AND SEWER NEW MONEY BOND TRANSACTION

On September 13, 2022, the Authority issued a new money water bond transaction and a bond refunding and new money sewage disposal system transaction. The Authority issued \$207,215,000 of Water Supply System Revenue Bonds and \$210,455,000 of Sewage Disposal System Revenue Bonds (\$197,965,000 in new money and \$12,490,000 in refunding bonds). The net present value savings from the refunding transaction for the sewage disposal fund was \$211,718.

REQUIRED SUPPLEMENTARY INFORMATION

GREAT LAKES WATER AUTHORITY

REQUIRED SUPPLEMENTARY INFORMATION

Nonemployer Contributing Entity Share of City of Detroit General Employees' Retirement System - Component II
Schedule of Changes in Net Pension Liability and Related Ratios - Business-Type Activities

	Fiscal Year						
	2022	2021	2020	2019	2018	2017	2016
Measurement Date	2021*	2020*	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability							
Interest	\$ 34,312,239	\$ 36,284,099	\$ 36,700,388	\$ 36,577,126	\$ 37,829,066	\$ 40,381,626	\$ 51,393,411
Differences between expected and actual experience	(9,204,321)	(10,265,139)	3,462,000	(320,610)	2,369,183	(5,063,923)	(427,134)
Changes in assumptions	23,270,230	13,103,099	-	(21,345,359)	15,153,104	17,627,395	(19,789,958)
Benefit changes	-	-	-	-	-	-	(152,368,108)
Benefit payments, including refunds of employee contributions	(44,436,536)	(45,098,368)	(46,507,916)	(47,396,240)	(51,081,380)	(69,639,576)	(54,293,644)
Net change	3,941,612	(5,976,309)	(6,345,528)	(32,485,083)	4,269,973	(16,694,478)	(175,485,433)
Share of total pension liability, beginning of year	508,227,334	514,203,643	520,549,171	553,034,254	548,764,281	565,458,759	740,944,192
Share of Total Pension Liability, End of Year	512,168,946	508,227,334	514,203,643	520,549,171	553,034,254	548,764,281	565,458,759
Share of Plan Fiduciary Net Position							
Employer contributions	30,158,700	30,158,700	30,158,700	30,158,700	30,158,700	30,158,700	30,150,889
Employee contributions	-	-	-	-	-	-	130,951
Net investment income (loss)	95,985,249	(3,614,092)	9,194,433	30,347,172	38,812,244	(1,311,974)	17,280,285
Benefit payments, including refunds of employee contributions	(44,436,536)	(45,098,368)	(46,507,916)	(47,396,240)	(51,081,380)	(69,639,576)	(54,293,644)
Administrative expense	-	-	-	-	-	-	(21,294)
Other changes	1,318,070	1,182,142	(119,469)	1,386,027	1,494,049	252,263	27,758,558
Net change	83,025,483	(17,371,618)	(7,274,252)	14,495,659	19,383,613	(40,540,587)	21,005,745
Share of plan fiduciary net position, beginning of year	363,922,136	381,293,754	388,568,006	374,072,347	354,688,734	395,229,321	374,223,576
Share of Plan Fiduciary Net Position, End of Year	446,947,619	363,922,136	381,293,754	388,568,006	374,072,347	354,688,734	395,229,321
SHARE OF NET PENSION LIABILITY	<u>\$ 65,221,327</u>	<u>\$ 144,305,198</u>	<u>\$ 132,909,889</u>	<u>\$ 131,981,165</u>	<u>\$ 178,961,907</u>	<u>\$ 194,075,547</u>	<u>\$ 170,229,438</u>
Nonemployer contributing entity share of collective net pension liability	7.4%	13.1%	14.2%	15.9%	19.0%	19.5%	20.6%
Plan fiduciary net position as a percentage of total pension liability	87.3%	71.6%	74.2%	74.6%	67.6%	64.6%	69.9%

* As described in Notes 1 and 18 GLWA was established on January 1, 2016. At that time, GLWA assumed a portion of the net position and liabilities of the City of Detroit Water and Sewerage Department. This reflects only the portion allocated to GLWA.

** The 2015 information is presented based on City of Detroit Water and Sewerage Department (DWSD) prior to the establishment of GLWA. The amounts shown represent GLWA's allocation, fiduciary net position and net pension liability. The actual employer contributions made by DWSD were \$42,888,889.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

The accompanying notes to required supplementary information are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

REQUIRED SUPPLEMENTARY INFORMATION

Nonemployer Contributing Entity Share of City of Detroit General Employees' Retirement System - Component II

Schedule of Changes in Net Pension Liability and Related Ratios - Water Fund

	Fiscal Year						
	2022	2021	2020	2019	2018	2017	2016
Measurement Date	2021*	2020*	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability							
Interest	\$ 12,299,693	\$ 13,006,533	\$ 13,155,758	\$ 13,111,573	\$ 13,560,348	\$ 14,475,348	\$ 18,422,673
Differences between expected and actual experience	(3,299,415)	(3,679,680)	1,241,001	(114,927)	849,266	(1,815,233)	(153,112)
Changes in assumptions	8,341,534	4,696,986	-	(7,651,537)	5,431,838	6,318,782	(7,093,982)
Benefit changes		-	-	-	-	-	(54,618,440)
Benefit payments, including refunds of employee contributions	(15,928,886)	(16,166,129)	(16,671,401)	(16,989,833)	(18,310,822)	(24,963,262)	(19,462,302)
Net change	1,412,926	(2,142,290)	(2,274,642)	(11,644,724)	1,530,630	(5,984,365)	(62,905,163)
Share of total pension liability, beginning of year	182,181,063	184,323,353	186,597,995	198,242,719	196,712,089	202,696,454	265,601,617
Share of Total Pension Liability, End of Year	183,593,989	182,181,063	184,323,353	186,597,995	198,242,719	196,712,089	202,696,454
Share of Plan Fiduciary Net Position							
Employer contributions	10,810,800	10,810,800	10,810,800	10,810,800	10,810,800	10,810,800	10,808,000
Employee contributions	-	-	-	-	-	-	46,941
Net investment income (loss)	34,407,230	(1,295,521)	3,295,871	10,878,360	13,912,782	(470,295)	6,194,355
Benefit payments, including refunds of employee contributions	(15,928,886)	(16,166,129)	(16,671,401)	(16,989,833)	(18,310,822)	(24,963,262)	(19,462,302)
Administrative expense	-	-	-	-	-	-	(7,633)
Other changes	472,481	423,755	(42,826)	496,841	535,562	90,427	9,950,436
Net change	29,761,625	(6,227,095)	(2,607,556)	5,196,168	6,948,322	(14,532,330)	7,529,797
Share of plan fiduciary net position, beginning of year	130,452,884	136,679,979	139,287,535	134,091,367	127,143,045	141,675,375	134,145,578
Share of Plan Fiduciary Net Position, End of Year	160,214,509	130,452,884	136,679,979	139,287,535	134,091,367	127,143,045	141,675,375
SHARE OF NET PENSION LIABILITY	\$ 23,379,480	\$ 51,728,179	\$ 47,643,374	\$ 47,310,460	\$ 64,151,352	\$ 69,569,044	\$ 61,021,079
Nonemployer contributing entity share of collective net pension liability - Water Fund	2.6%	4.7%	5.1%	5.7%	6.8%	7.0%	7.4%
Plan fiduciary net position as a percentage of total pension liability	87.3%	71.6%	74.2%	74.6%	67.6%	64.6%	69.9%

* As described in Notes 1 and 18 GLWA was established on January 1, 2016. At that time, GLWA assumed a portion of the net position and liabilities of the City of Detroit Water and Sewerage Department. This reflects only the portion allocated to GLWA.

** The 2015 information is presented based on City of Detroit Water and Sewerage Department (DWSD) prior to the establishment of GLWA. The amounts shown represent GLWA's allocation, fiduciary net position and net pension liability. The actual employer contributions made by DWSD were \$18,440,222.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

The accompanying notes to required supplementary information are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

REQUIRED SUPPLEMENTARY INFORMATION

Nonemployer Contributing Entity Share of City of Detroit General Employees' Retirement System - Component II
Schedule of Changes in Net Pension Liability and Related Ratios - Sewage Disposal Fund

	Fiscal Year						
	2022	2021	2020	2019	2018	2017	2016
Measurement Date	2021*	2020*	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability							
Interest	\$ 22,012,546	\$ 23,277,566	\$ 23,544,630	\$ 23,465,553	\$ 24,268,718	\$ 25,906,278	\$ 32,970,738
Differences between expected and actual experience	(5,904,906)	(6,585,459)	2,220,999	(205,683)	1,519,917	(3,248,690)	(274,022)
Changes in assumptions	14,928,696	8,406,113	-	(13,693,822)	9,721,266	11,308,613	(12,695,976)
Benefit changes							(97,749,668)
Benefit payments, including refunds of employee contributions	<u>(28,507,650)</u>	<u>(28,932,239)</u>	<u>(29,836,515)</u>	<u>(30,406,407)</u>	<u>(32,770,558)</u>	<u>(44,676,314)</u>	<u>(34,831,342)</u>
Net change	2,528,686	(3,834,019)	(4,070,886)	(20,840,359)	2,739,343	(10,710,113)	(112,580,270)
Share of total pension liability, beginning of year	<u>326,046,271</u>	<u>329,880,290</u>	<u>333,951,176</u>	<u>354,791,535</u>	<u>352,052,192</u>	<u>362,762,305</u>	<u>475,342,575</u>
Share of Total Pension Liability, End of Year	<u>328,574,957</u>	<u>326,046,271</u>	<u>329,880,290</u>	<u>333,951,176</u>	<u>354,791,535</u>	<u>352,052,192</u>	<u>362,762,305</u>
Share of Plan Fiduciary Net Position							
Employer contributions	19,347,900	19,347,900	19,347,900	19,347,900	19,347,900	19,347,900	19,342,889
Employee contributions	-	-	-	-	-	-	84,010
Net investment income (loss)	61,578,019	(2,318,571)	5,898,562	19,468,812	24,899,462	(841,679)	11,085,930
Benefit payments, including refunds of employee contributions	<u>(28,507,650)</u>	<u>(28,932,239)</u>	<u>(29,836,515)</u>	<u>(30,406,407)</u>	<u>(32,770,558)</u>	<u>(44,676,314)</u>	<u>(34,831,342)</u>
Administrative expense	-	-	-	-	-	-	(13,661)
Other changes	<u>845,589</u>	<u>758,387</u>	<u>(76,643)</u>	<u>889,186</u>	<u>958,487</u>	<u>161,836</u>	<u>17,808,122</u>
Net change	53,263,858	(11,144,523)	(4,666,696)	9,299,491	12,435,291	(26,008,257)	13,475,948
Share of plan fiduciary net position, beginning of year	<u>233,469,252</u>	<u>244,613,775</u>	<u>249,280,471</u>	<u>239,980,980</u>	<u>227,545,689</u>	<u>253,553,946</u>	<u>240,077,998</u>
Share of Plan Fiduciary Net Position, End of Year	<u>286,733,110</u>	<u>233,469,252</u>	<u>244,613,775</u>	<u>249,280,471</u>	<u>239,980,980</u>	<u>227,545,689</u>	<u>253,553,946</u>
SHARE OF NET PENSION LIABILITY	<u>\$ 41,841,847</u>	<u>\$ 92,577,019</u>	<u>\$ 85,266,515</u>	<u>\$ 84,670,705</u>	<u>\$ 114,810,555</u>	<u>\$ 124,506,503</u>	<u>\$ 109,208,359</u>
Nonemployer contributing entity share of collective net pension liability - Sewage Disposal Fund	4.7%	8.4%	9.1%	10.2%	12.2%	12.5%	13.2%
Plan fiduciary net position as a percentage of total pension liability	87.3%	71.6%	74.2%	74.6%	67.6%	64.6%	69.9%

* As described in Notes 1 and 18 GLWA was established on January 1, 2016. At that time, GLWA assumed a portion of the net position and liabilities of the City of Detroit Water and Sewerage Department. This reflects only the portion allocated to GLWA.

** The 2015 information is presented based on City of Detroit Water and Sewerage Department (DWSD) prior to the establishment of GLWA. The amounts shown represent GLWA's allocation, fiduciary net position and net pension liability. The actual employer contributions made by DWSD were \$24,448,667.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

The accompanying notes to required supplementary information are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

REQUIRED SUPPLEMENTARY INFORMATION

Nonemployer Contributing Entity Share of City of Detroit General Employees' Retirement System - Component II
Schedule of Contributions

	Fiscal Year						
	2022	2021*	2020*	2019*	2018*	2017*	2016*
Total Business-Type Activities							
Contractually required contribution**	\$ 30,158,700	\$ 30,158,700	\$ 30,158,700	\$ 30,158,700	\$ 30,158,700	\$ 30,158,700	\$ 30,158,700
Actual contribution	<u>30,158,700</u>	<u>30,158,700</u>	<u>30,158,700</u>	<u>30,158,700</u>	<u>30,158,700</u>	<u>30,158,700</u>	<u>30,158,700</u>
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Fund							
Contractually required contribution**	\$ 10,810,800	\$ 10,810,800	\$ 10,810,800	\$ 10,810,800	\$ 10,810,800	\$ 10,810,800	\$ 10,810,800
Actual contribution	<u>10,810,800</u>	<u>10,810,800</u>	<u>10,810,800</u>	<u>10,810,800</u>	<u>10,810,800</u>	<u>10,810,800</u>	<u>10,810,800</u>
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewage Disposal Fund							
Contractually required contribution**	\$ 19,347,900	\$ 19,347,900	\$ 19,347,900	\$ 19,347,900	\$ 19,347,900	\$ 19,347,900	\$ 19,347,900
Actual contribution	<u>19,347,900</u>	<u>19,347,900</u>	<u>19,347,900</u>	<u>19,347,900</u>	<u>19,347,900</u>	<u>19,347,900</u>	<u>19,347,900</u>
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

* As described in Notes 1 and 18 GLWA was established on January 1, 2016. At that time GLWA assumed a portion of the net position and liabilities of the City of Detroit Water and Sewerage Department. This reflects only the portion allocated to GLWA.

** Contributions are determined by the provisions of the Plan of Adjustment and are not actuarially determined.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

The accompanying notes to required supplementary information are an integral part of these financial statements.

GREAT LAKES WATER AUTHORITY

Nonemployer Contributing Entity Share of City of Detroit General Employees' Retirement System –
Component II

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2022

Changes in Assumptions

In 2016, amounts reported as changes in assumptions resulted from adjustment of the discount rate from 7.61 percent to 7.23 percent.

In 2017, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.23 percent to 6.91 percent.

In 2018, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.91 percent to 7.38 percent.

In 2020, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.38 percent to 7.06 percent.

In 2021, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.06 percent to 6.50 percent.

Note: Great Lakes Water Authority is required to present the last ten fiscal years of data; however, accounting standards allow the presentation of as many years as are available until ten fiscal years are presented.

SUPPLEMENTARY INFORMATION

GREAT LAKES WATER AUTHORITY

COMBINING SCHEDULE OF NET POSITION - WATER FUND

As of June 30, 2022

	Water Operations Fund	Water Improvement and Extension Fund	Water Construction Fund	Total Water Fund
Assets				
Current Assets				
Cash and cash equivalents	\$ 94,861,553	\$ 29,192,915	\$ 23,136,552	\$ 147,191,020
Restricted cash and cash equivalents	34,834,402	-	14,235,345	49,069,747
Restricted cash for the benefit of DWSD	11,371,285	-	-	11,371,285
Investments	26,195,404	65,304,455	-	91,499,859
Restricted investments	30,711,544	-	-	30,711,544
Receivables				
Billed	54,169,640	-	-	54,169,640
Unbilled	30,349,758	-	-	30,349,758
Other	295,791	-	-	295,791
Allowance for doubtful accounts	(13,917,234)	-	-	(13,917,234)
Due from other governments	11,246,188	-	-	11,246,188
Due from other funds	-	1,543,503	784,583	2,328,086
Due from other water funds	-	3,972,809	399,496	4,372,305
Contractual obligation receivable	18,126,021	-	-	18,126,021
Prepaid items and other assets	8,611,410	90,077	-	8,701,487
Total Current Assets	306,855,762	100,103,759	38,555,976	445,515,497
Noncurrent Assets				
Restricted cash and cash equivalents	2,773,291	-	-	2,773,291
Restricted investments	9,506,991	-	-	9,506,991
Contractual obligation receivable	549,493,189	-	-	549,493,189
Prepaid lease	11,250,000	-	-	11,250,000
Assets not subject to depreciation or amortization	567,414,021	-	-	567,414,021
Capital assets being depreciated, net	1,293,659,589	-	-	1,293,659,589
Intangible assets, net	90,652,709	-	-	90,652,709
Prepaid insurance on debt	6,649,782	-	-	6,649,782
Total noncurrent assets	2,531,399,572	-	-	2,531,399,572
Total Assets	2,838,255,334	100,103,759	38,555,976	2,976,915,069
Deferred outflows of resources				
Deferred charge on refunding	41,997,055	-	-	41,997,055
Deferred pension amounts	10,810,800	-	-	10,810,800
Total Deferred Outflows of Resources	52,807,855	-	-	52,807,855

The accompanying notes to the supplementary information are an integral part of this schedule.

	Water Operations Fund	Water Improvement and Extension Fund	Water Construction Fund	Total Water Fund
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 21,143,337	\$ 1,805,348	\$ 33,942,086	\$ 56,890,771
Accrued salaries, wages and benefits	1,046,674	-	-	1,046,674
Accrued liabilities	15,261,427	-	-	15,261,427
Due to other governments	17,610,601	-	-	17,610,601
Due to other water funds	4,329,759	42,546	-	4,372,305
Interest payable	36,398,995	-	-	36,398,995
Current portion of:				
Revenue bonds and loans	40,091,255	-	-	40,091,255
Raw water rights obligatin	2,845,282	-	-	2,845,282
BC Note obligation	203,954	-	-	203,954
Regional system lease	5,686,745	-	-	5,686,745
Other liabilities	3,378,083	-	-	3,378,083
Total Current Liabilities	<u>147,996,112</u>	<u>1,847,894</u>	<u>33,942,086</u>	<u>183,786,092</u>
Noncurrent Liabilities				
Revenue bonds and loans	2,359,238,286	-	-	2,359,238,286
Raw water rights obligation	92,515,774	-	-	92,515,774
BC Note obligation	16,338,339	-	-	16,338,339
Regional system lease	400,095,662	-	-	400,095,662
Other liabilities	4,132,979	-	-	4,132,979
Net pension liability	23,379,480	-	-	23,379,480
Total Noncurrent Liabilities	<u>2,895,700,520</u>	<u>-</u>	<u>-</u>	<u>2,895,700,520</u>
Total Liabilities	<u>3,043,696,632</u>	<u>1,847,894</u>	<u>33,942,086</u>	<u>3,079,486,612</u>
Deferred Inflows of Resources				
Deferred gain on refunding	48,216,421	-	-	48,216,421
Deferred amounts for swap terminations	61,438	-	-	61,438
Deferred pension amounts	11,224,189	-	-	11,224,189
Total Deferred Inflows of Resources	<u>59,502,048</u>	<u>-</u>	<u>-</u>	<u>59,502,048</u>
Net Position (Deficit)				
Net investment in capital assets	(109,163,683)	-	-	(109,163,683)
Restricted for debt service	31,660,045	-	-	31,660,045
Restricted for payment assistance program	5,272,708	-	-	5,272,708
Unrestricted	(139,904,561)	98,255,865	4,613,890	(37,034,806)
TOTAL NET POSITION	<u>\$ (212,135,491)</u>	<u>\$ 98,255,865</u>	<u>\$ 4,613,890</u>	<u>\$ (109,265,736)</u>

The accompanying notes to the supplementary information are an integral part of this schedule.

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GREAT LAKES WATER AUTHORITY

COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION - WATER FUND
For the Year Ended June 30, 2022

	Water Operations Fund	Water Improvement and Extension Fund	Water Construction Fund	Total Water Fund
Operating Revenues				
Wholesale customer charges	\$ 323,026,213	\$ -	\$ -	\$ 323,026,213
Local system charges	21,697,300	-	-	21,697,300
Other revenues	<u>234,462</u>	<u>-</u>	<u>-</u>	<u>234,462</u>
Total Operating Revenues	<u>344,957,975</u>	<u>-</u>	<u>-</u>	<u>344,957,975</u>
Operating Expenses				
Operating expenses before depreciation and amortization				
Personnel	44,892,622	-	-	44,892,622
Contractual services	49,143,743	1,540,154	-	50,683,897
Utilities	28,725,292	-	-	28,725,292
Chemicals	7,788,784	-	-	7,788,784
Supplies and other expenses	9,157,367	-	-	9,157,367
Capital program allocation	(1,618,459)	-	-	(1,618,459)
Intergovernmental reimbursements	<u>(1,813,535)</u>	<u>-</u>	<u>-</u>	<u>(1,813,535)</u>
Total Operating Expenses Before Depreciation and Amortization	136,275,814	1,540,154	-	137,815,968
Depreciation	123,196,027	-	-	123,196,027
Amortization of intangible assets	<u>3,566,664</u>	<u>-</u>	<u>-</u>	<u>3,566,664</u>
Total Operating Expenses	<u>263,038,505</u>	<u>1,540,154</u>	<u>-</u>	<u>264,578,659</u>
Operating Income (Loss)	<u>81,919,470</u>	<u>(1,540,154)</u>	<u>-</u>	<u>80,379,316</u>
Nonoperating Revenues (Expenses)				
Earnings (loss) on investments	(936,892)	(1,457,077)	32,573	(2,361,396)
Interest on obligations receivable	25,107,207	-	-	25,107,207
Interest expense	(125,086,379)	-	-	(125,086,379)
Amortization of debt related items and cost of issuance	15,610,434	-	-	15,610,434
Legacy pension expense	(4,988,132)	-	-	(4,988,132)
WRAP (Water Residential Assistance Program)	(1,049,908)	-	-	(1,049,908)
Other	388,656	-	-	388,656
Capital outlay	<u>161,296,514</u>	<u>(3,668,396)</u>	<u>(157,628,118)</u>	<u>-</u>
Total Nonoperating Revenues (Expenses)	<u>70,341,500</u>	<u>(5,125,473)</u>	<u>(157,595,545)</u>	<u>(92,379,518)</u>
Income (Loss) Before Transfers	152,260,970	(6,665,627)	(157,595,545)	(12,000,202)
Transfer in	2,164,216	23,739,800	149,803,527	175,707,543
Transfer out	<u>(49,381,883)</u>	<u>(126,293,770)</u>	<u>(31,890)</u>	<u>(175,707,543)</u>
Change in net position	105,043,303	(109,219,597)	(7,823,908)	(12,000,202)
NET POSITION (DEFICIT), Beginning of Year	<u>(317,178,794)</u>	<u>207,475,462</u>	<u>12,437,798</u>	<u>(97,265,534)</u>
NET POSITION (DEFICIT), END OF YEAR	<u>\$ (212,135,491)</u>	<u>\$ 98,255,865</u>	<u>\$ 4,613,890</u>	<u>\$ (109,265,736)</u>

Note: Transfers in (out) are used for recording financial activity related to borrowing proceeds and MBO requirements.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

COMBINING SCHEDULE OF NET POSITION - SEWAGE DISPOSAL FUND

As of June 30, 2022

	Sewer Operations Fund	Sewer Improvement and Extension Fund	Sewer Construction Fund	Total Sewage Disposal Fund
Assets				
Current Assets				
Cash and cash equivalents	\$ 131,968,097	\$ 52,493,924	\$ 16,002,376	\$ 200,464,397
Restricted cash and cash equivalents	30,966,553	11,659	7,596,015	38,574,227
Restricted cash for the benefit of DWSD	9,098,348	-	-	9,098,348
Investments	41,907,950	51,801,283	-	93,709,233
Restricted investments	73,042,550	-	-	73,042,550
Receivables:				
Billed	64,722,773	-	-	64,722,773
Unbilled	24,045,449	-	-	24,045,449
Other	996,875	-	-	996,875
Allowance for doubtful accounts	(42,906,498)	-	-	(42,906,498)
Due from other governments	1,916,727	291,545	-	2,208,272
Due from other sewage disposal funds	-	1,156,547	266,181	1,422,728
Contractual obligation receivable	15,403,674	-	-	15,403,674
Prepaid items and other assets	4,751,569	169,329	-	4,920,898
Inventories	8,366,771	-	-	8,366,771
Total Current Assets	364,280,838	105,924,287	23,864,572	494,069,697
Noncurrent assets				
Restricted cash and cash equivalents	2,491,300	-	-	2,491,300
Restricted investments	31,184,328	-	-	31,184,328
Contractual obligation receivable	369,794,921	-	-	369,794,921
Prepaid lease	13,750,000	-	-	13,750,000
Assets not subject to depreciation or amortization	320,526,307	-	-	320,526,307
Capital assets being depreciated, net	2,138,777,595	-	-	2,138,777,595
Intangible assets, net	3,993,977	-	-	3,993,977
Prepaid insurance on debt	10,124,011	-	-	10,124,011
Total Noncurrent Assets	2,890,642,439	-	-	2,890,642,439
Total Assets	3,254,923,277	105,924,287	23,864,572	3,384,712,136
Deferred Outflows of Resources				
Deferred charge on refunding	110,341,248	-	-	110,341,248
Deferred pension amounts	19,347,900	-	-	19,347,900
Total Deferred Outflows of Resources	129,689,148	-	-	129,689,148

The accompanying notes to the supplementary information are an integral part of this schedule.

	Sewer Operations Fund	Sewer Improvement and Extension Fund	Sewer Construction Fund	Total Sewage Disposal Fund
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 16,174,427	\$ 2,013,533	\$ 19,300,303	\$ 37,488,263
Accrued salaries, wages and benefits	1,013,356	-	-	1,013,356
Accrued liabilities	9,743,206	-	-	9,743,206
Due to other governments	3,750,000	-	-	3,750,000
Due to other funds	15,877	1,633,450	678,759	2,328,086
Due to other sewage disposal funds	1,417,359	5,369	-	1,422,728
Interest payable	34,566,553	-	-	34,566,553
Current portion of:				
Revenue bonds and loans	87,312,545	-	-	87,312,545
BC Note obligation	458,756	-	-	458,756
Regional system lease	6,950,466	-	-	6,950,466
Other liabilities	3,435,863	-	-	3,435,863
Total Current Liabilities	<u>164,838,408</u>	<u>3,652,352</u>	<u>19,979,062</u>	<u>188,469,822</u>
Noncurrent Liabilities				
Revenue bonds and loans	2,790,722,856	-	-	2,790,722,856
BC Note obligation	36,750,113	-	-	36,750,113
Regional system lease	489,005,809	-	-	489,005,809
Other liabilities	16,989,290	-	-	16,989,290
Net pension liability	41,841,847	-	-	41,841,847
Total Noncurrent Liabilities	<u>3,375,309,915</u>	<u>-</u>	<u>-</u>	<u>3,375,309,915</u>
Total Liabilities	<u>3,540,148,323</u>	<u>3,652,352</u>	<u>19,979,062</u>	<u>3,563,779,737</u>
Deferred Inflows of Resources				
Deferred gain on refunding	40,566,648	-	-	40,566,648
Deferred amounts for swap terminations	457	-	-	457
Deferred pension amounts	20,087,733	-	-	20,087,733
Total Deferred Inflows of Resources	<u>60,654,838</u>	<u>-</u>	<u>-</u>	<u>60,654,838</u>
Net Position (Deficit)				
Net investment in capital assets	(85,551,623)	-	-	(85,551,623)
Restricted for debt service	91,754,608	-	-	91,754,608
Restricted for payment assistance program	7,045,715	-	-	7,045,715
Unrestricted	<u>(229,439,436)</u>	<u>102,271,935</u>	<u>3,885,510</u>	<u>(123,281,991)</u>
TOTAL NET POSITION	<u>\$ (216,190,736)</u>	<u>\$ 102,271,935</u>	<u>\$ 3,885,510</u>	<u>\$ (110,033,291)</u>

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION - SEWAGE DISPOSAL FUND
For the Year Ended June 30, 2022

	Sewer Operations Fund	Sewer Improvement and Extension Fund	Sewer Construction Fund	Total Sewage Disposal Fund
Operating Revenues				
Wholesale customer charges	\$ 268,813,369	\$ -	\$ -	\$ 268,813,369
Local system charges	188,662,200	-	-	188,662,200
Industrial waste charges	8,300,278	-	-	8,300,278
Pollutant surcharges	5,181,816	-	-	5,181,816
Other revenues	429,491	-	-	429,491
Total Operating Revenues	471,387,154	-	-	471,387,154
Operating Expenses				
Operating expenses before depreciation and amortization				
Personnel	62,160,768	-	-	62,160,768
Contractual services	58,570,159	4,839,950	-	63,410,109
Utilities	30,930,459	-	-	30,930,459
Chemicals	12,593,379	-	-	12,593,379
Supplies and other expenses	19,911,985	-	-	19,911,985
Capital program allocation	(1,013,677)	-	-	(1,013,677)
Intergovernmental reimbursements	(771,355)	(302,991)	-	(1,074,346)
Total Operating Expenses Before Depreciation and Amortization	182,381,718	4,536,959	-	186,918,677
Depreciation	158,013,629	-	-	158,013,629
Amortization of intangible assets	439,704	-	-	439,704
Total Operating Expenses	340,835,051	4,536,959	-	345,372,010
Operating Income (Loss)	130,552,103	(4,536,959)	-	126,015,144
Nonoperating Revenues (Expenses)				
Earnings (loss) on investments	(2,172,598)	(877,209)	26,925	(3,022,882)
Interest on shortfall and obligations receivable	17,157,558	-	-	17,157,558
Interest expense	(131,110,125)	-	-	(131,110,125)
Amortization of debt related items and cost of issuance	(2,292,419)	-	-	(2,292,419)
Legacy pension expense	(8,927,171)	-	-	(8,927,171)
WRAP (Water Residential Assistance Program)	(1,742,929)	-	-	(1,742,929)
Other	(234,915)	-	-	(234,915)
Capital outlay	73,228,981	(8,080,463)	(65,148,518)	-
Total Nonoperating Revenues (Expenses)	(56,093,618)	(8,957,672)	(65,121,593)	(130,172,883)
Income (Loss) Before Transfers and Capital Contributions	74,458,485	(13,494,631)	(65,121,593)	(4,157,739)
Transfer in	1,463,926	42,964,809	57,560,908	101,989,643
Transfer out	(52,380,023)	(49,583,145)	(26,475)	(101,989,643)
Capital Contributions	6,991,039	-	-	6,991,039
Change in net position	30,533,427	(20,112,967)	(7,587,160)	2,833,300
NET POSITION (DEFICIT), Beginning of Year	(246,724,163)	122,384,902	11,472,670	(112,866,591)
NET POSITION (DEFICIT), END OF YEAR	\$ (216,190,736)	\$ 102,271,935	\$ 3,885,510	\$ (110,033,291)

Note: Transfers in (out) are used for recording financial activity related to borrowing proceeds and MBO requirements.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF INTERFUND RECEIVABLES AND PAYABLES
For the Year Ended June 30, 2022

Interfund balances result from the time lag between the dates interfund goods and services are provided or reimbursable expenditures occur and when the payment between funds are made. Interfund balances for the year ended June 30, 2022 consisted of the following:

	Sewage Disposal Fund due to Water Fund			
	Sewer Operations Fund	Sewer Improvement and Extension Fund	Sewer Construction Fund	Total
Water Operations Fund	\$ -	\$ -	\$ -	\$ -
Water Improvement and Extension Fund	-	1,543,503	-	1,543,503
Water Construction Fund	15,877	89,947	678,759	784,583
TOTALS	\$ 15,877	\$ 1,633,450	\$ 678,759	\$ 2,328,086

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATING EXPENSES FOR WATER OPERATIONS FUND - BUDGET TO ACTUAL

For the Year Ended June 30, 2022

	Original Budget	Amended Budget	Administrative and Centralized Services Reclassification	Final Amended Budget	Actual	Variance Over (Under) Amended Budget	Percent Over (Under) Amended Budget
Operating Expenses							
Personnel	\$ 76,206,731	\$ 74,108,755	\$ (26,939,300)	\$ 47,169,455	\$ 44,892,622	\$ (2,276,833)	-4.83%
Contractual services	80,082,220	84,543,809	(34,770,100)	49,773,709	49,143,743	(629,966)	-1.27%
Utilities	26,914,388	28,986,600	(180,800)	28,805,800	28,725,292	(80,508)	-0.28%
Chemicals	6,662,600	7,409,400	-	7,409,400	7,788,784	379,384	5.12%
Supplies and other expenses	22,591,026	19,809,247	(7,953,800)	11,855,447	9,157,367	(2,698,080)	-22.76%
Capital program allocation	(2,178,251)	(1,695,851)	-	(1,695,851)	(1,618,459)	77,392	-4.56%
Intergovernmental reimbursements	(1,547,600)	(2,430,800)	-	(2,430,800)	(1,813,535)	617,265	-25.39%
Centralized services allocation	(51,819,100)	(51,466,900)	51,466,900	-	-	-	0.00%
Administrative services allocation	(17,509,300)	(19,470,300)	19,470,300	-	-	-	0.00%
Unallocated reserve	4,531,086	4,139,840	(1,254,000)	2,885,840	-	(2,885,840)	-100.00%
Total operating expenses before depreciation and amortization financial reporting basis	143,933,800	143,933,800	(160,800)	143,773,000	136,275,814	(7,497,186)	
SBITA [1]	-	-	160,800	160,800	160,753	(47)	0.00%
TOTAL OPERATING EXPENSES BUDGET BASIS	\$ 143,933,800	\$ 143,933,800	\$ -	\$ 143,933,800	\$ 136,436,567	\$ (7,497,233)	-5.21%

[1] The subscription based information technology arrangements (SBITA) costs are an expense for budget purposes. These costs are capitalized under GASB 96 for financial reporting purposes. See Note 2 in the Notes to Supplementary Information.

Note: Centralized and administrative services allocations have been applied to the expense categories above for presentation of the amended budget to the actual amounts.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATING EXPENSES FOR SEWER OPERATIONS FUND - BUDGET TO ACTUAL
For the Year Ended June 30, 2022

	Original Budget	Amended Budget	Administrative and Centralized Services	Final Amended Budget	Actual	Variance Over (Under) Amended Budget	Percent Over (Under) Amended Budget
Operating Expenses							
Personnel	\$ 39,230,515	\$ 37,759,795	\$ 26,939,300	\$ 64,699,095	\$ 62,160,768	\$ (2,538,327)	-3.92%
Contractual services	23,293,638	26,654,738	34,770,100	61,424,838	58,570,159	(2,854,679)	-4.65%
Utilities	23,483,693	30,396,593	180,800	30,577,393	30,930,459	353,066	1.15%
Chemicals	9,381,700	12,432,900	-	12,432,900	12,593,379	160,479	1.29%
Supplies and other expenses	15,968,536	15,224,536	7,312,600	22,537,136	19,911,985	(2,625,151)	-11.65%
Capital program allocation	(1,292,697)	(988,397)	-	(988,397)	(1,013,677)	(25,280)	2.56%
Intergovernmental reimbursements	(344,900)	(771,360)	-	(771,360)	(771,355)	5	0.00%
Centralized services allocation	51,819,100	51,466,900	(51,466,900)	-	-	-	0.00%
Administrative services allocation	17,509,300	19,470,300	(19,470,300)	-	-	-	0.00%
Unallocated reserve	2,250,915	262,595	1,254,000	1,516,595	-	(1,516,595)	-100.00%
Total operating expenses before depreciation and amortization financial reporting basis	181,299,800	191,908,600	(480,400)	191,428,200	182,381,718	(9,046,482)	
SBITA [1]	-	-	160,800	160,800	160,753	(47)	0.00%
Warehouse lease [1]	-	-	319,600	319,600	319,584	(16)	-0.01%
TOTAL OPERATING EXPENSES BUDGET BASIS	<u>\$ 181,299,800</u>	<u>\$ 191,908,600</u>	<u>\$ -</u>	<u>\$ 191,908,600</u>	<u>\$ 182,862,055</u>	<u>\$ (9,046,545)</u>	-4.71%

[1] The subscription based information technology arrangements (SBITA) costs are an expense for budget purposes. These costs are capitalized under GASB 96 for financial reporting purposes. See Note 2 in the Notes to Supplementary Information.

[2] The warehouse lease is an expense for budget purposes. For financial reporting it is accounted for under GASB 87. See Note 2 in the Notes to Supplementary Information.

Note: Centralized and administrative services allocations have been applied to the expense categories above for presentation of the amended budget to the actual amounts.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATING EXPENSES FOR COMBINED WATER AND SEWER OPERATIONS FUNDS - BUDGET TO ACTUAL For the Year Ended June 30, 2022

	Original Budget	Final Amended Budget	Actual	Variance Over (Under) Amended Budget	Percent Over (Under) Amended Budget
Operating Expenses					
Personnel	\$ 115,437,246	\$ 111,868,550	\$ 107,053,390	\$ (4,815,160)	-4.30%
Contractual services	103,375,858	111,198,547	107,713,902	(3,484,645)	-3.13%
Utilities	50,398,081	59,383,193	59,655,751	272,558	0.46%
Chemicals	16,044,300	19,842,300	20,382,163	539,863	2.72%
Supplies and other expenses	38,559,562	34,392,583	29,069,352	(5,323,231)	-15.48%
Capital program allocation	(3,470,948)	(2,684,248)	(2,632,136)	52,112	-1.94%
Intergovernmental reimbursements	(1,892,500)	(3,202,160)	(2,584,890)	617,270	-19.28%
Centralized services allocation	-	-	-	-	0.00%
Administrative services allocation	-	-	-	-	0.00%
Unallocated reserve	6,782,001	4,402,435	-	(4,402,435)	-100.00%
Total operating expenses before depreciation and amortization financial reporting basis	325,233,600	335,201,200	318,657,532	(16,543,668)	
SBITA	-	321,600	321,506	(94)	0.00%
Warehouse lease	-	319,600	319,584	(16)	-0.01%
TOTAL OPERATING EXPENSES BUDGET BASIS	\$ 325,233,600	\$ 335,842,400	\$ 319,298,622	\$ (16,543,778)	-4.93%

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF REVENUE REQUIREMENTS BUDGET TO ACTUAL - WATER OPERATIONS

For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget using a revenue requirements method for its operating funds that aligns with water and wastewater revenue charges. This method applies an accrual basis of accounting for revenues and operating expenses in addition to a cash basis of accounting for other commitments, such as debt service, Detroit General Retirement closed pension commitment, lease payment, reserves and certain other payments. The schedule below presents the Board adopted budgeted, adjusted for amendments, for comparison with actual revenues, expenses, and other payments. Overall, Water Operations experienced a positive variance of approximately \$8.2 million.

	2022 Adopted Budget	2022 Amended Budget	2022 Actual	Variance Over (Under) Amended Budget
Revenues				
Revenue from charges				
Suburban wholesale customers [1]	\$ 321,110,900	\$ 315,010,900	\$ 316,529,785	\$ 1,518,885
Local system charges	21,697,300	21,697,300	21,697,300	-
Total revenue from charges	<u>342,808,200</u>	<u>336,708,200</u>	<u>338,227,085</u>	<u>1,518,885</u>
Other revenue [2]	175,000	684,400	775,537	91,137
Investment earnings [3]	<u>1,047,300</u>	<u>1,923,800</u>	<u>1,945,613</u>	<u>21,813</u>
Total Revenues	<u>\$ 344,030,500</u>	<u>\$ 339,316,400</u>	<u>\$ 340,948,235</u>	<u>\$ 1,631,835</u>
Revenue Requirements				
Operations and maintenance [4]	\$ 143,933,800	\$ 143,933,800	\$ 136,436,567	\$ (7,497,233)
General Retirement System legacy pension	6,048,000	6,048,000	6,048,000	-
Debt service	135,481,000	135,121,000	136,039,760	918,760
General Retirement System accelerated pension	6,268,300	6,268,300	6,268,300	-
Water Residential Assistance Program contribution	1,705,500	1,705,500	1,705,500	-
Regional system lease	22,500,000	22,500,000	22,500,000	-
Transfer to the Improvement & Extension Fund	<u>28,093,900</u>	<u>23,739,800</u>	<u>23,739,800</u>	<u>-</u>
Total Revenue Requirements	<u>\$ 344,030,500</u>	<u>\$ 339,316,400</u>	<u>\$ 332,737,927</u>	<u>\$ (6,578,473)</u>
Revenue Requirement Variance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 8,210,308</u>	<u>\$ 8,210,308</u>

[1] Revenue from Charges - Suburban Wholesale Customers presented in this schedule differs from those presented on the Statement of Revenues, Expenses and Changes in Net position due to \$6,496,428 of revenue which was credited for the KWA debt service which is a non-cash transaction that is the payment obligation on the raw water rights.

[2] Other Revenue includes other operating revenues and other nonoperating revenues for the Water Operations Fund. Numbers will not match combining schedules as other nonoperating is net of income and expenses.

[3] Investment earnings excludes earnings on bond proceeds in the construction fund. As required by the Master Bond Ordinance, investment earnings on bond proceeds will remain in the Construction Fund. There were no bond proceeds remaining in the construction fund during the current fiscal year.

[4] See the Schedule of Operating Expenses for Water Operations - Budget to Actual. Operations and Maintenance expenses in this schedule are based on activities relating only to the Water Operations Fund.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF REVENUE REQUIREMENTS BUDGET TO ACTUAL - SEWAGE DISPOSAL OPERATIONS For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget using a revenue requirements method for its operating funds that aligns with water and wastewater revenue charges. This method applies an accrual basis of accounting for revenues and operating expenses in addition to a cash basis of accounting for other commitments, such as debt service, Detroit General Retirement closed pension commitment, lease payment, reserves and certain other payments. The schedule below presents the Board adopted budgeted, adjusted for amendments, for comparison with actual revenues, expenses, and other payments. Overall, Sewage Disposal Operations had a positive variance of approximately \$8.5 million.

	2022 Adopted Budget	2022 Amended Budget	2022 Actual	Variance Over (Under) Amended Budget
Revenues				
Revenue from charges				
Suburban wholesale customers	\$ 272,130,000	\$ 268,130,000	\$ 268,813,369	\$ 683,369
Local system charges	188,662,200	188,662,200	188,662,200	-
Industrial waste control	9,024,800	8,324,800	8,300,278	(24,522)
Pollutant surcharges	<u>4,188,900</u>	<u>5,088,900</u>	<u>5,181,816</u>	<u>92,916</u>
Total revenue from charges	<u>474,005,900</u>	<u>470,205,900</u>	<u>470,957,663</u>	<u>751,763</u>
Other revenue [1]	400,000	538,000	817,448	279,448
Investment earnings [2]	<u>1,023,300</u>	<u>1,876,200</u>	<u>1,842,475</u>	<u>(33,725)</u>
Total Revenues	<u>\$ 475,429,200</u>	<u>\$ 472,620,100</u>	<u>\$ 473,617,586</u>	<u>\$ 997,486</u>
Revenue Requirements				
Operations and maintenance [3]	181,299,800	191,908,600	182,862,055	(9,046,545)
General Retirement System legacy pension	10,824,000	10,824,000	10,824,000	-
Debt service	207,209,500	204,984,500	206,490,151	1,505,651
General Retirement System accelerated pension	11,620,700	11,620,700	11,620,700	-
Water Residential Assistance Program contribution	2,358,300	2,358,300	2,358,300	-
Regional system lease	27,500,000	27,500,000	27,500,000	-
Transfer to the Improvement & Extension Fund [4]	<u>34,616,900</u>	<u>23,424,000</u>	<u>23,424,000</u>	<u>-</u>
Total Revenue Requirements	<u>\$ 475,429,200</u>	<u>\$ 472,620,100</u>	<u>\$ 465,079,206</u>	<u>\$ (7,540,894)</u>
Revenue Requirement Variance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 8,538,380</u>	<u>\$ 8,538,380</u>

[1] Other revenue includes other operating revenues and other nonoperating revenues for the Sewer Operations Fund. Amounts will not match combining schedules as other nonoperating is net of income and expenses.

[2] Investment earnings excludes earnings on bond proceeds in the construction fund. As required by the Master Bond Ordinance, investment earnings on bond proceeds will remain in the Construction Fund. There were no bond proceeds remaining in the construction fund during the current fiscal year.

[3] See the Schedule of Operating Expenses for Sewage Disposal Operations - Budget to Actual. Operations and Maintenance expenses in this schedule are based on activities relating only to the Sewer Operations Fund.

[4] DWSD shortfall receivable payments are transferred directly to the Improvement & Extension Fund. They are excluded from this schedule because they are not part of the revenue requirement methodology used to set charges.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF REVENUE REQUIREMENTS TO STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION CROSSWALK

For the Year Ended June 30, 2022

The Great Lakes Water Authority establishes a Revenue Requirements budget for the purpose of establishing charges for services which follows a modified cash basis of accounting. Conversely, the annual financial report is prepared in accordance with Generally Accepted Accounting Principles for enterprise funds of a local government. Because the budget and the financial report are prepared using different bases of accounting, a crosswalk is prepared to reconcile fiscal year financial performance from the budget basis of accounting to the financial statement basis of accounting. Key areas of reconciliation include the following:

- Defined Benefit Pension related to the City of Detroit General Employees Retirement System. Annual contributions are an expense for the budget basis while the accrual basis financial report reflects the current year payment as a deferred outflow.
- Debt Service, BC Note obligation and Regional system lease (principal and interest) are an expense for the budget basis while the accrual basis financial report treats interest as an expense and principal payments as a reduction of a liability.
- GASB 87 & GASB 96 items are expenses for budget purposes but are capitalized and amortized for financial reporting purposes.
- Contributions to the Regional System Improvement & Extension Fund are an expense for the budget basis while the accrual basis financial report treats this activity as an increase in assets.
- Depreciation and amortization are not a components of the budget basis while the accrual basis financial report treats these as an expense.

	Water Fund	Sewage Disposal Fund	Total Business- type Activities
Revenue Requirement Variance from Schedule of Revenue Requirements	\$ 8,210,308	\$ 8,538,380	\$ 16,748,688
Budgetary adjustments to financial reporting basis			
Pension delayed accounting election adjustments:			
Current year pension payments recorded as deferral	10,810,800	19,347,900	30,158,700
Prior year pension deferral accounted for in current year	(4,988,132)	(8,927,171)	(13,915,303)
Administrative fee prepaid adjustment	467,582	836,825	1,304,407
Debt service	57,501,353	114,864,801	172,366,154
BC Note obligation	194,233	436,916	631,149
Regional system lease	5,473,835	6,690,241	12,164,076
GASB 87 & GASB 96 adjustments	160,753	350,345	511,098
Water Residential Assistance Program (WRAP)	655,592	615,371	1,270,963
Improvement & Extension fund transfers	23,739,800	23,424,000	47,163,800
Nonbudgeted financial reporting adjustments			
Depreciation and amortization	(126,762,691)	(158,453,333)	(285,216,024)
Amortization - debt related	15,610,434	(2,292,419)	13,318,015
Improvement & Extension operating expenses	(1,540,154)	(4,536,959)	(6,077,113)
Gain (loss) on disposal of capital assets	9,999	(332,197)	(322,198)
Raw water rights obligation	2,763,095	-	2,763,095
Investment earnings on bond funds in construction fund	-	-	-
Interest on DWSD note receivable	-	144,918	144,918
Investment earnings unrealized gain (loss)	(4,307,009)	(4,865,357)	(9,172,366)
Capital contribution	-	6,991,039	6,991,039
Change in Net Position per Statement of Revenues, Expenses and Changes in Net Position	\$ (12,000,202)	\$ 2,833,300	\$ (9,166,902)

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

WATER IMPROVEMENT AND EXTENSION FUND - BUDGET TO ACTUAL

For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget for the uses of the Improvement & Extension Funds. The schedule below presents the Board adopted budget, adjusted for amendments, for comparison with actual activity in the Water I&E Fund. The Water I&E Fund experienced a decrease of \$109.2 million in net position which represents use of I&E funds reserved from prior years. This was expected as it aligns with the capital funding strategy. The system experienced a positive budget variance of approximately \$20.3 million.

	Adopted Budget	Amended Budget	Actual [3]	Variance Over (Under) Amended Budget
Inflows				
Revenue transfers	\$ 28,093,900	\$ 23,739,800	\$ 23,739,800	\$ -
Investment earnings [1]	-	1,329,000	1,335,993	6,993
Total Inflows	28,093,900	25,068,800	25,075,793	6,993
Outflows				
Capital spending other (net operating expenses)	-	1,500,000	1,540,154	40,154
Capital outlay	17,006,600	6,288,092	3,668,396	(2,619,696)
GASB 96 transfer to operating fund [2]	-	-	253,171	253,171
Investment earnings transfer out [1]	-	1,329,000	1,879,155	550,155
Revenue financed capital - transfer to Water Construction Fund	108,308,000	142,635,308	124,161,444	(18,473,864)
Total Outflows	125,314,600	151,752,400	131,502,320	(20,250,080)
Net Increase (Decrease) - Budget Basis	<u>\$ (97,220,700)</u>	<u>\$ (126,683,600)</u>	(106,426,527)	<u>\$ 20,257,073</u>
Non-budgeted inflows (outflows)				
Unrealized net decrease in fair value of investments			<u>(2,793,070)</u>	
Combining Schedule Water I&E Fund Change in Net Position [3]			<u>\$ (109,219,597)</u>	

[1] As required by the Master Bond Ordinance, investment earnings on I&E funds are transferred to the receiving fund on a monthly basis.

[2] The subscription based information technology arrangements (SBITA) costs are an expense for budget purposes. These costs are capitalized under GASB 96 for financial reporting purposes, therefore they are shown as a transfer out to the operating fund for this analysis. See Note 2 in the Notes to Supplementary Information.

[3] See the Combining Schedule of Revenues, Expenses and Changes in Net Position - Water Fund. Information in this schedule is based on activity in the Water Improvement and Extension Fund.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SEWER IMPROVEMENT AND EXTENSION FUND - BUDGET TO ACTUAL

For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget for the uses of the Improvement & Extension Funds. The schedule below presents the Board adopted budget, adjusted for amendments, for comparison with actual activity in the Sewer I&E Fund. Overall, the Sewer I&E Fund experienced a decrease of \$20.1 million in net position which represents use of I&E funds reserved from prior years. This was expected as it aligns with the capital funding strategy. The system experienced a positive budget variance of approximately \$20.1 million.

	Adopted Budget	Amended Budget	Actual [3]	Variance Over (Under) Amended Budget
Inflows				
Revenue transfers	\$ 34,616,900	\$ 23,424,000	\$ 23,424,000	\$ -
Receipt of DWSD shortfall receivable payments	406,400	144,900	8,441,496	8,296,596
Investment earnings [1]	-	1,004,900	855,242	(149,658)
Total Inflows	35,023,300	24,573,800	32,720,738	8,146,938
Outflows				
Capital spending other (net operating expenses)	-	722,200	4,536,959	3,814,759
Capital outlay	15,965,100	9,137,700	8,080,463	(1,057,237)
GASB 96 transfer to operating fund [2]	-	-	560,971	560,971
Investment earnings transfer out [1]	-	1,004,900	876,480	(128,420)
Revenue financed capital - transfer to Sewer Construction Fund	47,546,000	63,279,200	48,145,694	(15,133,506)
Total Outflows	63,511,100	74,144,000	62,200,567	(11,943,433)
Net Increase (Decrease) - Budget Basis	\$ (28,487,800)	\$ (49,570,200)	(29,479,829)	\$ 20,090,371
Non-budgeted inflows (outflows)				
Transfer for FY 2020 DWSD shortfall [4]			10,817,815	
Unrealized net decrease in fair value of investments			(1,732,451)	
Other transfers in			281,498	
Combining Schedule Sewer I&E Fund Change in Net Position [3]			\$ (20,112,967)	

- [1] As required by the Master Bond Ordinance, investment earnings on I&E funds are transferred to the receiving fund on a monthly basis.
- [2] The subscription based information technology arrangements (SBITA) costs are an expense for budget purposes. These costs are capitalized under GASB 96 for financial reporting purposes, therefore they are shown as a transfer out to the operating fund for this analysis. See Note 2 in the Notes to Supplementary Information.
- [3] See the Combining Schedule of Revenues, Expenses and Changes in Net Position - Sewage Disposal Fund. Information in this schedule is based on activity in the Sewer Improvement and Extension Fund.
- [4] Pursuant to the 2018 Memorandum of Understanding dated June 27, 2018, DWSD budget shortfalls not cured by the end of the following year in which they arise shall be repaid in installments plus a surcharge. DWSD experienced a \$10.2 million budget shortfall in FY 2020 that was cured in FY 2021. Those amounts were transferred to the I&E Fund in FY 2022.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

WATER CONSTRUCTION FUND - BUDGET TO ACTUAL For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget for the use of the Construction Funds. The schedule below presents the Board adopted budget, adjusted for amendments, for comparison with actual activity in the Water Construction Fund. The Water Construction Fund had a decrease of \$7.8 million in net position which represents use of construction funds from prior periods. This was expected as it aligns with the capital funding strategy. The system experienced a negative budget variance of approximately \$7.8 million.

	Adopted Budget	Amended Budget	Actual [2]	Variance Over (Under) Amended Budget
Inflows				
Transfers from Water Improvement & Extension Fund	\$ 108,308,000	\$ 142,635,300	\$ 124,161,444	\$ (18,473,856)
State revolving loans	26,100,000	27,000,000	25,642,083	(1,357,917)
Investment earnings [1]	-	-	32,093	32,093
Total Inflows	<u>134,408,000</u>	<u>169,635,300</u>	<u>149,835,620</u>	<u>(19,799,680)</u>
Outflows				
Investment earnings transfer out [1]	-	-	31,890	31,890
Capital projects	134,408,000	169,635,300	157,628,118	(12,007,182)
Total Outflows	<u>134,408,000</u>	<u>169,635,300</u>	<u>157,660,008</u>	<u>(11,975,292)</u>
Net Increase (Decrease) - Budget Basis	<u>\$ -</u>	<u>\$ -</u>	<u>(7,824,388)</u>	<u>\$ (7,824,388)</u>
Non-budgeted inflows (outflows)				
Unrealized net increase in fair value of investments			<u>480</u>	
Combining Schedule Water Construction Fund Change in Net Position [2]			<u>\$ (7,823,908)</u>	

[1] As required by the Master Bond Ordinance investment earnings on I&E funds are transferred to the receiving fund on a monthly basis. Any earnings on bond proceeds will remain in the Construction Fund. There were no bond proceeds remaining in the construction fund during the current fiscal year.

[2] See the Combining Schedule of Revenues, Expenses and Changes in Net Position - Water Fund. Information in this schedule is based on activity in the Water Construction Fund.

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

SEWER CONSTRUCTION FUND - BUDGET TO ACTUAL
For the Year Ended June 30, 2022

The Great Lakes Water Authority Board adopts a budget for the use of the Construction Funds. The schedule below presents the Board adopted budget, adjusted for amendments, for comparison with actual activity in the Sewer Construction Fund. The Sewer Construction Fund had a decrease of \$7.6 million in net position which represents use of construction funds from prior periods. This was expected as it aligns with the capital funding strategy. They system experienced a negative budget variance of approximately \$7.6 million.

	Adopted Budget	Amended Budget	Actual [2]	Variance Over (Under) Amended Budget
Inflows				
Transfers from Sewer Improvement & Extension Fund	\$ 47,546,000	\$ 63,279,200	\$ 48,145,694	\$ (15,133,506)
State revolving loans	31,992,000	10,000,000	9,215,214	(784,786)
Transfer from operations fund-proceeds from sale of assets	-	-	200,000	200,000
Investment earnings [1]	-	-	26,444	26,444
Total Inflows	<u>79,538,000</u>	<u>73,279,200</u>	<u>57,587,352</u>	<u>(15,691,848)</u>
Outflows				
Investment earnings transfer out [1]	-	-	26,475	26,475
Capital projects	79,538,000	73,279,200	65,148,518	(8,130,682)
Total Outflows	<u>79,538,000</u>	<u>73,279,200</u>	<u>65,174,993</u>	<u>(8,104,207)</u>
Net Increase (Decrease) - Budget Basis	<u>\$ -</u>	<u>\$ -</u>	(7,587,641)	<u>\$ (7,587,641)</u>
Non-budgeted inflows (outflows)				
Unrealized net increase in fair value of investments			<u>481</u>	
Combining Schedule Sewage Disposal Construction Fund Change in Net Position [2]			<u>\$ (7,587,160)</u>	

[1] As required by the Master Bond Ordinance investment earnings on I&E funds are transferred to the receiving fund on a monthly basis. Any earnings on bond proceeds will remain in the Construction Fund. There were no bond proceeds remaining in the construction fund during the current fiscal year.

[2] See the Combining Schedule of Revenues, Expenses and Changes in Net Position - Sewage Disposal Fund. Information in this schedule is based on activity in the Sewer Construction Fund.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF DAYS CASH - LIQUIDITY
As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016*
Water Fund							
Cash and investments - Unrestricted	\$ 238,690,879	\$ 353,308,385	\$ 394,440,814	\$ 347,204,928	\$ 317,089,746	\$ 267,335,558	\$ 167,292,572
Operating Expense							
Operating expense	\$ 264,578,659	\$ 250,476,297	\$ 263,282,730	\$ 263,959,730	\$ 254,602,752	\$ 245,868,861	\$ 120,841,204
Less: depreciation	(123,196,027)	(123,271,541)	(127,183,228)	(140,571,120)	(143,991,815)	(144,137,912)	(71,295,545)
Less: amortization of intangible asset	(3,566,664)	(3,566,664)	(3,566,664)	(3,566,664)	(2,080,554)	-	-
Net Operating Expense	\$ 137,815,968	\$ 123,638,092	\$ 132,532,838	\$ 119,821,946	\$ 108,530,383	\$ 101,730,949	\$ 49,545,659
Operating Expense per Day (365 days)	\$ 377,578	\$ 338,734	\$ 363,104	\$ 328,279	\$ 297,344	\$ 278,715	\$ 273,733
Days Cash							
Number of days cash	632	1,043	1,086	1,058	1,066	959	611
Sewage Disposal Fund							
Cash and investments - Unrestricted	\$ 294,173,630	\$ 323,972,718	\$ 287,464,920	\$ 236,057,128	\$ 208,563,268	\$ 205,179,312	\$ 188,063,375
Operating Expense							
Operating expense	\$ 345,372,010	\$ 328,983,415	\$ 329,870,427	\$ 342,585,175	\$ 363,629,987	\$ 336,946,731	\$ 170,401,050
Less: depreciation	(158,013,629)	(150,772,065)	(152,920,967)	(168,544,370)	(187,250,583)	(185,628,465)	(86,021,029)
Less: amortization of intangible asset	(439,704)	(109,926)	-	-	-	-	-
Net Operating Expense	\$ 186,918,677	\$ 178,101,424	\$ 176,949,460	\$ 174,040,805	\$ 176,379,404	\$ 151,318,266	\$ 84,380,021
Operating Expense per Day (365 days)	\$ 512,106	\$ 487,949	\$ 484,793	\$ 476,824	\$ 483,231	\$ 414,571	\$ 466,188
Days Cash							
Number of days cash	574	664	593	495	432	495	403
Combined							
Cash and investments - Unrestricted	\$ 532,864,509	\$ 677,281,103	\$ 681,905,734	\$ 583,262,056	\$ 525,653,014	\$ 472,514,870	\$ 355,355,947
Operating Expense							
Operating expense	\$ 609,950,669	\$ 579,459,712	\$ 593,153,157	\$ 606,544,905	\$ 618,232,739	\$ 582,815,592	\$ 291,242,254
Less: depreciation	(281,209,656)	(274,043,606)	(280,104,195)	(309,115,490)	(331,242,398)	(329,766,377)	(157,316,574)
Less: amortization of intangible asset	(4,006,368)	(3,566,664)	(3,566,664)	(3,566,664)	(2,080,554)	-	-
Net Operating Expense	\$ 324,734,645	\$ 301,849,442	\$ 309,482,298	\$ 293,862,751	\$ 284,909,787	\$ 253,049,215	\$ 133,925,680
Operating Expense per Day (365 days)	\$ 889,684	\$ 826,985	\$ 847,897	\$ 805,103	\$ 780,575	\$ 693,286	\$ 739,921
Days Cash							
Number of days cash	599	819	804	724	673	682	480

* GLWA assumed operations on January 1, 2016. Data for 2016 includes six months of operation under GLWA. Operating expense per day for 2016 is computed using 181 days (six months of operations).

The accompanying notes to the supplementary information are an integral part of this schedule.

GREAT LAKES WATER AUTHORITY

NOTES TO SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2022

Note 1 – Combining Fund Schedules

The Combining Fund Schedules presented combined the six funds the Authority maintains into the two major funds reported in the Basic Financial Statements, the Water Fund and Sewage Disposal Fund. The following describes the six funds and the purpose of each fund.

Water Operations Fund – All water revenues are credited to this fund. All expenses for the operations and maintenance of the water system are paid from this fund. This fund aligns with the operations and maintenance (O&M) expense revenue requirement for establishing service charges.

Sewer Operations Fund – All sewer revenues are credited to this fund. All expenses for the operations and maintenance of the wastewater system are paid from this fund. This fund aligns with the operations and maintenance (O&M) expense revenue requirement for establishing service charges.

Water Improvement & Extension Fund (I&E) – Amounts that are budgeted in the water revenue requirement to reduce debt financing are transferred to this fund as well as any other water funds that management has determined are available for this use. This fund is used for water system capital outlays and capital improvements. Expenditures under the operating expenses category are expenditures incurred for the betterment of the system, which may lead to capital expenditures but are not necessarily applicable to any current capital improvement.

Sewer Improvement & Extension Fund (I&E) – Amounts that are budgeted in the wastewater revenue requirement to reduce debt financing are transferred to this fund as well as any other wastewater funds that management has determined are available for this use. This fund is used for wastewater system capital outlays and capital improvements. Expenditures under the operating expenses category are expenditures incurred for the betterment of the system, which may lead to capital expenditures but are not necessarily applicable to any current capital improvement.

Water Construction Fund – This fund is used for the proceeds of water debt obligations and investment earnings thereon. I&E funds may also be transferred to this fund when bond proceeds have been exhausted. Funds are used to pay for water system capital improvements in accordance with the debt obligations.

Sewer Construction Fund – This fund is used for the proceeds of sewer debt obligations and investment earnings thereon. I&E funds may also be transferred to this fund when bond proceeds have been exhausted. Funds are used to pay for the wastewater system capital improvements in accordance with the debt obligations.

GREAT LAKES WATER AUTHORITY

NOTES TO SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2022

Note 2 – Budget to Actual Schedules

Schedule of Operating Expenses – Budget to Actual

The schedule of operating expenses for the water system operations and the sewage disposal system operations provides the detail of the major expense categories of the operations budget compared to the actual results. The schedule includes the actual operating expenses before depreciation and amortization for the Water Operations Fund and the Sewer Operations Fund reported in the Combining Schedule of Revenues, Expenses and Changes in Net position for the Water Fund and the Sewage Disposal Fund. The Warehouse lease line represents the total lease payments made for the warehouse which is included in the budget as an operating lease. For financial reporting purposes the warehouse payments are treated as a reduction in the lease liability and interest expense (which is a nonoperating expense). The subscription based information technology arrangements (SBITA) payments line represents the payments made for the SBITA's which is included in the budget as a contractual service. For financial reporting purposes these costs have been treated as a prepaid subscription asset as the software is not in service as of June 30, 2022.

Schedule of Revenue Requirements – Budget to Actual

The revenue requirements are the basis for GLWA's budget and calculating Member Partner service charges. The revenue requirements are presented to align with the Master Bond Ordinance flow of funds categories. The budget basis reflects revenues and operations and maintenance expenses on an accrual basis adjusted for GASB 87 and GASB 96 as described in the note above, in addition to cash payments for debt service, legacy pension obligations, water residential assistance program and regional system lease related activities.

The revenue requirements basis is foundational to GLWA's daily operations and long-term financial planning. The budget is adopted by the GLWA Board of Directors by resolution. The Board's action establishes the total operations and maintenance budget, total debt service requirements and total capital expenditures for the I&E Fund and Construction Fund for both the Regional Water System and the Regional Sewer System. The legal level of budgetary control is at this level. Administratively, the budget may be modified within these categories. Modifications to the budget beyond those established levels would be presented to the Audit Committee, and subsequently to the Board.

Investment earnings for the budget basis includes the stated interest rate received, amortization of the market discount or premium, and realized gains and losses (calculated for budget purposes as the difference between the selling price and the amortized cost basis). This will vary from the investment earnings reported in the basic financial statements. The main difference is the budget basis does not include unrealized gains and losses (calculated for budget purposes as the difference between the market value and the amortized cost basis).

Note 3 – Schedule of Revenue Requirements to Statement of Revenues, Expenses and Changes in Net Position Crosswalk

The Great Lakes Water Authority establishes a revenue requirements budget for the purposes of establishing charges, which follows a modified cash basis of accounting. The financial report is prepared in accordance with Generally Accepted Accounting Principles for enterprise funds of a local government. The crosswalk provides a reconciliation between the different basis of accounting used for the budget and the financial report.

STATISTICAL SECTION

GREAT LAKES WATER AUTHORITY

STATISTICAL SECTION TABLE OF CONTENTS

The objective of the statistical section is to provide financial statement users with additional historical perspective, context and detail to assist in using the information in the financial statements, notes to financial statements and required supplementary information to understand and assess the Authority's economic condition.

The statistical section information is presented in the following categories:

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Financial Trends Schedules 1 through 2	Financial trends information is intended to show how the Authority's financial position has changed over time.	115
Revenue Capacity Schedules 3 through 7	Revenue capacity information is intended to show the factors affecting the Authority's ability to generate its own-source revenue.	124
Debt Capacity Information Schedules 8 through 12	Debt capacity information is intended to show the Authority's debt burden and its ability to issue additional debt.	130
Demographic and Economic Schedules 13 through 14	Demographic and economic information is intended to show the socioeconomic environment within which the Authority operates.	142
Operating Information Schedules 15 through 17	Operating information is intended to show contextual information about operations and resources to provide understanding and assessing the Authority's economic condition.	144

Sources: Unless otherwise noted, information presented in these schedules was obtained from GLWA's Annual Comprehensive Financial Reports, the prior financial reports of DWSD or other internal information systems.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF NET POSITION - BUSINESS-TYPE ACTIVITIES

As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016
Assets							
Current Assets							
Cash and cash equivalents	\$ 347,655,417	\$ 354,351,132	\$ 208,356,720	\$ 309,015,559	\$ 509,141,777	\$ 470,231,842	\$ 311,735,186
Restricted cash and cash equivalents	87,643,974	151,186,044	65,364,730	164,495,839	105,929,392	132,967,081	134,210,268
Restricted cash for the benefit of DWSD	20,469,633	6,064,197	1,544,529	3,318,316	8,418,827	288,378	62,078
Investments	185,209,092	322,929,971	473,549,014	274,246,497	16,511,237	2,283,028	43,620,761
Restricted investments	103,754,094	31,690,982	117,966,914	34,852,593	33,025,340	32,541,021	56,661,000
Receivables							
Billed	118,892,413	108,247,576	95,159,661	98,886,172	88,712,190	88,694,341	85,676,104
Unbilled	54,395,207	54,387,680	54,893,266	50,441,488	54,429,817	53,818,603	55,345,336
Other	1,292,666	574,906	310,373	1,137,526	3,728,886	3,158,350	114,648,035
Allowance for doubtful accounts	(56,823,732)	(50,884,273)	(44,991,966)	(42,257,915)	(39,084,816)	(35,352,009)	(124,009,242)
Due from other governments	13,454,460	13,240,859	31,802,636	30,243,156	47,927,860	50,789,041	107,688,300
Due from other funds	2,328,086	2,948,712	2,134,191	2,889,522	3,778,220	-	65,971
Contractual obligation receivable	33,529,695	31,195,900	29,661,490	26,418,147	24,813,886	23,339,242	11,929,259
Shortfall receivable - DWSD	-	8,296,578	18,206,431	17,542,669	9,367,355	-	-
Prepaid items and other assets	13,622,385	11,744,542	10,150,336	8,448,932	4,949,631	3,526,568	2,591,049
Inventories	8,366,771	7,795,152	7,007,208	5,832,593	8,471,626	8,509,454	9,984,063
Total Current Assets	<u>933,790,161</u>	<u>1,053,769,958</u>	<u>1,071,115,533</u>	<u>985,511,094</u>	<u>880,121,228</u>	<u>834,794,940</u>	<u>810,208,168</u>
Noncurrent Assets							
Restricted cash and cash equivalents	5,264,591	5,395,501	47,505,584	94,185,040	48,263,059	306,318,331	160,949,722
Restricted investments	40,691,319	38,533,910	39,819,506	150,978,512	293,697,988	101,708,122	105,028,079
Contractual obligation receivable	919,288,110	936,811,819	954,297,909	883,248,672	812,613,943	830,432,680	832,571,741
Shortfall receivable - DWSD	-	-	8,296,578	26,503,010	19,932,645	-	-
Prepaid lease	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	-
Assets not subject to depreciation or amortization	887,940,328	813,485,421	719,865,490	786,405,120	706,046,995	730,471,792	711,434,348
Capital assets being depreciated, net	3,432,437,184	3,546,026,747	3,689,047,120	3,747,783,788	3,984,216,865	4,178,315,045	4,427,945,555
Intangible assets, net	94,646,686	98,653,054	97,786,037	101,352,701	104,919,365	-	-
Prepaid insurance on debt	16,773,793	18,357,442	19,988,764	22,635,151	29,933,631	32,694,221	48,653,581
Total Noncurrent Assets	<u>5,422,042,011</u>	<u>5,482,263,894</u>	<u>5,601,606,988</u>	<u>5,838,091,994</u>	<u>6,024,624,491</u>	<u>6,204,940,191</u>	<u>6,286,583,026</u>
Total Assets	<u>6,355,832,172</u>	<u>6,536,033,852</u>	<u>6,672,722,521</u>	<u>6,823,603,088</u>	<u>6,904,745,719</u>	<u>7,039,735,131</u>	<u>7,096,791,194</u>
Deferred Outflows of Resources							
Deferred charge on refunding	152,338,303	163,387,050	174,435,795	241,879,138	280,975,963	297,646,441	328,659,457
Deferred pension amounts	30,158,700	61,687,252	42,661,204	31,717,285	52,015,636	59,954,478	37,997,043
Total Deferred Outflows of Resources	<u>182,497,003</u>	<u>225,074,302</u>	<u>217,096,999</u>	<u>273,596,423</u>	<u>332,991,599</u>	<u>357,600,919</u>	<u>366,656,500</u>

	2022	2021	2020	2019	2018	2017	2016
Liabilities							
Current Liabilities							
Accounts and contracts payable	\$ 94,379,034	\$ 85,221,415	\$ 74,070,629	\$ 74,662,036	\$ 67,832,136	\$ 64,298,400	\$ 85,626,614
Accrued salaries, wages and benefits	2,060,030	6,028,598	5,321,864	4,284,220	4,734,956	3,190,038	2,887,280
Accrued liabilities	25,004,633	11,573,811	5,357,056	7,109,589	12,679,692	2,252,616	1,550,254
Due to other governments	21,360,601	19,443,993	20,032,254	15,963,934	11,983,407	61,242,386	37,893,903
Due to other funds	2,328,086	2,948,712	2,134,191	2,889,522	3,778,220	-	65,971
Interest payable	70,965,548	71,811,380	58,452,960	84,456,284	80,431,318	80,340,520	81,139,013
Current portion of:							
Revenue bonds and loans	127,403,800	119,909,733	121,998,075	117,602,109	81,756,050	89,314,212	96,552,356
Raw water rights obligation	2,845,282	2,734,246	2,624,820	2,520,996	2,999,458	-	-
BC Note obligation	662,710	631,153	601,097	572,474	545,213	519,251	494,524
Regional system leases	12,637,211	12,121,951	11,627,700	11,153,602	10,698,835	10,262,609	9,844,169
Other liabilities	6,813,946	5,867,203	6,380,583	5,751,747	5,687,043	6,714,210	7,789,273
Total Current Liabilities	<u>366,460,881</u>	<u>338,292,195</u>	<u>308,601,229</u>	<u>326,966,513</u>	<u>283,126,328</u>	<u>318,134,242</u>	<u>323,843,357</u>
Noncurrent Liabilities							
Revenue bonds and loans	5,149,961,142	5,319,896,659	5,474,913,736	5,630,571,800	5,714,095,283	5,842,482,161	5,876,115,822
Raw water rights obligation	92,515,774	95,361,056	98,095,302	100,720,123	103,241,118	-	-
BC Note obligation	53,088,452	53,751,162	54,382,315	54,983,412	55,555,887	56,101,100	56,620,351
Regional system lease	889,101,471	901,738,681	913,860,632	925,488,338	936,641,935	947,340,770	957,603,379
Other liabilities	21,122,269	21,514,839	18,757,906	18,771,285	18,437,517	11,340,902	46,002,543
Net pension liability	65,221,327	144,305,198	132,909,889	131,981,165	178,961,907	194,075,547	170,229,438
Total Noncurrent Liabilities	<u>6,271,010,435</u>	<u>6,536,567,595</u>	<u>6,692,919,780</u>	<u>6,862,516,123</u>	<u>7,006,933,647</u>	<u>7,051,340,480</u>	<u>7,106,571,533</u>
Total Liabilities	<u>6,637,471,316</u>	<u>6,874,859,790</u>	<u>7,001,521,009</u>	<u>7,189,482,636</u>	<u>7,290,059,975</u>	<u>7,369,474,722</u>	<u>7,430,414,890</u>
Deferred Inflows of Resources							
Deferred gain on refunding	88,783,069	96,296,284	103,809,499	108,300,657	105,907,267	112,080,430	-
Deferred amounts for swap terminations	61,895	84,205	106,515	240,839	270,150	299,461	4,373,886
Deferred capital contribution	-	-	5,960,000	-	-	-	-
Deferred pension amounts	31,311,922	-	-	-	20,254,690	18,316,430	43,342,798
Total Deferred Inflows of Resources	<u>120,156,886</u>	<u>96,380,489</u>	<u>109,876,014</u>	<u>108,541,496</u>	<u>126,432,107</u>	<u>130,696,321</u>	<u>47,716,684</u>
Net Position (Deficit) [1]							
Net investment in capital assets	(194,715,306)	(302,012,473)	(351,218,780)	(228,867,586)	(49,720,885)	140,378,223	311,166,676
Restricted for debt service	123,414,653	114,544,694	105,282,969	146,977,835	125,235,904	134,125,957	178,591,676
Restricted for payment assistance program	12,318,423	11,043,109	8,988,078	8,001,369	5,771,110	5,336,117	3,504,148
Unrestricted	<u>(160,316,797)</u>	<u>(33,707,455)</u>	<u>15,370,230</u>	<u>(126,936,239)</u>	<u>(260,040,893)</u>	<u>(382,675,290)</u>	<u>(507,946,380)</u>
TOTAL NET POSITION (DEFICIT)	<u>\$ (219,299,027)</u>	<u>\$ (210,132,125)</u>	<u>\$ (221,577,503)</u>	<u>\$ (200,824,621)</u>	<u>\$ (178,754,764)</u>	<u>\$ (102,834,993)</u>	<u>\$ (14,683,880)</u>

[1] The classification for net position for 2016 - 2018 have been revised to match the methodology used from 2019 and thereafter.

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY
SCHEDULE OF NET POSITION - WATER FUND
As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016
Assets							
Current Assets							
Cash and cash equivalents	\$ 147,191,020	\$ 162,766,427	\$ 88,786,996	148,643,793	\$ 310,085,221	\$ 266,483,138	\$ 155,712,891
Restricted cash and cash equivalents	49,069,747	65,677,030	39,304,453	68,564,311	51,097,342	60,753,268	53,028,844
Restricted cash for the benefit of DWSD	11,371,285	3,144,400	1,544,529	2,690,397	8,418,827	288,378	10,430
Investments	91,499,859	190,541,958	305,653,818	198,561,135	7,004,525	852,420	11,579,681
Restricted investments	30,711,544	2,932,400	30,900,352	1,468,148	1,234,954	1,169,187	27,818,000
Receivables							
Billed	54,169,640	48,694,817	38,769,605	38,336,701	38,272,740	36,459,563	37,629,170
Unbilled	30,349,758	30,066,884	31,032,237	26,144,348	29,229,709	29,539,433	32,307,945
Other	295,791	85,494	214,997	916,074	5,850	1,300	21,899,046
Allowance for doubtful accounts	(13,917,234)	(11,562,519)	(8,634,075)	(7,455,747)	(6,221,815)	(4,941,777)	(25,040,612)
Due from other governments	11,246,188	11,889,748	20,343,238	30,063,571	23,588,754	21,327,713	41,486,157
Due from other funds	2,328,086	2,786,344	2,134,191	2,876,954	330,293	-	-
Contractual obligation receivable	18,126,021	16,558,716	15,620,163	14,328,368	13,560,086	12,076,942	6,851,584
Prepaid items and other assets	8,701,487	7,601,239	6,458,613	5,647,661	3,265,972	2,437,047	2,183,690
Inventories	-	794,521	636,621	386,612	-	-	-
Total Current Assets	<u>441,143,192</u>	<u>531,977,459</u>	<u>572,765,738</u>	<u>531,172,326</u>	<u>479,872,458</u>	<u>426,446,612</u>	<u>365,466,826</u>
Noncurrent Assets							
Restricted cash and cash equivalents	2,773,291	2,519,127	20,491,397	32,154,262	18,261,706	177,939,494	5,460,942
Restricted investments	9,506,991	8,651,762	10,770,585	77,075,423	150,436,225	20,530,374	42,841,345
Contractual obligation receivable	549,493,189	552,093,376	554,942,283	468,481,719	477,039,443	483,604,380	466,317,666
Prepaid lease	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	-
Assets not subject to depreciation or amortization	567,414,021	498,010,970	418,996,654	467,830,218	434,684,895	452,185,674	415,558,090
Capital assets being depreciated, net	1,293,659,589	1,324,554,087	1,390,129,473	1,390,765,435	1,499,118,693	1,587,291,603	1,728,054,410
Intangible asset - raw water rights, net	90,652,709	94,219,373	97,786,037	101,352,701	104,919,365	-	-
Prepaid insurance on debt	6,649,782	7,304,243	7,958,703	8,754,897	13,002,376	14,112,324	20,831,496
Total Noncurrent Assets	<u>2,531,399,572</u>	<u>2,498,602,938</u>	<u>2,512,325,132</u>	<u>2,557,664,655</u>	<u>2,708,712,703</u>	<u>2,746,913,849</u>	<u>2,679,063,949</u>
Total Assets	<u>2,972,542,764</u>	<u>3,030,580,397</u>	<u>3,085,090,870</u>	<u>3,088,836,981</u>	<u>3,188,585,161</u>	<u>3,173,360,461</u>	<u>3,044,530,775</u>
Deferred Outflows of Resources							
Deferred charge on refunding	41,997,055	44,677,823	47,358,590	82,508,971	94,431,823	99,294,499	116,511,949
Deferred pension amounts	10,810,800	22,112,642	15,292,494	11,369,496	18,645,719	21,491,506	13,620,562
Total Deferred Outflows of Resources	<u>52,807,855</u>	<u>66,790,465</u>	<u>62,651,084</u>	<u>93,878,467</u>	<u>113,077,542</u>	<u>120,786,005</u>	<u>130,132,511</u>

	2022	2021	2020	2019	2018	2017	2016
Liabilities							
Current Liabilities							
Accounts and contracts payable	\$ 56,890,771	\$ 53,039,330	\$ 43,231,679	36,657,714	\$ 33,754,534	\$ 36,751,842	\$ 49,474,527
Accrued salaries, wages and benefits	1,046,674	4,892,033	5,321,864	4,284,220	4,734,956	3,190,038	2,887,280
Accrued liabilities	15,261,427	6,958,556	5,357,056	6,481,670	12,679,692	1,353,816	875,796
Due to other governments	17,610,601	15,693,993	18,282,254	15,963,934	11,935,868	25,393,813	13,668,890
Due to other funds	-	162,368	-	12,568	3,447,927	-	65,971
Interest payable	36,398,995	36,621,768	30,887,915	40,325,682	39,322,324	39,329,322	37,226,125
Current portion of:							
Revenue bonds and loans	40,091,255	32,500,450	33,058,615	29,244,447	20,569,843	23,393,905	35,650,167
Raw water rights obligation	2,845,282	2,734,246	2,624,820	2,520,996	2,999,458	-	-
BC Note obligation	203,954	194,242	184,992	176,183	167,794	159,803	152,193
Regional system lease	5,686,745	5,454,878	5,232,465	5,019,121	4,814,476	4,618,174	4,429,876
Other liabilities	3,378,083	3,123,843	5,331,161	4,938,308	4,635,565	2,182,888	6,675,228
Total Current Liabilities	<u>179,413,787</u>	<u>161,375,707</u>	<u>149,512,821</u>	<u>145,624,843</u>	<u>139,062,437</u>	<u>136,373,601</u>	<u>151,106,053</u>
Noncurrent Liabilities							
Revenue bonds and loans	2,359,238,286	2,407,391,624	2,459,730,737	2,467,177,447	2,545,529,255	2,606,465,431	2,488,824,632
Raw water rights obligation	92,515,774	95,361,056	98,095,302	100,720,123	103,241,118	-	-
BC Note obligation	16,338,339	16,542,293	16,736,534	16,921,526	17,097,709	17,265,503	17,425,306
Regional system lease	400,095,662	405,782,406	411,237,284	416,469,750	421,488,871	426,303,346	430,921,520
Other liabilities	4,132,979	4,138,780	4,840,615	4,979,604	4,933,977	5,170,201	9,784,562
Net pension liability	23,379,480	51,728,179	47,643,374	47,310,460	64,151,352	69,569,044	61,021,079
Total Noncurrent Liabilities	<u>2,895,700,520</u>	<u>2,980,944,338</u>	<u>3,038,283,846</u>	<u>3,053,578,910</u>	<u>3,156,442,282</u>	<u>3,124,773,525</u>	<u>3,007,977,099</u>
Total Liabilities	<u>3,075,114,307</u>	<u>3,142,320,045</u>	<u>3,187,796,667</u>	<u>3,199,203,753</u>	<u>3,295,504,719</u>	<u>3,261,147,126</u>	<u>3,159,083,152</u>
Deferred Inflows of Resources							
Deferred gain on refunding	48,216,421	52,250,187	56,283,953	60,317,719	59,252,431	62,822,646	-
Deferred amounts for swap terminations	61,438	66,164	70,890	75,616	80,342	85,068	4,134,908
Deferred pension amounts	11,224,189	-	-	-	7,260,572	6,565,776	15,536,821
Total Deferred Inflows of Resources	<u>59,502,048</u>	<u>52,316,351</u>	<u>56,354,843</u>	<u>60,393,335</u>	<u>66,593,345</u>	<u>69,473,490</u>	<u>19,671,729</u>
Net Position (Deficit) [1]							
Net investment in capital assets	(109,163,683)	(191,352,010)	(237,858,820)	(166,485,092)	(84,133,546)	(2,321,309)	90,778,518
Restricted for debt service	31,660,045	23,688,943	19,479,656	29,731,576	23,239,368	26,194,280	69,797,836
Restricted for payment assistance program	5,272,708	4,614,294	3,754,368	3,369,875	2,462,214	2,218,373	1,451,598
Unrestricted	(37,034,806)	65,783,239	118,215,240	56,502,001	(2,003,397)	(62,565,494)	(166,119,547)
TOTAL NET POSITION (DEFICIT)	<u>\$ (109,265,736)</u>	<u>\$ (97,265,534)</u>	<u>\$ (96,409,556)</u>	<u>\$ (76,881,640)</u>	<u>\$ (60,435,361)</u>	<u>\$ (36,474,150)</u>	<u>\$ (4,091,595)</u>

[1] The classification for net position for 2016 - 2018 have been revised to match the methodology used from 2019 and thereafter.

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF NET POSITION - SEWAGE DISPOSAL FUND

As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016
Assets							
Current Assets							
Cash and cash equivalents	\$ 200,464,397	\$ 191,584,705	\$ 119,569,724	\$ 160,371,766	\$ 199,056,556	\$ 203,748,704	\$ 156,022,295
Restricted cash and cash equivalents	38,574,227	85,509,014	26,060,277	95,931,528	54,832,050	72,213,813	81,181,424
Restricted cash for the benefit of DWSD	9,098,348	2,919,797	-	627,919	-	-	51,648
Investments	93,709,233	132,388,013	167,895,196	75,685,362	9,506,712	1,430,608	32,041,080
Restricted investments	73,042,550	28,758,582	87,066,562	33,384,445	31,790,386	31,371,834	28,843,000
Receivables							
Billed	64,722,773	59,552,759	56,390,056	60,549,471	50,439,450	52,234,778	48,046,934
Unbilled	24,045,449	24,320,796	23,861,029	24,297,140	25,200,108	24,279,170	23,037,391
Other	996,875	489,412	95,376	221,452	3,723,036	3,157,050	92,748,989
Allowance for doubtful accounts	(42,906,498)	(39,321,754)	(36,357,891)	(34,802,168)	(32,863,001)	(30,410,232)	(98,968,630)
Due from other governments	2,208,272	1,351,111	11,459,398	179,585	24,339,106	29,461,328	66,202,143
Due from other funds	-	162,368	-	12,568	3,447,927	-	65,971
Contractual obligation receivable	15,403,674	14,637,184	14,041,327	12,089,779	11,253,800	11,262,300	5,077,675
Shortfall receivable - DWSD	-	8,296,578	18,206,431	17,542,669	9,367,355	-	-
Prepaid items and other assets	4,920,898	4,143,303	3,691,723	2,801,271	1,683,659	1,089,521	407,359
Inventories	8,366,771	7,000,631	6,370,587	5,445,981	8,471,626	8,509,454	9,984,063
Total Current Assets	<u>492,646,969</u>	<u>521,792,499</u>	<u>498,349,795</u>	<u>454,338,768</u>	<u>400,248,770</u>	<u>408,348,328</u>	<u>444,741,342</u>
Noncurrent Assets							
Restricted cash and cash equivalents	2,491,300	2,876,374	27,014,187	62,030,778	30,001,353	128,378,837	155,488,780
Restricted investments	31,184,328	29,882,148	29,048,921	73,903,089	143,261,763	81,177,748	62,186,734
Contractual obligation receivable	369,794,921	384,718,443	399,355,626	414,766,953	335,574,500	346,828,300	366,254,075
Shortfall receivable - DWSD	-	-	8,296,578	26,503,010	19,932,645	-	-
Prepaid lease	13,750,000	13,750,000	13,750,000	13,750,000	13,750,000	13,750,000	-
Assets not subject to depreciation or amortization	320,526,307	315,474,451	300,868,836	318,574,902	271,362,100	278,286,118	295,876,258
Capital assets being depreciated, net	2,138,777,595	2,221,472,660	2,298,917,647	2,357,018,353	2,485,098,172	2,591,023,442	2,699,891,145
Intangible assets, net	3,993,977	4,433,681	-	-	-	-	-
Prepaid insurance on debt	10,124,011	11,053,199	12,030,061	13,880,254	16,931,255	18,581,897	27,822,085
Total Noncurrent Assets	<u>2,890,642,439</u>	<u>2,983,660,956</u>	<u>3,089,281,856</u>	<u>3,280,427,339</u>	<u>3,315,911,788</u>	<u>3,458,026,342</u>	<u>3,607,519,077</u>
Total Assets	<u>3,383,289,408</u>	<u>3,505,453,455</u>	<u>3,587,631,651</u>	<u>3,734,766,107</u>	<u>3,716,160,558</u>	<u>3,866,374,670</u>	<u>4,052,260,419</u>
Deferred Outflows of Resources							
Deferred charge on refunding	110,341,248	118,709,227	127,077,205	159,370,167	186,544,140	198,351,942	212,147,508
Deferred pension amounts	19,347,900	39,574,610	27,368,710	20,347,789	33,369,917	38,462,972	24,376,481
Total Deferred Outflows of Resources	<u>129,689,148</u>	<u>158,283,837</u>	<u>154,445,915</u>	<u>179,717,956</u>	<u>219,914,057</u>	<u>236,814,914</u>	<u>236,523,989</u>

	2022	2021	2020	2019	2018	2017	2016
Liabilities							
Current Liabilities							
Accounts and contracts payable	\$ 37,488,263	\$ 32,182,085	\$ 30,838,950	\$ 38,004,322	\$ 34,077,602	\$ 27,546,558	\$ 36,152,087
Accrued salaries, wages and benefits	1,013,356	1,136,565	-	-	-	-	-
Accrued liabilities	9,743,206	4,615,255	-	627,919	-	898,800	674,458
Due to other governments	3,750,000	3,750,000	1,750,000	-	47,539	35,848,573	24,225,013
Due to other funds	2,328,086	2,786,344	2,134,191	2,876,954	330,293	-	-
Interest payable	34,566,553	35,189,612	27,565,045	44,130,602	41,108,994	41,011,198	43,912,888
Current portion of:							
Revenue bonds and loans	87,312,545	87,409,283	88,939,460	88,357,662	61,186,207	65,920,307	60,902,189
BC Note obligation	458,756	436,911	416,105	396,291	377,419	359,448	342,331
Regional system lease	6,950,466	6,667,073	6,395,235	6,134,481	5,884,359	5,644,435	5,414,293
Other liabilities	3,435,863	2,743,360	1,049,422	813,439	1,051,478	4,531,322	1,114,045
Total Current Liabilities	<u>187,047,094</u>	<u>176,916,488</u>	<u>159,088,408</u>	<u>181,341,670</u>	<u>144,063,891</u>	<u>181,760,641</u>	<u>172,737,304</u>
Noncurrent Liabilities							
Revenue bonds and loans	2,790,722,856	2,912,505,035	3,015,182,999	3,163,394,353	3,168,566,028	3,236,016,730	3,387,291,190
BC Note obligation	36,750,113	37,208,869	37,645,781	38,061,886	38,458,178	38,835,597	39,195,045
Regional system lease	489,005,809	495,956,275	502,623,348	509,018,588	515,153,064	521,037,424	526,681,859
Other liabilities	16,989,290	17,376,059	13,917,291	13,791,681	13,503,540	6,170,701	36,217,981
Net pension liability	41,841,847	92,577,019	85,266,515	84,670,705	114,810,555	124,506,503	109,208,359
Total Noncurrent Liabilities	<u>3,375,309,915</u>	<u>3,555,623,257</u>	<u>3,654,635,934</u>	<u>3,808,937,213</u>	<u>3,850,491,365</u>	<u>3,926,566,955</u>	<u>4,098,594,434</u>
Total Liabilities	<u>3,562,357,009</u>	<u>3,732,539,745</u>	<u>3,813,724,342</u>	<u>3,990,278,883</u>	<u>3,994,555,256</u>	<u>4,108,327,596</u>	<u>4,271,331,738</u>
Deferred Inflows of Resources							
Deferred gain on refunding	40,566,648	44,046,097	47,525,546	47,982,938	46,654,836	49,257,784	-
Deferred amounts for swap terminations	457	18,041	35,625	165,223	189,808	214,393	238,978
Deferred capital contribution	-	-	5,960,000	-	-	-	-
Deferred pension amounts	20,087,733	-	-	-	12,994,118	11,750,654	27,805,977
Total Deferred Inflows of Resources	<u>60,654,838</u>	<u>44,064,138</u>	<u>53,521,171</u>	<u>48,148,161</u>	<u>59,838,762</u>	<u>61,222,831</u>	<u>28,044,955</u>
Net Position (Deficit) [1]							
Net investment in capital assets	(85,551,623)	(110,660,463)	(113,359,960)	(62,382,494)	34,412,661	142,699,532	220,388,158
Restricted for debt service	91,754,608	90,855,751	85,803,313	117,246,259	101,996,536	107,931,677	108,793,840
Restricted for payment assistance program	7,045,715	6,428,815	5,233,710	4,631,494	3,308,896	3,117,744	2,052,550
Unrestricted	(123,281,991)	(99,490,694)	(102,845,010)	(183,438,240)	(258,037,496)	(320,109,796)	(341,826,833)
TOTAL NET POSITION (DEFICIT)	<u>\$ (110,033,291)</u>	<u>\$ (112,866,591)</u>	<u>\$ (125,167,947)</u>	<u>\$ (123,942,981)</u>	<u>\$ (118,319,403)</u>	<u>\$ (66,360,843)</u>	<u>\$ (10,592,285)</u>

[1] The classification for net position for 2016 - 2018 have been revised to match the methodology used from 2019 and thereafter.

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

CHANGES IN NET POSITION - BUSINESS-TYPE ACTIVITIES

	2022	2021	2020	2019	2018	2017	2016*
Operating Revenues							
Wholesale customer charges	\$ 591,839,582	\$ 589,991,584	\$ 578,705,063	\$ 584,171,596	\$ 592,096,175	\$ 594,426,876	\$ 281,883,522
Local system charges	210,359,500	209,885,200	207,102,800	201,340,700	194,099,800	202,794,400	102,660,400
Industrial waste charges	8,300,278	8,004,939	7,854,593	9,106,274	14,334,979	14,381,106	6,910,192
Pollutant surcharges	5,181,816	6,719,964	6,448,508	5,932,550	6,908,404	5,206,294	2,423,910
Bad debt recovery	-	-	-	-	-	40,172,155	-
Other revenues	663,953	766,943	778,257	527,663	4,455,345	576,195	4,252,477
Total Operating Revenues	816,345,129	815,368,630	800,889,221	801,078,783	811,894,703	857,557,026	398,130,501
Operating Expenses							
Personnel	107,053,390	106,945,131	104,266,420	98,588,599	95,525,457	86,156,304	21,590,763
Contractual services	114,094,006	103,324,025	109,448,358	101,743,758	99,877,310	90,135,859	17,179,869
Utilities	59,655,751	52,749,654	51,152,735	51,395,385	53,694,380	55,661,469	25,037,499
Chemicals	20,382,163	13,982,136	14,241,843	13,275,860	12,877,813	14,765,181	6,451,484
Supplies and other expenses	29,069,352	31,097,071	35,427,273	37,120,915	34,526,388	20,162,690	17,903,355
Capital adjustment	-	-	26,780	2,258,351	-	-	-
Capital program allocation	(2,632,136)	(3,191,809)	(3,347,401)	(3,380,755)	(1,683,450)	(2,128,078)	-
Intergovernmental reimbursements	(2,887,881)	(3,166,692)	(1,733,710)	(7,139,362)	(9,908,111)	(11,704,210)	-
Centralized services	-	-	-	-	-	-	35,228,282
Administrative services	-	-	-	-	-	-	10,534,428
Depreciation	281,209,656	274,043,606	280,104,195	309,115,490	331,242,398	329,766,377	157,316,574
Amortization of intangible assets	4,006,368	3,676,590	3,566,664	3,566,664	2,080,554	-	-
Total Operating Expenses	609,950,669	579,459,712	593,153,157	606,544,905	618,232,739	582,815,592	291,242,254
Operating Income	206,394,460	235,908,918	207,736,064	194,533,878	193,661,964	274,741,434	106,888,247
Nonoperating Revenues (Expenses)							
Earnings (loss) on investments	(5,384,278)	1,259,624	25,416,706	26,517,802	11,395,785	4,042,790	1,481,398
Interest on shortfall and obligations receivable	42,264,765	43,722,511	42,434,884	41,777,702	38,856,520	42,332,428	21,062,500
Interest expense	(256,196,504)	(263,485,014)	(288,947,856)	(296,597,333)	(300,395,306)	(291,592,097)	(148,447,442)
Amortization of debt related items and cost of issuance	13,318,015	12,965,639	10,302,560	3,995,230	8,684,285	(14,937,182)	2,055,724
Legacy pension expense	(13,915,303)	(22,527,961)	(20,143,505)	16,778,381	(24,922,162)	(7,021,006)	-
WRAP (Water Residential Assistance Program)	(2,792,837)	(1,517,453)	(3,315,117)	(2,024,119)	(3,755,534)	(2,127,333)	-
Other	153,741	(840,886)	(196,618)	(524,198)	554,677	379,409	275,693
Sewer lookback - MOU adjustment	-	-	-	(6,527,200)	-	-	-
Total Nonoperating Expenses	(222,552,401)	(230,423,540)	(234,448,946)	(216,603,735)	(269,581,735)	(268,922,991)	(123,572,127)
Income (loss) before contributions and special item	(16,157,941)	5,485,378	(26,712,882)	(22,069,857)	(75,919,771)	5,818,443	(16,683,880)
Capital Contributions	6,991,039	5,960,000	5,960,000	-	-	320,707	2,000,000
Special Item - MOU with DWSD	-	-	-	-	-	(94,290,263)	-
Change in net position	(9,166,902)	11,445,378	(20,752,882)	(22,069,857)	(75,919,771)	(88,151,113)	(14,683,880)
NET POSITION (DEFICIT), Beginning of Year	(210,132,125)	(221,577,503)	(200,824,621)	(178,754,764)	(102,834,993)	(14,683,880)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (219,299,027)	\$ (210,132,125)	\$ (221,577,503)	\$ (200,824,621)	\$ (178,754,764)	\$ (102,834,993)	\$ (14,683,880)

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

CHANGES IN NET POSITION - WATER FUND

	2022	2021	2020	2019	2018	2017	2016*
Operating Revenues							
Wholesale customer charges	\$ 323,026,213	\$ 322,423,768	\$ 312,701,777	\$ 311,399,136	\$ 323,117,344	\$ 331,115,131	\$ 160,777,169
Local system charges	21,697,300	21,925,500	21,295,500	20,181,400	15,130,600	15,490,300	6,833,500
Bad debt recovery	-	-	-	-	-	5,107,125	-
Other revenues	234,462	265,822	256,300	21,340	64,200	37,388	54,863
Total Operating Revenues	344,957,975	344,615,090	334,253,577	331,601,876	338,312,144	351,749,944	167,665,532
Operating Expenses							
Personnel	44,892,622	43,889,495	43,946,225	42,085,546	41,845,295	38,261,393	8,301,022
Contractual services	50,683,897	40,410,811	46,097,405	43,083,078	35,794,549	34,257,419	3,304,113
Utilities	28,725,292	28,828,226	27,719,754	26,247,858	26,871,081	28,469,603	12,368,557
Chemicals	7,788,784	6,028,141	5,569,437	5,088,827	4,804,768	5,340,753	2,444,543
Supplies and other expenses	9,157,367	9,158,990	12,034,192	11,797,279	9,543,615	7,982,562	1,440,644
Capital adjustment	-	-	26,780	-	-	-	-
Capital program allocation	(1,618,459)	(2,123,060)	(2,164,003)	(2,054,913)	(713,779)	(977,762)	-
Intergovernmental reimbursements	(1,813,535)	(2,554,511)	(696,952)	(6,425,729)	(9,615,146)	(11,603,019)	-
Centralized services	-	-	-	-	-	-	18,494,851
Administrative services	-	-	-	-	-	-	3,191,929
Depreciation	123,196,027	123,271,541	127,183,228	140,571,120	143,991,815	144,137,912	71,295,545
Amortization of intangible asset	3,566,664	3,566,664	3,566,664	3,566,664	2,080,554	-	-
Total Operating Expenses	264,578,659	250,476,297	263,282,730	263,959,730	254,602,752	245,868,861	120,841,204
Operating Income	80,379,316	94,138,793	70,970,847	67,642,146	83,709,392	105,881,083	46,824,328
Nonoperating Revenues (Expenses)							
Earnings (loss) on investments	(2,361,396)	768,918	13,744,774	14,754,401	6,129,530	1,832,918	392,031
Interest on shortfall and obligations receivable	25,107,207	25,474,904	22,945,866	22,921,380	23,351,220	25,269,750	12,231,250
Interest expense	(125,086,379)	(128,257,367)	(133,537,621)	(136,704,033)	(139,343,204)	(132,434,945)	(65,958,095)
Amortization of debt related items and cost of issuance	15,610,434	15,988,278	14,258,569	10,771,937	13,837,585	2,403,018	2,418,891
Legacy pension expense	(4,988,132)	(8,075,457)	(7,220,716)	6,014,441	(8,933,691)	(2,516,776)	-
WRAP (Water Residential Assistance Program)	(1,049,908)	(593,206)	(1,393,179)	(855,455)	(1,506,554)	(884,327)	-
Other	388,656	(300,841)	703,544	(991,096)	(1,205,489)	878,305	-
Total Nonoperating Expenses	(92,379,518)	(94,994,771)	(90,498,763)	(84,088,425)	(107,670,603)	(105,452,057)	(50,915,923)
Income (loss) before special item	(12,000,202)	(855,978)	(19,527,916)	(16,446,279)	(23,961,211)	429,026	(4,091,595)
Special Item - MOU with DWSD	-	-	-	-	-	(32,811,581)	-
Change in net position	(12,000,202)	(855,978)	(19,527,916)	(16,446,279)	(23,961,211)	(32,382,555)	(4,091,595)
NET POSITION (DEFICIT), Beginning of Year	(97,265,534)	(96,409,556)	(76,881,640)	(60,435,361)	(36,474,150)	(4,091,595)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (109,265,736)	\$ (97,265,534)	\$ (96,409,556)	\$ (76,881,640)	\$ (60,435,361)	\$ (36,474,150)	\$ (4,091,595)

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

CHANGES IN NET POSITION - SEWAGE DISPOSAL FUND

	2022	2021	2020	2019	2018	2017	2016*
Operating Revenues							
Wholesale customer charges	\$ 268,813,369	\$ 267,567,816	\$ 266,003,286	\$ 272,772,460	\$ 268,978,831	\$ 263,311,745	\$ 121,106,353
Local system charges	188,662,200	187,959,700	185,807,300	181,159,300	178,969,200	187,304,100	95,826,900
Industrial waste charges	8,300,278	8,004,939	7,854,593	9,106,274	14,334,979	14,381,106	6,910,192
Pollutant surcharges	5,181,816	6,719,964	6,448,508	5,932,550	6,908,404	5,206,294	2,423,910
Bad debt recovery	-	-	-	-	-	35,065,030	-
Other revenues	429,491	501,121	521,957	506,323	4,391,145	538,807	4,197,614
Total Operating Revenues	471,387,154	470,753,540	466,635,644	469,476,907	473,582,559	505,807,082	230,464,969
Operating Expenses							
Personnel	62,160,768	63,055,636	60,320,195	56,503,053	53,680,162	47,894,911	13,289,741
Contractual services	63,410,109	62,913,214	63,350,953	58,660,680	64,082,761	55,878,440	13,875,756
Utilities	30,930,459	23,921,428	23,432,981	25,147,527	26,823,299	27,191,866	12,668,942
Chemicals	12,593,379	7,953,995	8,672,406	8,187,033	8,073,045	9,424,428	4,006,941
Supplies and other expenses	19,911,985	21,938,081	23,393,081	25,323,636	24,982,773	12,180,128	16,462,711
Capital adjustment	-	-	-	2,258,351	-	-	-
Capital program allocation	(1,013,677)	(1,068,749)	(1,183,398)	(1,325,842)	(969,671)	(1,150,316)	-
Intergovernmental reimbursements	(1,074,346)	(612,181)	(1,036,758)	(713,633)	(292,965)	(101,191)	-
Centralized services	-	-	-	-	-	-	16,733,431
Administrative services	-	-	-	-	-	-	7,342,499
Depreciation	158,013,629	150,772,065	152,920,967	168,544,370	187,250,583	185,628,465	86,021,029
Amortization of intangible assets	439,704	109,926	-	-	-	-	-
Total Operating Expenses	345,372,010	328,983,415	329,870,427	342,585,175	363,629,987	336,946,731	170,401,050
Operating Income	126,015,144	141,770,125	136,765,217	126,891,732	109,952,572	168,860,351	60,063,919
Nonoperating Revenues (Expenses)							
Earnings (loss) on investments	(3,022,882)	490,706	11,671,932	11,763,401	5,266,255	2,209,872	1,089,367
Interest on shortfall and obligations receivable	17,157,558	18,247,607	19,489,018	18,856,322	15,505,300	17,062,678	8,831,250
Interest expense	(131,110,125)	(135,227,647)	(155,410,235)	(159,893,300)	(161,052,102)	(159,157,152)	(82,489,347)
Amortization of debt related items and cost of issuance	(2,292,419)	(3,022,639)	(3,956,009)	(6,776,707)	(5,153,300)	(17,340,200)	(363,167)
Legacy pension expense	(8,927,171)	(14,452,504)	(12,922,789)	10,763,940	(15,988,471)	(4,504,230)	-
WRAP (Water Residential Assistance Program)	(1,742,929)	(924,247)	(1,921,938)	(1,168,664)	(2,248,980)	(1,243,006)	-
Other	(234,915)	(540,045)	(900,162)	466,898	1,760,166	(498,896)	275,693
Sewer lookback - MOU adjustment	-	-	-	(6,527,200)	-	-	-
Total Nonoperating Expenses	(130,172,883)	(135,428,769)	(143,950,183)	(132,515,310)	(161,911,132)	(163,470,934)	(72,656,204)
Income (loss) before contributions and special item	(4,157,739)	6,341,356	(7,184,966)	(5,623,578)	(51,958,560)	5,389,417	(12,592,285)
Capital Contributions	6,991,039	5,960,000	5,960,000	-	-	320,707	2,000,000
Special Item - MOU with DWSD	-	-	-	-	-	(61,478,682)	-
Change in net position	2,833,300	12,301,356	(1,224,966)	(5,623,578)	(51,958,560)	(55,768,558)	(10,592,285)
NET POSITION (DEFICIT), Beginning of Year	(112,866,591)	(125,168,947)	(123,943,981)	(118,319,403)	(66,360,843)	(10,592,285)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (110,033,291)	\$ (112,867,591)	\$ (125,168,947)	\$ (123,942,981)	\$ (118,319,403)	\$ (66,360,843)	\$ (10,592,285)

* GLWA began operations on January 1, 2016. The data for FY 2016 relates to six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

CHARGE ADJUSTMENTS

	2023	2022	2021	2020	2019	2018	2017	2016 [5]
Water Fund								
Budgeted revenue requirement [1]	\$ 356,071,600	\$ 344,030,500	\$ 341,642,000	\$ 339,664,200	\$ 331,400,500	\$ 328,119,300	\$ 331,213,200	\$ 318,474,200
Percent change in budgeted revenue requirement	3.5%	0.7%	0.6%	2.5%	1.0%	-0.9%	4.0%	4.0%
Average annual charge adjustment [2]								
Total regional system	3.7%	1.5%	3.2%	0.6%	1.8%	1.8%	4.5%	n/a [6]
Suburban wholesale	3.5%	1.9%	3.1%	0.3%	0.2%	2.0%	3.4%	11.3%
Local system charge [3]	3.0%	-2.0%	3.0%	2.7%	14.1%	-1.0%	11.6%	n/a [6]
Number of wholesale water customers [4]	87	87	87	87	87	87	88	85
Sewage Disposal Fund								
Budgeted revenue requirement [1]	\$ 481,372,100	\$ 475,429,200	\$ 486,751,300	\$ 480,605,300	\$ 470,156,000	\$ 465,500,100	\$ 464,078,500	\$ 446,229,300
Percent change in budgeted revenue requirement	1.3%	-2.3%	1.3%	2.2%	1.0%	0.3%	4.0%	4.0%
Average annual charge adjustment [2]								
Total regional system	2.4%	-0.6%	2.0%	0.8%	0.1%	-0.7%	8.3%	n/a [6]
Suburban wholesale	3.2%	-0.1%	1.7%	-0.1%	1.3%	1.8%	4.9%	-1.1%
Local system charge [3]	1.2%	-0.7%	2.3%	2.5%	1.2%	-4.2%	13.9%	n/a [6]
Number of wholesale sewer customers [4]	18	18	18	18	18	18	18	21

[1] This is the revenue requirements in the original adopted budget for the fiscal year which is used in the calculation of charges. The revenue requirement represents the funding requirements which are defined in the Master Bond Ordinance.

[2] Average annual charge adjustment percentages is the required charge adjustment required when calculating revenue with the prior year existing charges, usage projections and any other specific individual contract requirements. For the sewage disposal system, this also includes the bad debt adjustment.

[3] Represents the annual change in the local system charges to the Detroit customer class before the annual credit of \$20.7 million for water and \$5.5 million for sewer. Does not include any lookback charges in the percentage increase/decrease calculation. Does not include any Detroit local system operating costs or charges included in the Detroit retail rate. Also does not include any impact of Detroit's use of the regional system lease payment to finance allocated debt service obligations.

[4] Does not include the City of Detroit. The water system includes one emergency basis contract.

[5] GLWA began operations on January 1, 2016. Amounts in this column are based on annual budget of Detroit Water and Sewage Department for FY 2016 which was the basis for the revenue requirement for the six months of operations of GLWA.

[6] Due to the establishment of the Authority and DWSD as separate entities during FY 2016, this information is not applicable.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

Source: Great Lakes Water Authority Financial Services Area and the Foster Group

GREAT LAKES WATER AUTHORITY

WATER FUND OPERATING REVENUES/ LARGEST WATER CUSTOMERS

	2022	2021	2020	2019	2018	2017	2016*
Operating Revenues							
Suburban wholesale charges [1]	\$ 323,026,213	\$ 322,423,768	\$ 312,701,777	\$ 311,399,136	\$ 323,117,344	\$ 331,115,131	\$ 160,777,169
Local system charges	21,697,300	21,925,500	21,295,500	20,181,400	15,130,600	15,490,300	6,833,500
Bad debt recovery	-	-	-	-	-	5,107,125	-
Other revenue	234,462	265,822	256,300	21,340	64,200	37,388	54,863
Total Operating Revenues	\$ 344,957,975	\$ 344,615,090	\$ 334,253,577	\$ 331,601,876	\$ 338,312,144	\$ 351,749,944	\$ 167,665,532
Suburban wholesale charges % of total operating revenue	93.64%	93.56%	93.55%	93.91%	95.51%	94.13%	95.89%
Local system charges % of total operating revenue	6.29%	6.36%	6.37%	6.09%	4.47%	4.40%	4.08%
Ten Largest Suburban Wholesale Member Partners							
Southeast Oakland County Water Authority	\$ 24,035,255	\$ 23,722,602	\$ 23,089,967	\$ 23,311,743	\$ 23,118,160	\$ 22,434,129	\$ 11,160,701
North Oakland County Water Authority	22,798,372	22,667,931	22,293,795	23,464,096	23,365,866	22,913,261	11,105,152
Sterling Heights	16,235,356	16,375,729	15,242,912	14,644,368	15,571,146	15,480,008	7,155,303
Shelby Township	14,885,135	15,690,553	14,482,451	13,719,053	13,554,398	13,462,808	6,114,243
Troy	13,811,983	14,324,990	13,607,770	13,700,093	13,842,135	13,939,815	6,058,667
Macomb Township	13,065,395	13,388,385	12,870,377	11,063,225	11,167,739	10,945,117	-
Livonia	11,860,410	11,806,151	11,553,730	14,001,058	13,669,376	13,483,657	6,223,290
West Bloomfield Township	11,229,363	11,010,166	-	10,733,617	-	-	-
Ypsilanti Community Utilities Authority	11,059,703	-	10,450,861	-	11,038,134	-	-
Warren	10,940,909	-	-	10,648,162	-	-	-
Flint [2]	-	10,980,526	10,325,345	11,604,504	12,235,483	13,256,330	6,738,009
Canton Township	-	10,919,607	10,491,407	-	13,334,615	13,872,584	6,032,404
Genesee County Drain Commission [3]	-	-	-	-	-	18,493,530	8,593,304
Novi	-	-	-	-	-	-	5,595,031
Total Revenue Ten Largest Suburban Wholesale Member Partners	\$ 149,921,881	\$ 150,886,640	\$ 144,408,615	\$ 146,889,919	\$ 150,897,052	\$ 158,281,239	\$ 74,776,104
Ten largest suburban wholesale member partners % of total operating revenues	43.46%	43.78%	43.20%	44.30%	44.60%	45.00%	44.60%

[1] Net of bad debt expense.

[2] Represents billed revenues prior to the credit to Flint for its proportional share of KWA debt service.

[3] Genesee County Drain Commission changed service providers in December 2017 and has contracted GLWA for as needed emergency water service.

* GLWA began operations on January 1, 2016. The data for 2016 is for the six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

SEWAGE DISPOSAL FUND OPERATING REVENUES/ LARGEST SEWER CUSTOMERS

	2022	2021	2020	2019	2018	2017	2016*
Operating Revenues							
Suburban wholesale charges [1]	\$ 268,813,369	\$ 267,567,816	\$ 266,003,286	\$ 272,772,460	\$ 268,978,831	\$ 263,311,745	\$ 121,106,353
Local system charges	188,662,200	187,959,700	185,807,300	181,159,300	178,969,200	187,304,100	95,826,900
Industrial waste and surcharges	13,482,094	14,724,903	14,303,101	15,038,824	21,243,383	19,587,400	9,334,102
Bad debt recovery	-	-	-	-	-	35,065,030	-
Other revenue	429,491	501,121	521,957	506,323	4,391,145	538,807	4,197,614
Total Operating Revenues	\$ 471,387,154	\$ 470,753,540	\$ 466,635,644	\$ 469,476,907	\$ 473,582,559	\$ 505,807,082	\$ 230,464,969
Suburban wholesale charges % of total operating revenue	57.03%	56.84%	57.00%	58.10%	56.80%	52.06%	52.55%
Local system charges % of total operating revenue	40.02%	39.93%	39.82%	38.59%	37.79%	37.03%	41.58%
Ten Largest Suburban Wholesale Member Partners							
Oakland Macomb Interceptor Drainage District	\$ 70,683,993	\$ 70,355,029	\$ 69,870,786	\$ 77,533,200	\$ 72,816,000	\$ 69,627,600	\$ 34,541,400
Wayne County - Rouge Valley	55,267,200	54,536,400	54,162,000	53,761,200	55,022,400	55,486,800	25,901,400
Oakland County-George W Kuhn Drainage District	45,828,000	45,558,000	45,264,000	44,972,400	45,751,200	45,682,800	21,410,400
Evergreen Farmington	35,766,000	35,084,400	34,839,600	34,578,000	33,733,200	32,179,200	15,094,200
South Macomb Sanitation District	24,772,800	25,000,800	24,837,600	24,672,000	24,637,200	24,120,000	11,501,400
Dearborn	20,058,000	19,628,400	19,502,400	19,372,800	19,628,400	19,603,200	8,049,000
Highland Park	5,356,800	5,708,400	5,670,000	5,614,800	5,642,400	5,818,800	2,808,600
Hamtramck	3,993,600	4,019,400	3,994,800	3,962,400	3,958,800	4,086,000	1,966,800
Grosse Pointe Farms	2,715,600	2,769,000	2,750,400	2,727,600	2,696,400	2,667,600	1,243,800
Grosse Pointe Park	1,882,800	1,824,000	1,812,000	1,801,200	1,740,000	1,626,000	746,400
Total Revenue Ten Largest Suburban Wholesale Member Partners	\$ 266,324,793	\$ 264,483,829	\$ 262,703,586	\$ 268,995,600	\$ 265,626,000	\$ 260,898,000	\$ 123,263,400
Ten largest suburban wholesale member partners % of total operating revenues	56.50%	56.18%	56.30%	57.30%	56.09%	51.58%	53.48%

[1] Net of bad debt expense.

* GLWA began operations on January 1, 2016. The data for 2016 is for the six months of activity through June 30, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF WATER CHARGES*

Community Name	Fixed Monthly Charge	Commodity \$/Mcf	Community Name	Fixed Monthly Charge	Commodity \$/Mcf
Allen Park	\$ 126,400	\$ 7.82	Mayfield Township	\$ 2,500	\$ 24.68
Almont, Village of	12,600	10.54	Melvindale	34,100	6.42
Ash Township	43,900	8.27	New Haven, Village of	22,200	6.94
Belleville	16,600	9.74	North Oakland County Water Authority	1,168,100	10.41
Berlin Township	38,400	11.54	Northville, City	40,600	10.48
Brownstown Township	190,600	11.09	Northville Township	299,300	17.00
Bruce Township	16,700	61.19	Novi	476,200	13.03
Canton Township	539,900	12.36	Oak Park	73,700	6.08
Center Line	24,600	6.28	Oakland County Drain Commission	4,300	3.49
Chesterfield Township	223,800	10.41	Plymouth, City	57,000	10.34
Clinton Township	398,900	7.92	Plymouth Township	234,100	11.57
Commerce Township	187,700	14.72	Redford Township	167,100	8.32
Dearborn	538,500	7.22	River Rouge	35,900	7.58
Dearborn Heights	193,300	7.84	Riverview	46,900	7.73
Eastpointe	82,000	6.31	Rockwood	14,700	11.79
Ecorse	79,400	4.48	Romeo	13,500	18.13
Farmington	53,000	9.52	Romulus	224,200	8.21
Farmington Hills	465,600	10.57	Roseville	142,200	5.99
Ferndale	54,100	6.19	Royal Oak Township	10,400	7.65
Flat Rock	69,900	9.79	Shelby Township	751,600	14.88
Flint (1)	564,400	9.43	Southeastern Oakland County Water Authority	1,215,400	7.75
Fraser	64,300	8.72	South Rockwood	6,100	10.17
Garden City	88,100	8.71	Southgate	116,300	8.12
Gibraltar	17,500	8.61	St. Clair County-Burtchville Township	17,700	18.19
Grosse Ile Township	57,800	12.10	St. Clair County-Greenwood Energy Center	49,400	19.18
Grosse Pointe Park	71,000	10.21	St. Clair Shores	161,800	6.80
Grosse Pointe Shores	34,800	13.75	Sterling Heights	804,500	11.14
Grosse Pointe Woods	67,700	7.50	Sumpter Township	35,600	9.67
Hamtramck	42,200	5.42	Sylvan Lake	12,300	15.48
Harper Woods	42,500	7.12	Taylor	244,700	7.46
Harrison Township	85,100	7.21	Trenton	89,100	8.19
Hazel Park	38,800	6.15	Troy	722,200	12.20
Highland Park	61,200	4.63	Utica	30,000	9.72
Huron Township	77,600	10.28	Van Buren Township	183,700	11.10
Imlay City	77,200	13.50	Walled Lake	42,200	10.98
Imlay Township	800	42.50	Warren	545,200	6.94
Inkster	65,100	5.56	Washington Township	121,700	12.37
Keego Harbor	15,700	12.74	Wayne	168,700	12.96
Lapeer	80,600	12.39	West Bloomfield Township	551,000	16.52
Lenox Township	15,600	8.42	Westland	327,500	7.99
Lincoln Park	121,000	6.04	Wixom	130,500	13.95
Livonia	607,100	10.11	Woodhaven	88,100	12.22
Macomb Township	669,300	16.23	Ypsilanti Community Utilities Authority	547,900	9.03
Madison Heights	98,000	7.35			

Annual Detroit Wholesale Revenue Requirement \$21,697,300

* Water charges went into effect July 1, 2021 per GLWA Board of Director's action taken at their regular meeting held March 24, 2021.

(1) Net fixed monthly charge will include \$554,400 monthly credits for KWA debt service

GREAT LAKES WATER AUTHORITY**SCHEDULE OF SEWAGE DISPOSAL SYSTEM CHARGES***

<u>Community Name</u>	<u>Fixed Monthly Charge</u>
Oakland Macomb Interceptor District (OMID)	\$ 5,871,700
Rouge Valley	4,605,600
Oakland County - George W. Kuhn (GWK)	3,819,000
Evergreen Farmington	2,980,500
SE Macomb Sanitary District	2,064,400
Dearborn	1,671,500
Grosse Pointe Farms	226,300
Grosse Pointe Park	156,900
Melvindale	129,500
Farmington	98,700
Center Line	85,800
Allen Park	69,800
Highland Park	446,400
Hamtramck	332,800
Grosse Pointe	74,100
Harper Woods	18,000
Redford Township	22,200
Wayne County #3	4,300

Annual Detroit Wholesale Revenue Requirement \$188,662,200

* Wholesale charges went into effect July 1, 2021

GREAT LAKES WATER AUTHORITY

INDUSTRIAL WASTE CONTROL CHARGES AND POLLUTANT SURCHARGES
EFFECTIVE JULY 1, 2021

Industrial Waste Control Charges			
Meter size - inches:	Admin Only Charge (1)		Monthly Charge (2)
5/8	\$	0.89	\$ 3.54
3/4	\$	1.33	\$ 5.31
1	\$	2.21	\$ 8.85
1 1/2	\$	4.87	\$ 19.47
2	\$	7.08	\$ 28.32
3	\$	12.83	\$ 51.33
4	\$	17.70	\$ 70.80
6	\$	26.55	\$ 106.20
8	\$	44.25	\$ 177.00
10	\$	61.95	\$ 247.80
12	\$	70.80	\$ 283.20
14	\$	88.50	\$ 354.00
16	\$	106.20	\$ 424.80
18	\$	123.90	\$ 495.60
20	\$	141.60	\$ 566.40
24	\$	159.30	\$ 637.20
30	\$	177.00	\$ 708.00
36	\$	194.70	\$ 778.80
48	\$	212.40	\$ 849.60

(1) Administration only charge is applicable to member partners that are within a geographical area defined in a specific agreement.

(2) Includes both administration and field work components charges for all other member partners.

Pollutant Surcharges			
Pollutant		Charge per Pound	
Biochemical Oxygen Demand (BOD)	for concentrations > 275 mg/l	\$	0.347
Total Suspended Solids (TSS)	for concentrations > 350 mg/l	\$	0.476
Phosphorus (P)	for concentrations > 12 mg/l	\$	6.368
Fats, Oil and Grease (FOG)	for concentrations > 100 mg/l	\$	0.111
Septage Disposal Fee	per 500 gallons of disposal	\$	36.00

GREAT LAKES WATER AUTHORITY

RATIOS OF OUTSTANDING DEBT BY TYPE

	2022	2021	2020	2019	2018	2017	2016
Water Fund							
Revenue bonds [1]	\$ 2,289,900,079	\$ 2,368,632,473	\$ 2,453,471,088	\$ 2,466,561,092	\$ 2,540,663,196	\$ 2,612,607,101	\$ 2,507,091,038
State revolving loans	109,429,462	71,259,601	39,318,264	29,860,802	25,435,902	17,252,235	17,383,761
Total Water Fund	\$ 2,399,329,541	\$ 2,439,892,074	\$ 2,492,789,352	\$ 2,496,421,894	\$ 2,566,099,098	\$ 2,629,859,336	\$ 2,524,474,799
Sewage Disposal Fund							
Revenue bonds [1]	\$ 2,498,387,185	\$ 2,577,642,399	\$ 2,643,788,368	\$ 2,764,196,915	\$ 2,739,090,653	\$ 2,797,168,264	\$ 2,922,089,599
Capital appreciation bonds [1]	-	5,504,069	10,667,560	13,377,972	14,984,042	19,501,737	19,668,138
State revolving loans	379,648,216	416,767,850	449,666,531	474,177,128	475,677,540	485,267,036	506,435,742
Total Sewage Disposal Fund	\$ 2,878,035,401	\$ 2,999,914,318	\$ 3,104,122,459	\$ 3,251,752,015	\$ 3,229,752,235	\$ 3,301,937,037	\$ 3,448,193,479
Business-type Activities							
Revenue bonds [1]	\$ 4,788,287,264	\$ 4,946,274,872	\$ 5,097,259,456	\$ 5,230,758,007	\$ 5,279,753,849	\$ 5,409,775,365	\$ 5,429,180,637
Capital appreciation bonds [1]	-	5,504,069	10,667,560	13,377,972	14,984,042	19,501,737	19,668,138
State revolving loans	489,077,678	488,027,451	488,984,795	504,037,930	501,113,442	502,519,271	523,819,503
Total Business-type Activities Debt	\$ 5,277,364,942	\$ 5,439,806,392	\$ 5,596,911,811	\$ 5,748,173,909	\$ 5,795,851,333	\$ 5,931,796,373	\$ 5,972,668,278
Total taxable value [2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total population served [3]:							
Water	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000	3,800,000
Sewage disposal	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000
Total debt per capita:							
Water	\$ 631	\$ 642	\$ 656	\$ 657	\$ 675	\$ 692	\$ 664
Sewage disposal	\$ 1,028	\$ 1,071	\$ 1,109	\$ 1,161	\$ 1,153	\$ 1,179	\$ 1,231
Per capita income [4]	\$ 59,590	\$ 58,971	\$ 58,356	\$ 54,172	\$ 52,572	\$ 50,863	\$ 49,179
Total debt as a percentage of income:							
Water	1.06%	1.09%	1.12%	1.21%	1.28%	1.36%	1.35%
Sewage disposal	1.73%	1.82%	1.90%	2.14%	2.19%	2.32%	2.50%

[1] Amounts are reported net of premiums and discounts.

[2] GLWA is not authorized to levy property taxes; therefore, presentation of taxable values and the ratio of total debt to taxable value is not applicable.

[3] Source: Estimated based on data from Southeast Michigan Council of Governments (SEMCOG).

[4] Source: FRED Economic Data, St. Louis Fed and Michigan State University Center for Economic Analysis.

Further details regarding the Authority's debt can be found in the notes to the financial statements.

GLWA began operations on January 1, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

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GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2022

Continued on Next Page

	Original Principal Amount [1]	Outstanding as of June 30, 2022
Water Supply System Revenue Bonds		
Senior Lien Bonds		
Water Supply System Revenue Senior Lien Bonds, Series 2003A	\$ 234,805,000	\$ 100,000
Water Supply System Revenue Senior Lien Bonds, Series 2005B	194,900,000	100,000
Water Supply System Revenue Senior Lien Bonds, Series 2006A	280,000,000	100,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-1	206,540,000	71,225,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-2	188,455,000	188,455,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-4	307,645,000	209,360,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2015D-1	89,430,000	69,275,000
Water Supply System Revenue Senior Lien Bonds, Series 2016A	88,000,000	87,995,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2016C	443,930,000	443,930,000
Water Supply System Revenue Senior Lien Bonds, Series 2020A	42,445,000	42,445,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2020C	377,515,000	377,515,000
	<u>2,453,665,000</u>	<u>1,490,500,000</u>
Second Lien Bonds		
Water Supply System Revenue Second Lien Bonds, Series 2003B	172,945,000	100,000
Water Supply System Revenue Second Lien Bonds, Series 2006B	120,000,000	100,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2014D-6	65,425,000	49,490,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2015D-2	37,235,000	37,235,000
Water Supply System Revenue Second Lien Bonds, Series 2016B	163,830,000	163,825,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2016D	222,045,000	222,045,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2018A	155,595,000	122,460,000
Water Supply System Revenue Second Lien Bonds, Series 2020B	43,135,000	43,135,000
	<u>980,210,000</u>	<u>638,390,000</u>
SRF Junior Lien Bonds		
Water Supply System Revenue Bonds, Series 2005 SRF-1	13,805,164	3,875,164
Water Supply System Revenue Bonds, Series 2005 SRF-2	8,891,730	2,446,730
Water Supply System Revenue Bonds, Series 2006 SRF-1	5,180,926	1,445,926
Water Supply System Revenue Bonds, Series 2008 SRF-1	2,590,941	750,941
Water Supply System Revenue Bonds, Series 2016 SRF-1	8,273,168	7,463,168
Water Supply System Revenue Bonds, Series 2016 SRF-2	3,393,543	3,053,543
Water Supply System Revenue Bonds, Series 2017 SRF-1	5,807,931	5,347,931
Water Supply System Revenue Bonds, Series 2019 SRF-1	8,330,000	7,985,000
Water Supply System Revenue Bonds, Series 2019 SRF-2	29,950,000	27,115,556
Water Supply System Revenue Bonds, Series 2019 SRF-3	11,788,056	7,742,932
Water Supply System Revenue Bonds, Series 2020 SRF-1	20,538,700	15,869,467
Water Supply System Revenue Bonds, Series 2020 SRF-2	9,000,000	3,623,516
Water Supply System Revenue Bonds, Series 2020 SRF-3	8,960,000	6,753,599
Water Supply System Revenue Bonds, Series 2020 SRF-4	12,153,050	5,325,829
Water Supply System Revenue Bonds, Series 2021 SRF-1	11,940,000	1,774,468
Water Supply System Revenue Bonds, Series 2021 SRF-2	104,725,000	7,154,223
Water Supply System Revenue Bonds, Series 2021 SRF-3	11,528,950	1,701,469
	<u>276,857,159</u>	<u>109,429,462</u>
TOTAL WATER SUPPLY SYSTEM REVENUE BONDS	<u>\$ 3,710,732,159</u>	<u>\$ 2,238,319,462</u>

GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2022

Continued on Next Page

	Original Principal Amount [1]	Outstanding as of June 30, 2022
Sewage Disposal System Revenue Bonds		
Senior Lien Bonds		
Sewage Disposal System Revenue Bonds (Senior), Series 1999 SRF-2	\$ 46,000,000	\$ 2,885,000
Sewage Disposal System Senior Lien Revenue Bonds, Series 2003B	150,000,000	100,000
Sewage Disposal System Senior Lien Revenue Refunding Bonds, Series 2004A	101,435,000	12,640,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2006D	370,000,000	239,475,000
Sewage Disposal System Revenue & Revenue Refunding Senior Lien Bonds, Series 2012A	659,780,000	32,105,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2014C-3	446,170,000	381,800,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2014C-6	143,880,000	88,900,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2016B	126,105,000	126,105,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018A	81,595,000	78,810,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018B	131,690,000	131,690,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018C	44,180,000	37,350,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2020A	594,930,000	594,930,000
	<u>2,895,765,000</u>	<u>1,726,790,000</u>
Second Lien Bonds		
Sewage Disposal System Second Lien Revenue Bonds, Series 2001B	110,550,000	78,895,000
Sewage Disposal System Revenue Second Lien Bonds, Series 2005A	273,355,000	100,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2005B	40,215,000	6,695,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2005C	63,160,000	100,000
Sewage Disposal System Revenue Second Lien Bonds, Series 2006B	250,000,000	100,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2014C-7	76,715,000	50,000,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2015C	197,660,000	197,160,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2016C	295,190,000	295,190,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2020B	92,525,000	87,600,000
	<u>1,399,370,000</u>	<u>715,840,000</u>

GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2022

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	Original Principal Amount [1]	Outstanding as of June 30, 2022
Sewage Disposal System Revenue Bonds (concluded)		
SRF Junior Lien Bonds		
Sewage Disposal System Revenue Bonds, Series 2000 SRF-1	\$ 44,197,995	\$ 2,667,995
Sewage Disposal System Revenue Bonds, Series 2000 SRF-2	64,401,066	4,016,066
Sewage Disposal System Revenue Bonds, Series 2001 SRF-1	82,200,000	15,095,000
Sewage Disposal System Revenue Bonds, Series 2001 SRF-2	59,850,000	10,990,000
Sewage Disposal System Revenue Bonds, Series 2002 SRF-1	18,985,000	1,190,000
Sewage Disposal System Revenue Bonds, Series 2002 SRF-2	1,545,369	95,369
Sewage Disposal System Revenue Bonds, Series 2002 SRF-3	31,549,466	5,329,466
Sewage Disposal System Revenue Bonds, Series 2003 SRF-1	48,520,000	11,735,000
Sewage Disposal System Revenue Bonds, Series 2003 SRF-2	25,055,370	4,565,370
Sewage Disposal System Revenue Bonds, Series 2004 SRF-1	2,910,000	520,000
Sewage Disposal System Revenue Bonds, Series 2004 SRF-2	18,353,459	3,263,459
Sewage Disposal System Revenue Bonds, Series 2004 SRF-3	12,722,575	2,252,575
Sewage Disposal System Revenue Bonds, Series 2007 SRF-1	167,540,598	73,570,598
Sewage Disposal System Revenue Bonds, Series 2009 SRF-1	13,970,062	6,215,062
Sewage Disposal System Revenue Bonds, Series 2010 SRF-1	4,214,763	2,120,763
Sewage Disposal System Revenue Bonds, Series 2012 SRF-1	14,950,000	10,535,000
Sewage Disposal System Revenue Bonds, Series 2015A SRF	79,500,000	59,625,000
Sewage Disposal System Revenue Bonds, Series 2015B SRF	27,175,304	20,005,304
Sewage Disposal System Revenue Bonds, Series 2015D SRF	15,321,478	11,061,478
Sewage Disposal System Revenue Bonds, Series 2016 SAW-1	10,000,000	8,800,000
Sewage Disposal System Revenue Bonds, Series 2016 SRF-1	15,463,628	12,733,628
Sewage Disposal System Revenue Bonds, Series 2016 SRF-2	48,315,683	42,145,683
Sewage Disposal System Revenue Bonds, Series 2017 SRF-1	33,566,682	29,746,682
Sewage Disposal System Revenue Bonds, Series 2018 SRF-2	17,510,000	17,510,000
Sewage Disposal System Revenue Bonds, Series 2020 SRF-1	28,350,000	16,456,478
Sewage Disposal System Revenue Bonds, Series 2020 SRF-2	3,232,000	480,152
Sewage Disposal System Revenue Bonds, Series 2021 SRF-1	12,940,000	4,037,088
Sewage Disposal System Revenue Bonds, Series 2021 SRF-2	6,881,250	-
Sewage Disposal System Revenue Bonds, Series 2022 SRF-1	34,195,000	-
	<u>943,416,748</u>	<u>376,763,216</u>
TOTAL SEWAGE DISPOSAL SYSTEM REVENUE BONDS	\$ 5,238,551,748	\$ 2,819,393,216

[1] Reflects original amount issued by predecessor entity, DWSD, for bonds issued prior to January 1, 2016.

GREAT LAKES WATER AUTHORITY
SCHEDULE OF DEBT SERVICE REQUIREMENTS
As of June 30, 2022

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Fiscal Year Ending [1]	Senior Lien Bonds (\$000)			Second Lien Bonds (\$000)			Junior Lien Bonds (\$000)			All Bonds (\$000)
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total Debt Service
Water Fund										
2023 [2]	\$6,740	\$54,467	\$61,207	\$13,425	\$28,728	\$42,153	\$5,097	\$2,217	\$7,314	\$110,673
2024	60,290	66,341	126,631	16,640	30,144	46,784	5,565	2,132	7,697	181,112
2025	64,210	63,477	127,687	18,380	29,269	47,649	11,009	1,965	12,974	188,310
2026	67,040	60,553	127,593	19,300	28,327	47,627	9,594	1,761	11,355	186,574
2027	70,060	57,313	127,373	20,265	27,337	47,602	6,928	1,594	8,522	183,498
2028	73,525	53,954	127,479	21,280	26,299	47,579	4,892	1,473	6,365	181,423
2029	76,770	50,472	127,242	22,345	25,208	47,553	4,496	1,378	5,873	180,669
2030	80,490	46,668	127,158	23,460	24,063	47,523	4,445	1,286	5,731	180,411
2031	84,380	42,659	127,039	27,440	22,791	50,231	4,545	1,194	5,739	183,008
2032	88,510	38,439	126,949	28,810	21,384	50,194	4,640	1,100	5,740	182,884
2033	92,825	34,004	126,829	30,255	20,051	50,306	4,319	1,008	5,327	182,462
2034	86,695	29,565	116,260	42,150	18,585	60,735	4,380	919	5,299	182,294
2035	94,960	25,043	120,003	39,930	16,735	56,665	4,475	829	5,304	181,972
2036	107,100	20,010	127,110	2,650	15,671	18,321	4,555	736	5,291	150,722
2037	15,790	17,046	32,836	120,120	12,601	132,721	4,640	642	5,282	170,838
2038	55,135	15,607	70,742	1,600	9,557	11,157	4,226	546	4,772	86,671
2039	61,740	13,368	75,108	1,675	9,475	11,150	3,910	458	4,368	90,626
2040	63,910	11,160	75,070	1,760	9,389	11,149	3,995	376	4,371	90,591
2041	66,160	8,874	75,034	1,845	9,299	11,144	3,036	293	3,328	89,507
2042	67,190	6,530	73,720	1,940	9,205	11,145	1,855	234	2,089	86,953
2043	17,905	4,901	22,806	31,660	8,365	40,025	1,890	193	2,083	64,914
2044	18,805	3,984	22,789	33,245	6,742	39,987	1,593	155	1,748	64,523
2045	19,740	3,020	22,760	34,910	5,038	39,948	1,515	120	1,635	64,343
2046	20,725	2,008	22,733	36,650	3,249	39,899	1,555	86	1,641	64,274
2047	21,765	946	22,711	38,485	1,371	39,856	1,241	52	1,292	63,859
2048	2,550	338	2,888	2,590	344	2,934	787	23	810	6,632
2049	2,680	208	2,888	2,725	211	2,936	248	3	251	6,074
2050	2,810	70	2,880	2,855	71	2,926	-	-	-	5,807
Total	\$1,490,500	\$731,026	\$2,221,526	\$638,390	\$419,506	\$1,057,896	\$109,429	\$22,773	\$132,202	\$3,411,624

GREAT LAKES WATER AUTHORITY
SCHEDULE OF DEBT SERVICE REQUIREMENTS
As of June 30, 2022

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Fiscal Year Ending [1]	Senior Lien Bonds (\$000)			Second Lien Bonds (\$000)			Junior Lien Bonds (\$000)			All Bonds (\$000)
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total Debt Service
Sewage Disposal Fund										
2023 [2]	\$26,105	\$53,602	\$79,707	\$12,445	\$27,572	\$40,017	\$45,051	\$8,175	\$53,226	\$172,950
2024	80,260	63,536	143,796	3,215	33,438	36,653	40,360	7,189	47,549	227,998
2025	82,615	59,915	142,530	16,035	32,924	48,959	41,266	6,271	47,537	239,026
2026	84,900	56,158	141,058	16,995	32,040	49,035	27,373	5,472	32,845	222,938
2027	90,905	52,369	143,274	21,040	31,028	52,068	24,805	4,917	29,722	225,064
2028	95,135	48,807	143,942	25,795	29,793	55,588	25,250	4,388	29,638	229,168
2029	102,270	44,955	147,225	26,640	28,415	55,055	25,765	3,850	29,615	231,896
2030	114,250	40,618	154,868	19,860	27,183	47,043	26,241	3,301	29,542	231,452
2031	108,915	36,345	145,260	32,550	25,836	58,386	15,528	2,827	18,354	222,001
2032	112,765	32,445	145,210	34,175	24,168	58,343	15,465	2,448	17,913	221,466
2033	130,570	28,296	158,866	21,910	22,766	44,676	15,865	2,071	17,936	221,479
2034	132,420	22,774	155,194	25,915	21,594	47,509	16,280	1,683	17,963	220,667
2035	53,595	18,318	71,913	112,440	18,464	130,904	16,740	1,286	18,026	220,843
2036	11,445	16,909	28,354	162,055	12,296	174,351	15,478	895	16,374	219,078
2037	11,745	16,544	28,289	169,445	4,593	174,038	7,280	557	7,837	210,164
2038	110,565	14,637	125,202	1,690	522	2,212	7,394	379	7,773	135,187
2039	114,005	11,146	125,151	1,745	460	2,205	6,542	198	6,740	134,097
2040	117,550	7,545	125,095	1,810	396	2,206	990	72	1,062	128,363
2041	23,745	5,275	29,020	1,875	330	2,205	1,010	52	1,062	32,286
2042	24,635	4,374	29,009	1,945	261	2,206	1,030	31	1,061	32,276
2043	25,545	3,438	28,983	2,015	189	2,204	1,050	11	1,061	32,248
2044	26,500	2,468	28,968	2,085	115	2,200	-	-	-	31,168
2045	27,275	1,463	28,738	2,160	39	2,199	-	-	-	30,937
2046	4,425	843	5,268	-	-	-	-	-	-	5,268
2047	4,645	616	5,261	-	-	-	-	-	-	5,261
2048	4,880	378	5,258	-	-	-	-	-	-	5,258
2049	5,125	128	5,253	-	-	-	-	-	-	5,253
Total	\$1,726,790	\$643,903	\$2,370,693	\$715,840	\$374,422	\$1,090,262	\$376,763	\$56,074	\$432,837	\$3,893,792

[1] Reflects fiscal period in which actual payments are due.

[2] For bonds issued through the Michigan Finance Authority (MFA) in 2014 and 2015, the Authority is required to make payment on these obligations to the MFA depository account five business days prior to the actual due date of the bond principal and interest payments. Therefore, the payments for the principal and interest due on July 1, 2021 are not included in the debt service requirement amounts above as they were paid on June 24, 2022.

Schedule may not foot due to rounding

GREAT LAKES WATER AUTHORITY

DEBT CREDIT RATING HISTORY

As of June 30, 2022

Debt Type	2022	2021	2020	2019	2018	2017	2016
Water Supply System Revenue							
Standards & Poor's							
Senior Lien	AA-	AA-	AA-	AA-	A-	A-	A-
Second Lien	A+	A+	A+	A+	BBB+	BBB+	BBB+
Junior Lien	A+	A+	A+	A+	N/A	N/A	N/A
Moody's							
Senior Lien	A1	A1	A1	A2	A3	A3	Baa1
Second Lien	A2	A2	A2	A3	Baa1	Baa1	Baa2
Fitch							
Senior Lien	A+	A+	A+	A	A	A	BBB
Second Lien	A	A	A	A-	A-	A-	BBB-
Sewage Disposal System Revenue							
Standard's & Poor's							
Senior Lien	AA-	AA-	AA-	A+	A-	A-	A-
Second Lien	A+	A+	A+	A	BBB+	BBB+	BBB+
Junior Lien	A+	A+	A+	A	N/A	N/A	N/A
Moody's							
Senior Lien	A1	A1	A1	A2	A3	A3	Baa1
Second Lien	A2	A2	A2	A3	Baa1	Baa1	Baa2
Fitch							
Senior Lien	A+	A+	A+	A	A	A	BBB
Second Lien	A	A	A	A-	A-	A-	BBB-

GLWA began operations on January 1, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - OVERVIEW

As of June 30, 2022

The Authority has pledged Net Revenues of the water and sewage disposal systems to secure the repayment of the principal and interest of the revenue bonds and State of Michigan revolving fund loans. Revenues are defined in the Master Bond Ordinance (MBO) and are in accordance with State of Michigan Public Act 94, the Revenue Bond Act of 1933, as all monies collected, directly or indirectly, by GLWA, or by the DWSD as agent for GLWA for the local system under the water and sewer services agreement. Net Revenues are defined in the MBO as all Revenues except for those transferred to the Operations and Maintenance Fund.

Debt service coverage ratios are presented using both (a) the GAAP methodology which calculates pledged revenue on an accrual basis and (b) the Rate Covenant methodology which calculates pledged revenue on a cash basis. This year the Authority has made a refinement to both of these methodologies which are described below:

The GAAP methodology line item for 'GLWA operating expenses' now uses the operating expenses before depreciation and amortization from the basic financial statements. An additional line item has been added for GASB 87 and GASB 96 items that are expenses for budget purposes but require capitalization under the GASB standards. In previous years only the activity in the operations fund from the combining statements was used, which excluded operating expenses paid for in the Improvement and Extension Fund. Prior years have been restated to match the current year methodology.

The Rate Covenant methodology line item for the 'GLWA Regional system operations' is now based on transfers out of the trust to the GLWA operations funds. Previously a calculation was done to compute the cash disbursements from the GLWA operations funds as any cash remaining in the operations fund could be returned to the trust for debt service payments. As the Authority has matured and implemented monthly cash meetings to review cash needs for operations, the new methodology is a more conservative approach which will be used going forward. Prior years have not been restated as the methodology used during those time periods provided a more realistic picture of operational cash needs during the Authority's beginning years.

The MBO establishes that rates and charges be set such that they are expected to produce debt service coverage that is not less than the Required Coverage. Required Coverage is defined as debt service coverage levels of 1.20 for senior lien bonds, 1.10 for second lien bonds and 1.00 for any junior lien bonds, other than second lien bonds. Debt service coverage ratios are inclusive of all revenue bonds and state revolving loans held on behalf of both GLWA and DWSD.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE - GAAP BASIS - WATER SYSTEM
As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016 [1]
GLWA Revenues							
Wholesale customer charges	\$ 323,026,213	\$ 322,423,768	\$ 312,701,777	\$ 311,399,136	\$ 323,117,344	\$ 336,222,256	\$ 160,777,169
KWA debt service credits	(6,496,428)	(6,652,253)	(6,652,348)	(6,979,503)	(3,176,073)	-	-
DWSD Local system charges	21,697,300	21,925,500	21,295,500	20,181,400	15,130,600	15,490,300	6,833,500
Other Revenue	775,537	267,562	1,912,636	21,340	64,200	37,388	54,863
Earnings on investments [2]	1,945,613	4,195,305	9,115,115	11,818,203	4,489,397	1,348,898	520,891
Total GLWA Revenues	<u>340,948,235</u>	<u>342,159,882</u>	<u>338,372,680</u>	<u>336,440,576</u>	<u>339,625,468</u>	<u>353,098,842</u>	<u>168,186,423</u>
DWSD Local System Revenues [7]							
Local system revenues [3]	83,591,720	67,464,986	73,817,339	69,777,041	83,983,786	69,680,402	183,279,645
Other Revenue	2,349,445	1,958,151	7,289,468	1,013,276	1,635,430	5,265,229	2,074,095
Total DWSD Local System Revenues	<u>85,941,165</u>	<u>69,423,137</u>	<u>81,106,807</u>	<u>70,790,317</u>	<u>85,619,216</u>	<u>74,945,631</u>	<u>185,353,740</u>
Total Revenue	<u>426,889,400</u>	<u>411,583,019</u>	<u>419,479,487</u>	<u>407,230,893</u>	<u>425,244,684</u>	<u>428,044,473</u>	<u>353,540,163</u>
Operating Expenses							
GLWA operating expenses	137,815,968	123,638,092	132,532,838	119,821,946	108,530,383	101,730,949	49,545,659
GASB 96 expenditures [4]	413,924	-	-	-	-	-	-
O&M transfers:							
DWSD Local System operations	29,989,000	35,833,900	34,662,400	35,484,300	35,059,704	33,596,400	22,444,800
Legacy Pension Regional System [5]	6,048,000	6,048,000	6,048,000	6,048,000	6,048,000	6,048,000	3,024,000
Legacy Pension DWSD Local System [5]	4,272,000	4,272,000	4,272,000	4,272,000	4,272,000	4,272,000	2,136,000
Total Operating Expenses	<u>178,538,892</u>	<u>169,791,992</u>	<u>177,515,238</u>	<u>165,626,246</u>	<u>153,910,087</u>	<u>145,647,349</u>	<u>77,150,459</u>
Pledged revenue	<u>\$ 248,350,508</u>	<u>\$ 241,791,027</u>	<u>\$ 241,964,249</u>	<u>\$ 241,604,647</u>	<u>\$ 271,334,597</u>	<u>\$ 282,397,124</u>	<u>\$ 276,389,704</u>
Principal and interest funding requirement [6]:							
Senior lien bonds	\$ 124,309,692	\$ 123,798,304	\$ 122,318,928	\$ 119,230,820	\$ 127,687,420	\$ 134,234,660	\$ 128,177,999
Second lien bonds	46,840,350	51,731,158	47,849,350	46,214,385	42,852,813	38,990,023	41,178,843
Total senior and second lien bonds	171,150,042	175,529,462	170,168,278	165,445,205	170,540,233	173,224,683	169,356,842
Junior lien bonds	5,439,273	3,684,917	2,700,795	2,521,249	2,009,658	1,785,328	1,781,683
Total all bonds	<u>\$ 176,589,315</u>	<u>\$ 179,214,379</u>	<u>\$ 172,869,073</u>	<u>\$ 167,966,454</u>	<u>\$ 172,549,891</u>	<u>\$ 175,010,011</u>	<u>\$ 171,138,525</u>
GAAP basis debt service coverage							
Senior lien bonds	2.00	1.95	1.98	2.03	2.12	2.10	2.16
Senior and second lien bonds	1.45	1.38	1.42	1.46	1.59	1.63	1.63
All bonds, including SRF junior lien	1.41	1.35	1.40	1.44	1.57	1.61	1.62

[1] GLWA started operations on January 1, 2016. Includes 6 months under operations of DWSD and 6 months under the operations of GLWA under the Master Bond Ordinances in effect during the respective time periods.

[2] Excludes investment earnings on bond proceeds in construction fund

[3] Local Service Revenue reported net of bad debt expense.

[4] Amounts recorded under GASB 96 for financial reporting purposes are treated as operating expenditures for budget purposes and the debt service coverage calculation.

[5] The legacy pension obligations reflects only the Legacy Pension Obligation as defined in Section 504(c) of the Water Master Bond Ordinance.

[6] Calculated on a debt set aside basis consistent with rate covenant basis for rate determination purposes.

[7] At the time of the issuance of the GLWA financial report, DWSD's audited financial report had not been released. Amounts used were provided by DWSD's management of the preliminary financial results for the year ended June 30, 2022.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE - RATE COVENANT BASIS - WATER SYSTEM

As of June 30, 2022

	2022	2021	2020 [4]	2019	2018	2017 [5]	2016 [1]
GLWA Receipts							
Wholesale System Receipts	\$ 313,964,381	\$ 310,032,178	\$ 303,568,071	\$ 308,690,722	\$ 319,728,881	\$ 336,362,250	
DWSD Local system charges	21,697,300	21,925,500	21,295,500	20,181,400	15,130,600	15,490,300	
Investment Earnings	2,456,013	4,684,353	7,742,625	7,722,112	3,592,524	579,546	
Total GLWA Receipts	338,117,694	336,642,031	332,606,196	336,594,234	338,452,005	352,432,096	
DWSD Local System Receipts	80,267,663	80,141,924	75,590,223	79,686,819	85,962,882	80,960,806	
Total Receipts	418,385,357	416,783,955	408,196,419	416,281,053	424,414,887	433,392,902	
Operation and Maintenance Transfers							
GLWA Regional system operations [2]	143,933,800	124,167,627	126,188,192	116,356,994	114,426,522	105,431,843	
DWSD Local System operations	29,989,000	35,833,900	34,662,400	35,484,300	35,059,704	33,596,400	
Legacy Pension Regional System [3]	6,048,000	6,048,000	6,048,000	6,048,000	6,048,000	6,048,000	
Legacy Pension DWSD Local System [3]	4,272,000	4,272,000	4,272,000	4,272,000	4,272,000	4,272,000	
Total Operations and Maintenance Transfers	184,242,800	170,321,527	171,170,592	162,161,294	159,806,226	149,348,243	
Pledged revenue	\$ 234,142,557	\$ 246,462,428	\$ 237,025,827	\$ 254,119,759	\$ 264,608,661	\$ 284,044,659	
Principal and interest funding requirement [4]:							
Senior lien bonds	\$ 124,309,692	\$ 123,798,304	\$ 122,318,928	\$ 119,230,820	\$ 127,687,420	\$ 134,234,660	
Second lien bonds	46,840,350	51,731,158	47,849,350	46,214,385	42,852,813	38,990,023	
Total senior and second lien bonds	171,150,042	175,529,462	170,168,278	165,445,205	170,540,233	173,224,683	
Junior lien bonds	5,439,273	3,684,917	2,700,795	2,521,249	2,009,658	1,785,328	
Total all bonds	\$ 176,589,315	\$ 179,214,379	\$ 172,869,073	\$ 167,966,454	\$ 172,549,891	\$ 175,010,011	
Rate covenant basis debt service coverage							
Senior lien bonds	1.88	1.99	1.94	2.13	2.07	2.12	
Senior and second lien bonds	1.37	1.40	1.39	1.54	1.55	1.64	
All bonds, including SRF junior lien	1.33	1.38	1.37	1.51	1.53	1.62	

[1] GLWA started operations on January 1, 2016. Due to the bifurcation from DWSD the Rate Covenant Basis cannot be computed for 2016.

[2] For years prior to 2022 a different methodology was used. A calculation was performed to determine the cash basis disbursements from the operations fund.

[3] The legacy pension obligations reflects only the Legacy Pension Obligation as defined in Section 504 (c) of the Water Master Bond Ordinance.

[4] Calculated on a debt set aside basis consistent with rate covenant basis for rate determination purposes.

[5] In preparation of the 2022 Water Official Statements this historical information was revised and differs from last year's Annual Comprehensive Financial Report.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE - GAAP BASIS - SEWAGE DISPOSAL SYSTEM
As of June 30, 2022

	2022	2021	2020	2019	2018	2017	2016 [1]
GLWA Revenues							
Suburban Wholesale Customers	\$ 268,813,369	\$ 267,567,816	\$ 266,003,286	\$ 272,772,460	\$ 268,978,831	\$ 298,376,775	\$ 121,106,353
DWSD Local system charges	188,662,200	187,959,700	185,807,300	181,159,300	178,969,200	187,304,100	95,826,900
Industrial waste charges	8,300,278	8,004,939	7,854,593	9,106,274	14,334,979	14,381,106	6,910,192
Pollutant surcharges	5,181,816	6,719,964	6,448,508	5,932,550	6,908,404	5,206,294	2,423,910
Other Revenue	817,448	6,481,905	6,491,617	506,323	4,391,145	538,807	4,197,614
Earnings on investments [2]	1,842,475	2,802,041	7,775,080	9,592,270	4,022,582	1,384,225	586,072
Total GLWA Revenues	473,617,586	479,536,365	480,380,384	479,069,177	477,605,141	507,191,307	231,051,041
DWSD Local System Revenues [7]							
Local system revenues [3]	132,274,680	79,360,298	80,935,263	71,542,770	84,018,973	45,587,339	206,870,710
Other Revenue	1,797,906	915,216	914,969	346,821	159,535	4,617,148	(940,714)
Total DWSD Local System Revenues	134,072,586	80,275,514	81,850,232	71,889,591	84,178,508	50,204,487	205,929,996
Total Revenue	607,690,172	559,811,879	562,230,616	550,958,768	561,783,649	557,395,794	436,981,037
Operating Expenses							
GLWA operating expenses	186,918,677	178,101,424	176,949,460	174,040,805	176,379,404	151,318,266	84,380,021
GASB 87 and GASB 96 expenditures [4]	1,041,308	118,759	-	-	-	-	-
O&M transfers:							
DWSD Local System operations	61,301,000	69,915,700	55,243,500	56,767,920	60,517,992	41,535,600	16,949,400
Legacy Pension Regional System [5]	10,824,000	10,824,000	10,824,000	10,824,000	10,824,000	10,824,000	5,412,000
Legacy Pension DWSD Local System [5]	2,856,000	2,856,000	2,856,000	2,856,000	2,856,000	2,856,000	1,428,000
Total Operating Expenses	262,940,985	261,815,883	245,872,960	244,488,725	250,577,396	206,533,866	108,169,421
Pledged revenue	\$ 344,749,187	\$ 297,995,996	\$ 316,357,656	\$ 306,470,043	\$ 311,206,253	\$ 350,861,928	\$ 328,811,616
Principal and interest funding requirement [6]:							
Senior lien bonds	\$ 130,404,294	\$ 119,217,128	\$ 147,310,565	\$ 145,795,507	\$ 141,718,836	\$ 140,854,010	\$ 140,191,016
Second lien bonds	51,893,038	57,778,951	45,878,850	43,922,600	43,990,100	47,918,639	48,944,924
Total senior and second lien bonds	182,297,332	176,996,079	193,189,415	189,718,107	185,708,936	188,772,649	189,135,940
Junior lien bonds	53,550,614	53,166,797	52,593,843	49,454,156	46,571,896	45,782,165	39,434,631
Total all bonds	\$ 235,847,946	\$ 230,162,876	\$ 245,783,258	\$ 239,172,263	\$ 232,280,832	\$ 234,554,814	\$ 228,570,571
GAAP basis debt service coverage							
Senior lien bonds	2.64	2.50	2.15	2.10	2.20	2.49	2.35
Senior and second lien bonds	1.89	1.68	1.64	1.62	1.68	1.86	1.74
All bonds, including SRF junior lien	1.46	1.29	1.29	1.28	1.34	1.50	1.44

[1] GLWA started operations on January 1, 2016. Includes 6 months under operations of DWSD and 6 months under the operations of GLWA under the Master Bond Ordinances in effect during the respective time periods.

[2] Excludes investment earnings on bond proceeds in construction fund

[3] Local Service Revenue reported net of bad debt expense.

[4] Amounts recorded under GASB 96 for financial reporting purposes are treated as operating expenditures for budget purposes and the debt service coverage calculation.

[5] The legacy pension obligations reflects only the Legacy Pension Obligation as defined in Section 504(c) of the Water Master Bond Ordinance.

[6] Calculated on a debt set aside basis consistent with rate covenant basis for rate determination purposes.

[7] At the time of the issuance of the GLWA financial report, DWSD's audited financial report had not been released. Amounts used were provided by DWSD's management of the preliminary financial results for the year ended June 30, 2022.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE - RATE COVENANT BASIS - SEWAGE DISPOSAL SYSTEM
As of June 30, 2022

	2022	2021	2020 [4]	2019	2018	2017	2016 [1]
GLWA Receipts							
Wholesale System Receipts	\$ 280,048,244	\$ 286,580,811	\$ 291,884,274	\$ 281,485,522	\$ 294,503,834	\$ 281,528,551	
DWSD Local system charges	188,662,200	187,959,700	185,807,300	181,159,300	178,969,200	187,304,100	
Investment Earnings	<u>1,680,667</u>	<u>2,739,425</u>	<u>5,372,063</u>	<u>5,098,922</u>	<u>2,796,727</u>	<u>372,505</u>	
Total GLWA Receipts	470,391,111	477,279,936	483,063,637	467,743,744	476,269,761	469,205,156	
DWSD Local System Receipts	<u>102,618,696</u>	<u>120,251,068</u>	<u>78,882,259</u>	<u>82,349,510</u>	<u>60,314,827</u>	<u>43,553,820</u>	
Total Receipts	<u>573,009,807</u>	<u>597,531,004</u>	<u>561,945,896</u>	<u>550,093,254</u>	<u>536,584,588</u>	<u>512,758,976</u>	
Operations and Maintenance Transfers							
GLWA Regional system operations [2]	191,908,600	165,588,970	176,416,149	171,899,072	172,614,312	172,965,094	
DWSD Local System operations	61,301,000	69,915,700	55,243,500	56,767,920	60,517,992	41,535,600	
Legacy Pension Regional System [3]	10,824,000	10,824,000	10,824,000	10,824,000	10,824,000	10,824,000	
Legacy Pension DWSD Local System [3]	<u>2,856,000</u>	<u>2,856,000</u>	<u>2,856,000</u>	<u>2,856,000</u>	<u>2,856,000</u>	<u>2,856,000</u>	
Total Operations and Maintenance Transfers	<u>266,889,600</u>	<u>249,184,670</u>	<u>245,339,649</u>	<u>242,346,992</u>	<u>246,812,304</u>	<u>228,180,694</u>	
Pledged revenue	<u>\$ 306,120,207</u>	<u>\$ 348,346,334</u>	<u>\$ 316,606,247</u>	<u>\$ 307,746,262</u>	<u>\$ 289,772,284</u>	<u>\$ 284,578,282</u>	
Principal and interest funding requirement [4]:							
Senior lien bonds	\$ 130,404,294	\$ 119,217,128	\$ 147,310,565	\$ 145,795,507	\$ 141,718,836	\$ 140,854,010	
Second lien bonds	<u>51,893,038</u>	<u>57,778,951</u>	<u>45,878,850</u>	<u>43,922,600</u>	<u>43,990,100</u>	<u>47,918,639</u>	
Total senior and second lien bonds	182,297,332	176,996,079	193,189,415	189,718,107	185,708,936	188,772,649	
Junior lien bonds	<u>53,550,614</u>	<u>53,166,797</u>	<u>52,593,843</u>	<u>49,454,156</u>	<u>46,571,896</u>	<u>45,782,165</u>	
Total all bonds	<u>\$ 235,847,946</u>	<u>\$ 230,162,876</u>	<u>\$ 245,783,258</u>	<u>\$ 239,172,263</u>	<u>\$ 232,280,832</u>	<u>\$ 234,554,814</u>	
Rate covenant basis debt service coverage							
Senior lien bonds	2.35	2.92	2.15	2.11	2.04	2.02	
Senior and second lien bonds	1.68	1.97	1.64	1.62	1.56	1.51	
All bonds, including SRF junior lien	1.30	1.51	1.29	1.29	1.25	1.21	

[1] GLWA started operations on January 1, 2016. Due to the bifurcation from DWSD the Rate Covenant Basis cannot be computed for 2016.

[2] For years prior to 2022 a different methodology was used. A calculation was performed to determine the cash basis disbursements from the operations fund.

[3] The legacy pension obligations reflects only the Legacy Pension Obligation as defined in Section 504 (c) of the Water Master Bond Ordinance.

[4] Calculated on a debt set aside basis consistent with rate covenant basis for rate determination purposes.

Note: This schedule is being built prospectively; ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

SERVICE AREA DEMOGRAPHICS Last Ten Years

Year	Population (1)	Unemployment (2)	Per Capita Income (3)	Total Debt Service (5)	Debt Per Capita	Debt Service as a Percentage of Income
Water Fund						
2022	3,800,000	4.6%	\$ 59,590 (4)	\$ 176,589,315	\$ 46.47	0.08%
2021	3,800,000	6.2%	58,971 (4)	179,214,379	47.16	0.08%
2020	3,800,000	11.5%	58,356	172,869,073	45.49	0.08%
2019	3,800,000	4.3%	54,172	167,966,454	44.20	0.08%
2018	3,800,000	4.3%	52,572	172,549,891	45.41	0.09%
2017	3,800,000	4.6%	50,863	175,010,011	46.06	0.09%
2016 *	3,800,000	5.3%	49,179	171,138,525	45.04	0.09%
2015 *	3,800,000	5.9%	47,799	178,923,900	47.09	0.10%
2014 *	3,800,000	8.1%	44,966	182,464,900	48.02	0.11%
2013 *	3,800,000	9.7%	42,725	172,458,800	45.38	0.11%
Sewage Disposal Fund						
2022	2,800,000	4.6%	\$ 59,590 (4)	\$ 235,847,946	\$ 84.23	0.14%
2021	2,800,000	6.2%	58,971 (4)	230,162,876	82.20	0.14%
2020	2,800,000	11.5%	58,356	245,783,258	87.78	0.15%
2019	2,800,000	4.3%	54,172	239,172,263	85.42	0.16%
2018	2,800,000	4.3%	52,572	232,280,832	82.96	0.16%
2017	2,800,000	4.6%	50,863	234,554,814	83.77	0.16%
2016 *	2,800,000	5.3%	49,179	228,570,571	81.63	0.17%
2015 *	2,807,000	5.9%	47,799	232,612,800	82.87	0.17%
2014 *	2,807,000	8.1%	44,966	229,611,100	81.80	0.18%
2013 *	2,807,000	9.7%	42,725	225,222,900	80.24	0.19%

(1) Source: Estimated based on data from Southeast Michigan Council of Governments (SEMCOG).

(2) Source: Bureau of Labor Statistics Detroit-Warren-Dearborn MSA Annual Average (For 2022 the June rate was used). The Detroit-Warren-Dearborn Metropolitan Statistical Area (MSA) is comprised of six counties: Wayne, Oakland, Macomb, Livingston, Lapeer and St. Clair. This represents the majority of the service area customers.

(3) Source: FRED Economic Data, St. Louis Fed (Prior year amounts have been updated to match current information from FRED)

(4) Source: Michigan State University Center for Economic Analysis

(5) Debt service is based on set aside debt service requirements for the fiscal year which includes the subsequent year July 1st debt payment.

* GLWA assumed operations on January 1, 2016. The information in this table from 2013-2015 is based on operations under the City of Detroit Water and Sewerage Department (DWSD). Data for 2016 includes six months of operation under DWSD and six months of operation under GLWA.

GREAT LAKES WATER AUTHORITY

LARGEST EMPLOYERS Current Year and 9 years prior

Employer	Type of Business	Fiscal Year 2022			Fiscal Year 2013		
		Full- Time Employees (a)	Rank	Percent of Total Employment (b)	Full- Time Employees (c)	Rank	Percent of Total Employment (d)
Ford Motor Co.	Automobile Manufacturer	47,750	1	2.40%	43,977	1	2.37%
Stellantis NV (Formerly FCA US LLC)	Automobile Manufacturer	37,761	2	1.90%	29,006	3	1.56%
University of Michigan	Public University and Health System	35,185	3	1.77%	29,551	2	1.59%
General Motors Co.	Automobile Manufacturer	33,935	4	1.70%	26,843	4	1.45%
Beaumont Health	Health Care System	24,668	5	1.24%	13,134	9	0.71%
U.S. Government	Federal Government	19,953	6	1.00%	18,600	5	1.00%
Rocket Companies Inc.	Holding company consisting of technology, personal finance and consumer service brands	18,000	7	0.90%	n/a	n/a	n/a
Henry Ford Health System	Health Care System	17,875	8	0.90%	17,831	6	0.96%
Trinity Health Michigan	Health Care System	12,991	9	0.65%	14,062	7	0.76%
Ascension Michigan (Formerly St. John's Providence)	Health Care System	12,452	10	0.63%	12,002	10	0.65%
Detroit Medical Center	Health Care System	n/a	n/a	n/a	13,458	8	0.72%
Total		<u>260,570</u>		<u>13.08%</u>	<u>218,464</u>		<u>11.76%</u>

- (a) Employment data from July 2021 Crain's Detroit Business (most recent available), Largest Southeast Michigan Employers - Ranked by full-time employees
- (b) Percentage base on U.S. Bureau of Labor Statistics from July 2021 of 1,991,991 for the Detroit-Warren-Dearborn, MI Metropolitan Statistical Area
- (c) Employment data from July 2013 Crain's Detroit Business, Largest Metro Detroit Employers - Ranked by full-time employees
- (d) Percentage base on U.S. Bureau of Labor Statistics from July 2013 of 1,857,269 for the Detroit-Warren-Dearborn, MI Metropolitan Statistical Area

GREAT LAKES WATER AUTHORITY

PRODUCED AND BILLED WATER VOLUMES (Mcf)

Fiscal Year	Water Produced [1]	Reported Water Sales			Non-Revenue Water Estimate	Non-Revenue Water Estimate % of Production
		Wholesale Billed [2]	Local System Billed [3]	Total Water Billed		
2022	20,498,700	13,205,300	4,297,300	17,502,600	2,996,100	14.6%
2021	20,565,800	14,258,300	4,120,000	18,378,300	2,187,500	10.6%
2020	19,989,500	13,578,700	4,161,300	17,740,000	2,249,500	11.3%
2019	20,968,100	13,708,600	4,354,600	18,063,200	2,904,900	13.9%
2018	23,228,600	14,391,800	4,428,200	18,820,000	4,408,600	19.0%
2017	23,915,600	14,824,000	4,465,800	19,289,800	4,625,800	19.3%
2016 *	23,580,700	14,730,400	4,649,100	19,379,500	4,201,200	17.8%

The table for historical water sales and reported total water production presents water volume in thousands of cubic feet (“Mcf”) for suburban wholesale customers, for the Retail Water Customers, and for the Regional Water System as a whole, together with total water production and non-revenue water volume. As is common for all large water systems, the Regional Water System experiences a differential between the quantity of water produced by the treatment plants during the fiscal year and the quantity of water billed to customers over the same period, and the difference is referred to as “non-revenue water.” Non-revenue water results from a variety of factors such as the range of accuracy of production and retail meters, losses due to leaks or major breaks in the transmission and distribution systems, unmetered water that is used for fire protection, and the accuracy of estimates for unmetered use. The Authority believes that improvements in the accuracy of the reported production figures may reduce the level of non-revenue water. Production at some of the water plants is not metered, but rather is estimated based on pump curves. The data continues to be reviewed, and the Authority has initiated efforts to measure production figures and refine production estimating techniques.

The schedule of charges for each of the wholesale customers consists of a fixed monthly charge and a commodity charge applied to monthly metered water usage. While the overall methodology used to determine charges for each customer is uniform, the service charge schedule for each customer is unique, reflecting the specific volumes, peak demands, and other demographic information in their individual contracts. Charges are designed to recover 60% of the revenue requirement via fixed monthly charges, with the other 40% generated by commodity charges.

[1] Represents, in part, estimated volumes based on pump curves and engineering analysis. GLWA engineering studies in 2017 concluded that the total water production values for calendar year 2016 were over-reported by 5.8%.

[2] Represents metered amounts for all suburban wholesale customers, with the exception of Dearborn which is based on self-reported billed volumes (including local system losses), and Highland Park, which is based on estimated volumes.

[3] The GLWA charges the DWSD local system a flat charge based on average historical usage from DWSD retail billings data adjusted for water loss. These amounts reflect retail water sales as reported by DWSD plus estimated real and apparent losses in the local distribution system based on engineering studies.

* GLWA assumed operations on January 1, 2016. Data for 2016 includes six months of operation under DWSD and six months of operation under GLWA. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

GREAT LAKES WATER AUTHORITY

WASTEWATER VOLUMES (Mcf)

Fiscal Year	Wastewater Influent [1]	Customer Wastewater Volume [2]		"System" Volume [3]
		Metered Customers	Unmetered Customers [3]	
2022 *	36,008,500	15,496,000	11,451,400	9,061,100
2021	27,543,700	11,773,200	8,929,500	6,841,000
2020	30,856,000	13,812,000	9,633,400	7,410,600
2019	34,080,800	14,658,300	10,913,300	8,509,200
2018	32,139,200	13,587,800	10,487,000	8,064,400
2017	33,623,600	14,141,100	10,788,000	8,694,500
2016 **	29,336,600	12,802,100	11,288,400	5,246,100

Treated and billed wastewater volumes are monitored by GLWA operations and engineering teams throughout the year then go through a formal review and approval process over a period of six to nine months following the end of the fiscal year. The formal, annual, data analytic review is led by an outside consultant. As part of this process preliminary data is shared with customers to confirm. Current and historic data does change at times as system improvements are made and reporting refinements occur.

[1] Represents total influent volume to the System, including volumes treated and discharged at the Water Resource Recovery Facility and volumes discharged via Combined Sewer Overflow facilities

[2] The GLWA Sewer Charge Methodology uses historical wastewater volumes to allocate annual revenue requirements to the member partners based on historical wastewater volumes, and recovers the allocated revenue requirements via fixed monthly charges.

[3] The GLWA Sewer Charge Methodology assigns a portion of the unmetered non-sanitary flow volume as a "system" responsibility allocable to all member partners. The remaining amount is assigned to unmetered customers, which includes the Local System and certain wholesale customers.

* Data is preliminary

** GLWA assumed operations on January 1, 2016. Data for 2016 includes six months of operation under City of Detroit Water and Sewerage Department (DWSD) and six months of operation under GLWA.

This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

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GREAT LAKES WATER AUTHORITY

ADDITIONAL SUMMARY STATISTICS *

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Capital Asset Statistics - Water							
Water Treatment Plants	5	5	5	5	5	5	5
Intake Facilities	3	3	3	3	3	3	3
Booster Pumping Stations	19	19	19	19	19	19	19
Water Storage Reservoirs	32	32	32	32	32	32	32
Miles of Transmission Lines	816	816	816	816	803	803	803
Capital Asset Statistics - Sewer							
Water Resource Recovery Facility	1	1	1	1	1	1	1
Major Interceptors	3	3	3	3	3	3	3
Pump Stations [1]	9	9	9	9	9	9	9
Combined Sewer Overflow Facilities:							
Retention Treatment Basins	5	5	5	5	5	5	5
Flow-through Type Facilities	3	3	3	3	3	3	3
Miles of Trunk Sewers and Interceptors	195	195	195	195	181	181	181
GLWA Employees							
Water Operations	203	211	211	213	205	180	155
Sewage Disposal Operations	298	320	344	369	358	342	320
Centralized Services	295	298	302	295	276	249	217
Administrative Services	152	156	152	147	129	110	90
Total Employees	<u>948</u>	<u>985</u>	<u>1,009</u>	<u>1,024</u>	<u>968</u>	<u>881</u>	<u>782</u>

[1] GLWA operates nine pump stations. This count includes four pump stations that are owned by DWSD and operated by GLWA under a shared services agreement.

* GLWA began operations on January 1, 2016. This schedule is being built prospectively. Ultimately, 10 years of data will be presented.

