

DRAFT as of 12.4.2020

Fiscal Year
**Comprehensive Annual
Financial Report**
Ended June 30, 2020



*“Striving to be the preferred provider of water
and wastewater services in southeast Michigan”*



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

GREAT LAKES WATER AUTHORITY
Southeast Michigan

COMPREHENSIVE ANNUAL FINANCIAL REPORT

Including Independent Auditors' Report

Fiscal Year Ended June 30, 2020

DRAFT

Prepared By:

Great Lakes Water Authority Financial Services Area

GREAT LAKES WATER AUTHORITY

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INTRODUCTORY SECTION

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TRANSMITTAL LETTER

December 18, 2020

Board of Directors
Great Lakes Water Authority

Dear Directors,

We are pleased to present the Comprehensive Annual Financial Report (“CAFR”) for the Great Lakes Water Authority (“GLWA” or “Authority”) for the fiscal year which ended June 30, 2020. This is GLWA’s fourth full 12-month fiscal year of operations since the Authority’s operational effective date of January 1, 2016. Having four full years of financial information allows the GLWA team to demonstrate delivery of the high level of performance that we have pledged.

GLWA’s financial statements 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 my 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 my 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 Virchow Krause, LLC, 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, 2020 with comparative amounts for June 30, 2019.

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

GLWA is the result of a monumental collaboration among regional leaders. Working to meet the needs of sustainable and affordable infrastructure, a memorandum of understanding was agreed upon on September 9, 2014 to form a regional water authority. Subsequently, GLWA was incorporated by the City of Detroit ("City") and the counties of Macomb, Oakland and Wayne on November 26, 2014 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.

On June 12, 2015, the City and GLWA executed the Regional Water Supply and Sewerage Disposal System Leases (the Regional System Leases), transferring the regional water and sewage disposal facilities from the City to GLWA for an initial term of 40 years. In addition, the City and GLWA entered into a Water and Sewer Services Agreement whereby GLWA provides water and sewer services to the City; the City then supplies these services to Detroit retail customers via the DWSD.

The above agreements required the satisfaction of several conditions before becoming effective. By January 1, 2016 (the operational Effective Date), those conditions were met and GLWA, under the terms of the Leases, became responsible for the assets, all bonded indebtedness, and operations for the regional water and wastewater systems.

GLWA leases the regional water and sewerage 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. GLWA also funds a Water Residential Assistance Program ("WRAP") to assist low-income residential households in enrolled member partner communities.

Biennial budgets are prepared annually and approved by the Board of Directors. Included with the biennial budget is a five-year financial plan. A five-year capital plan is also prepared annually and approved by the Board of Directors.

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 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.

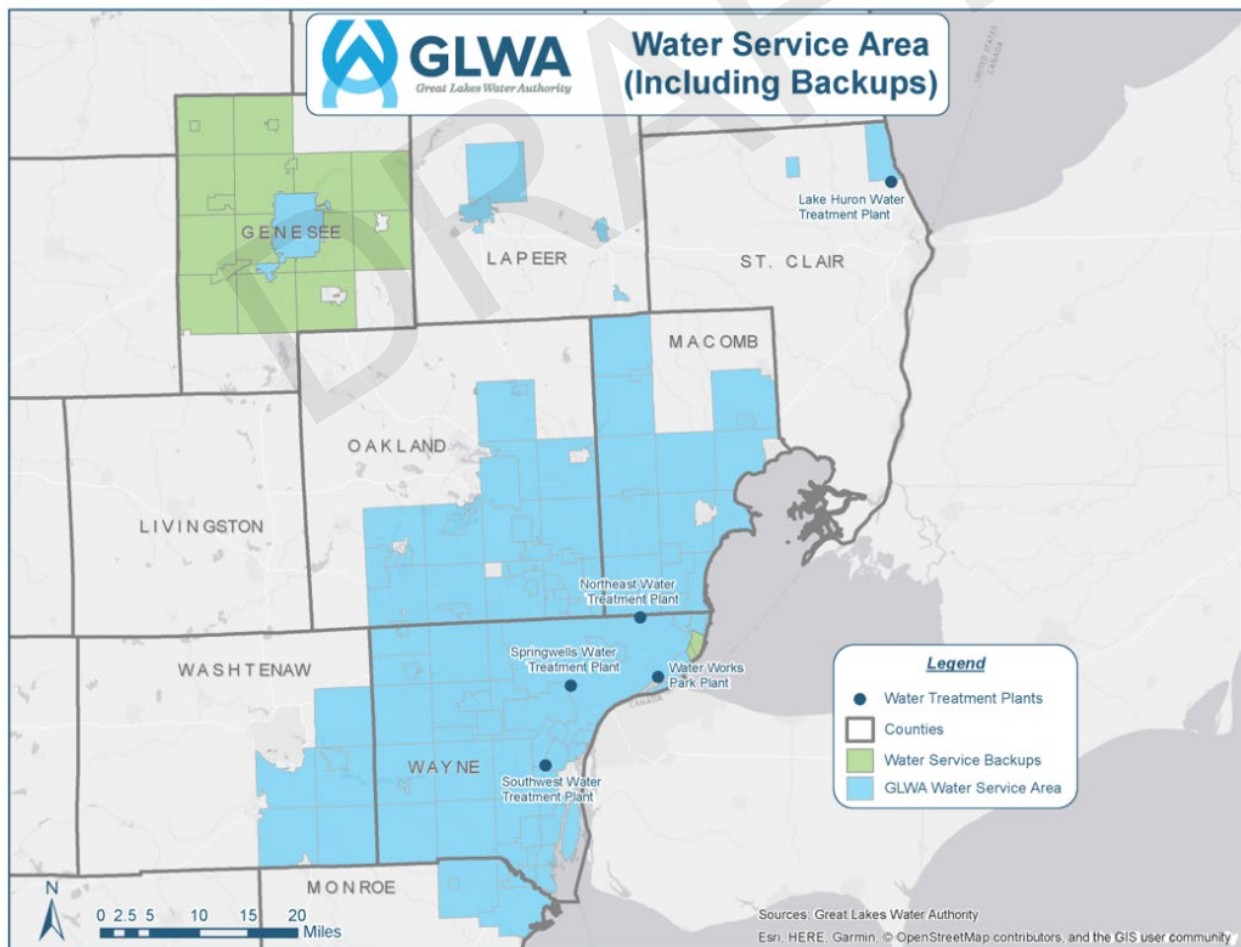
Water System

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.

The long-term strategy for the water system focuses on reliability, flexibility and cost effectiveness. The 2015 Comprehensive Water Master Plan has identified the ability to reduce the number of water treatment facilities in full operation at GLWA. Initially, for long-term capital expenditure avoidance, the plan has identified the repurposing of the Northeast Water Treatment Plant. To repurpose this facility into a reservoir and pump station, several capital projects, as identified Table IV-10 of the FY 2021 - 2025 CIP, have been identified and are required to be completed.

Below is the Water System service area map.



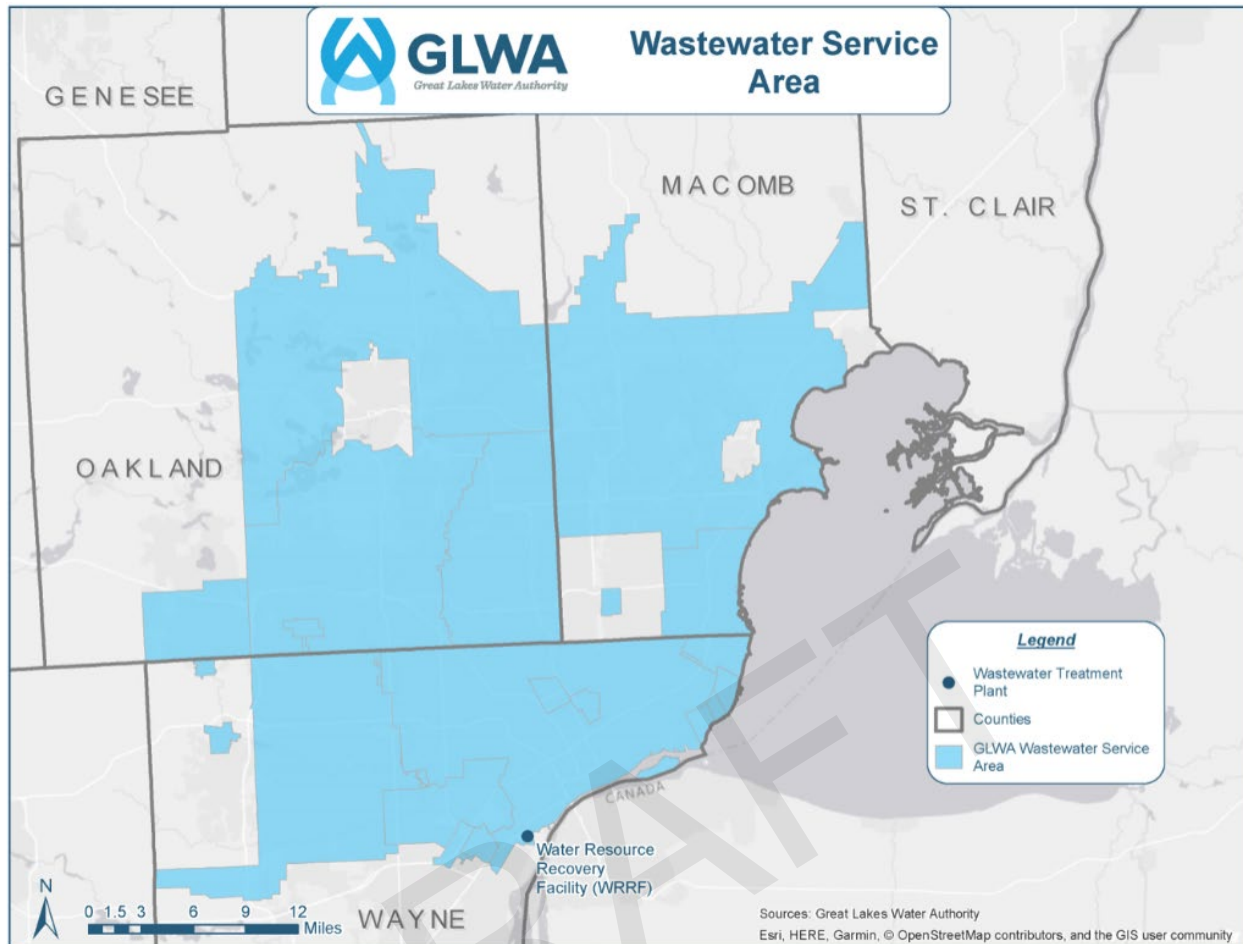
Wastewater System

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 System service area map.



Key Financial Highlight – Bond Refunding Savings

As interest rates continued to decline during FY 2020, the possibility of a successful advance refunding transaction later became a reality - despite the challenges presented by the COVID-19 Pandemic.

December 2019 - The bond financing team is assembled, and initial planning meeting is held.

Early March 2020 – Presentations were made to each rating agency with successful outcomes.

Standard & Poors affirmed GLWA’s senior lien water system at AA- and its second lien water system rating at A+. Both the water and sewer senior and second lien bonds were assigned a stable outlook. S&P cited several strengths: as a wholesaler serving a large area, GLWA is not dependent on any single entity to fulfill its financial commitments, comprehensive budgeting practices, and a Capital Improvement Plan (“CIP”) that is forward-looking and not tied to any regulatory compliance mandates. Both the senior and second liens were assigned a stable outlook. The rating agency upgraded GLWA’s senior lien sewer system rating by one notch to AA- and its second lien sewer system was increased by one notch to A+.

Moody’s Investors Service upgraded both GLWA’s water system and sewer system senior lien ratings one notch to A1 and both its second lien ratings one notch to A2. Moody’s cited GLWA’s strong operating trends, healthy liquidity, and an “experienced management team

[that] remains committed to measured revenue growth through annual revenue requirement increases, while at the same time maintaining an affordable rate structure ...". The ratings outlook for both water and sewer senior and second lien bonds remain stable.

Fitch Ratings also upgraded both system bond ratings, raising GLWA's ratings for its water system and sewer system senior lien bonds by one notch to A+, and its second lien bonds by one notch to an A. The credit outlook for both water and sewer senior and second lien bonds are stable. In its report, Fitch said the improvement in its credit outlook for GLWA, "reflects sustained improvement to the Authority's financial profile," citing stable charge setting practices, accumulation of cash reserves, and prospects for achieving or beating expectations help to insulate GLWA from potential credit risks. Fitch also cited GLWA's plans to use pay-as-you-go capital funding to moderate debt levels as a key factor in this outlook adjustment.

Mid/Late March 2020 – The World Health Organization declared a pandemic on March 11, 2020, following the outbreak of COVID-19, a respiratory disease caused by a novel strain of coronavirus. Then, on March 13, 2020, President Donald Trump declared a national emergency to unlock federal funds to help states and local governments fight the pandemic. Subsequently, on March 28, 2020, President Trump, at the request of Michigan Governor Gretchen Whitmer, declared that a major disaster exists. This crisis created a volatile municipal bond market and varying concerns by credit analysts of water sector financial outlook. GLWA was, therefore, in position to pause the contemplated refunding and new money transaction.

Concurrently, GLWA was proactively managing through the COVID-19 challenges utilizing an emergency management plan framework while focusing on GLWA's long-term operational and financial stability. In addition to expense reductions to offset potential reductions in water sales, at the recommendation of the Authority's administration, the GLWA Board of Directors voted to defer the previously approved service charge increase from July 1, 2020 until October 1, 2020 to support member partner communities who are facing increased expenses and/or cashflow needs due to the pandemic.

Late April 2020 - As the market showed favorable signs of stability, GLWA prepared to return to the bond market. The recently upgraded ratings remained in place, despite the events of the prior 45 days. On April 29, 2020 S&P issued a ratings bulletin, *Great Lakes Water Authority, MI Ratings Unaffected by COVID-19 Pandemic*, stating that the AA- rating on the senior lien water supply system bonds and the A+ rating on the second-lien revenue bonds had not been affected by the COVID-19 pandemic. S&P noted that GLWA took actions to maintain budgetary balance to date and has identified further actions depending on the length of the declared emergency in Michigan and the United States.

May 2020 - GLWA executed a successful refunding transaction on May 12, 2020, of \$463.1 million of Water Supply System Revenue Bonds (with \$377.5 million in refunding bonds and \$85.6 million for the DWSD local system in new money achieving a very favorable arbitrage yield of 2.98% for 30-year debt and generating nearly \$100 million for local system water system capital improvements). The net present value savings from the refunding transaction was \$66.5 million for the water fund. There was outstanding investor participation with over \$1.6 billion in orders for the combined preliminary pricing total of \$443 million in bonds (3.6x oversubscribed). This resulted in a mid-day repricing and allowed us to achieve even greater savings for the refunding and to further lower the borrowing rate for the new money bonds for DWSD capital improvements.

June 2020 - A second successful refunding was completed on June 16, 2020 of \$687.5 million of Sewage Disposal System Revenue Bonds. The net present value savings from the refunding transaction was \$122.9 million for the sewage disposal fund. Like the water system transaction, there was outstanding investor participation with over \$4.3 billion in orders for the total of \$687.5 million in bonds (6.3x oversubscribed). Given the taxable (rather than tax exempt) nature of the bonds, investors from Canada, Norway, Britain and Taiwan also participated in the transaction.

Pattern of Delivering What We Promise - This financial achievement, which occurred with maintaining system reliability and quality during an emergency event, 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 and both Standard & Poor's and Fitch Ratings have increased the ratings 4 notches.

One Billion in Savings Reached - Within a relatively short period of time, the path toward financial stability through optimizing the debt portfolio has resulted in over \$1 billion in cashflow savings over the remaining life of the debt at the time of the refunding – with nearly 72% of those savings achieved since the operating effective date of GLWA. In addition, restricted cash for debt reserves has decreased nearly \$160 million. These savings have a material impact on GLWA's ability to control annual charge adjustments at an amount well below the consumer price index. Further, the required level of restricted cash has declined as the structure of the outstanding debt has been optimized as part of a long-term strategy as shown in the table below. This frees up additional cash for capital improvements.

Cumulative Savings from Bond Refunding Transactions (\$000)

	GLWA			DWSD (Implementation period of Memorandum of Understanding)			Total FY 2015 to FY 2020
	FY 2020	FY 2019	FY 2017	Total Since Inception January 1, 2016	Period Ended December 31, 2015	FY 2015	
Cash Flow Savings							
Water Fund	\$ 103,077	\$ 30,880	\$ 185,424	\$ 319,381	\$ 16,390	\$ 138,696	\$ 474,467
Sewer Disposal Fund	221,040	54,049	123,711	398,800	21,884	106,813	527,497
Total Cash Flow Savings	\$ 324,117	\$ 84,929	\$ 309,135	\$ 718,181	\$ 38,274	\$ 245,509	\$ 1,001,964
Economic Gain - Net Present Value Savings							
Water Fund	\$ 66,489	\$ 24,897	\$ 120,781	\$ 212,167	\$ 13,003	\$ 56,956	\$ 282,126
Sewer Disposal Fund	122,881	34,519	71,155	228,555	13,226	56,589	298,370
Total Economic Gain	\$ 189,370	\$ 59,416	\$ 191,936	\$ 440,722	\$ 26,229	\$ 113,545	\$ 580,496

Restricted Cash Required for Debt Reserves (\$000)							
	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
Water Fund	\$ 4,361	\$ 16,353	\$ 20,970	\$ 21,547	\$ 46,541	\$ 46,333	\$ 77,920
Sewer Disposal Fund	18,903	52,206	64,830	65,975	89,587	89,237	105,556
Total Debt Reserves	<u>\$ 23,264</u>	<u>\$ 68,559</u>	<u>\$ 85,800</u>	<u>\$ 87,522</u>	<u>\$ 136,128</u>	<u>\$ 135,570</u>	<u>\$ 183,476</u>

FY 2020 Results

GLWA is committed to ensuring the long-term sustainability of the water and sewage disposal systems. Beyond the FY 2020 bond refunding program noted, below are key financial highlights from FY 2020.

1. Liquidity - Strong liquidity with 1,086 days cash on hand for the water system and 593 days for the sewage disposal system as shown on the Schedule of Days Cash in the supplementary information.

2. Debt Service Coverage - Excellent debt service coverage for both the water and sewage disposal funds. The water fund reports debt coverage for senior lien bonds at 1.97 times and all bonds at 1.43 times. The sewage disposal fund reports debt coverage for senior lien bonds at 2.16 times and all bonds at 1.30 times. Detail for all debt types can be found in the Debt Service Coverage schedule in the statistical section.

3. Revenue Stability - Predictable wholesale budgeted with actual revenues within 0.46 percent (\$1.4 million) more than budget for the water system and 0.14 percent (\$0.4 million) less than budget for the sewage disposal system. The Schedule of Revenue Requirements in the Supplementary Information section provides more information related to the basis for which we establish service charges compared to actual results.

4. Controlled Operations Spending Results in Positive Overall Budget Variances - Both the water and wastewater operations controlled their spending within 5% as shown in the Schedule of Operations and Maintenance Expense for each system in the Supplementary Information section. Both systems had overall positive budget variances of \$7.5 million for the water fund and \$11.3 million for the sewage disposal system as shown in the Schedule of Revenue Requirement for each system in the Supplementary Information section. Generally, the overall positive budget variances will be directed toward future years' pay-as-you go capital funding.

Solid Foundation for Sustainability

As GLWA matures as an organization, the connections that our team members have with each other, and with our many stakeholders, is evident. This is most noticeable when you see the passion of multi-disciplinary teams, working through the development of a long-term plan that encompasses engineering, operations, finance, and many others to chart the course for the future - while never forgetting about the end-consumer and the environment. Below are topics that we cover when

talking about GLWA. At the core of each item is a connection between our stakeholders and a foundational element of sustainability.

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 decreasing long-term liabilities. 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 system charge structure, developed collaboratively with member partners, supports a high degree of financial stability. The Water 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 2020 was 98.9% of budget despite a reduction in water sales volumes of over 5% compared to the 2018 volumes, upon which the budgeted 2020 sales volumes were based. The sewer system charge revenues are 100 percent fixed monthly billing based on each member partner's share of the annual forecasted revenue requirement. As we are presently looking forward to the FY 2022 financial planning cycle, a new, further simplified sewer charge methodology will be implemented which was developed by GLWA team members, advisors, and member partners over the past two years. This was recently presented to the Board of Directors on November 25, 2020.

Bondholder Protections - All GLWA and DWSD customer payments are deposited to Bond Trustee Accounts and are disbursed in accordance the Master Bond Ordinance (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.

Flexible Capital Program - The majority of the GLWA FY 2021 –2025 five-year capital improvement plan ("CIP") is driven by optimizing the system and fostering innovation. There are no projects in the water system or sewer system CIP which have costs that will be incurred during FY 2021 to 2025 that are driven by mandated permit requirements. The water system CIP calls for \$701.6 million of major capital expenditures over the next five fiscal years (2021-2025) and the sewer system CIP calls for \$554.6 million of capital expenditures over the same time 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.

Regulatory Stability – GLWA's National Pollutant Discharge Elimination System ("NPDES") permit was issued July 1, 2019. A key feature is that it enables an integrated planning framework as well as gray infrastructure construction deferred for two permit periods to allow GLWA time to demonstrate strategies from the wastewater master plan.

Payment Assistance Program - The Water Residential Assistance Program (WRAP) set aside \$4.1 million of resources to support customer assistance needs in the region for the year ended June 30, 2020. 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. Embracing the spirit of continuous improvement, in late FY 2020, we assessed the program to identify better performance measures and ensure that eligible residents throughout the service can readily access

the program. During FY 2021, we are working with service agency partners to expand the base of constituency served to address these goals.

Workforce Development - As a significant number of employees in the water service sector prepare for retirement, GLWA is focused on workforce development and succession planning. In September 2020, the Apprenticeship Program for Electrical Instrumentation Control Technicians (EICT-I) graduated 20 apprentices from the three-year training program for EICT-I certification. Nineteen accepted full-time positions with GLWA. This program, which operates in conjunction with the U.S. Department of Labor, was expanded in January 2019 to include a new three-year apprenticeship program for 20 maintenance technicians. In February 2020, a five-year EICT-E (electrician) apprenticeship program was launched.

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.

Governance Structure that Supports Collaboration - GLWA's Board of Directors consists of six members. Two members are appointed by the mayor of the City of Detroit, one member is appointed by each chief executive of the three counties (Macomb, Oakland, and Wayne), and one member is appointed by the governor of the state of Michigan. The governor's appointee represents other suburban customer areas outside the tri-county service area, and that appointee must reside within that geographic area.

One Water Partnership - In September 2017, the first One Water Partnership Agreement was signed by GLWA and its member partners. This historic agreement outlines the mutual commitments to working together for the greater good of the region and details the responsibilities of all parties to moving the agreement forward. A critical addition to the agreement is the development of a multi-jurisdictional, multi-agency approach to infrastructure renewal and investment.

Recognition Among Our Peers

Leading Utilities of the World Membership - In 2019, GLWA was invited to become a part of the Leading Utilities of the World ("LUOW") initiative. LUOW is a network of the world's most successful, forward-thinking and innovative water and wastewater utilities. Created to help drive performance across the service sector, GLWA is one of just 49 global utilities inaugurated into the initiative since it was founded in 2017. These utilities represent a "gold standard" of utility innovation and performance. The network provides a platform to share ideas and challenges, and to inspire innovation.

The basis for GLWA's acceptance into the network included key achievements: a) Network Operation via public agency collaboration to address service redundancy for the city of Flint and communities in Genesee, Lapeer and St. Clair Counties; b) Environmental Impact Improvements with the

retirement of six incinerators at the Authority's Water Resource Recovery Facility and resulting beneficial reuse of biosolids via a public-private partnership Biosolids Dryer Facility; c) completion of the Rouge River Outfall project addressing a long-term water quality improvement objective at a fraction of the cost of prior approaches; and, d) in the area of Human Resource Development/Stakeholder Engagement, GLWA's apprenticeship programs and One Water Institute supporting GLWA and member partners' team member development needs.

Platinum Award for Utility Excellence - In October 2020, GLWA received the Platinum Award for Utility Excellence from the Association of Metropolitan Water Agencies ("AMWA"). The national award recognizes the exceptional performance of public drinking water utilities where management vision and employee commitment create sustainable utilities producing ample supplies of clean, safe drinking water. To be invited by AMWA to apply for the Platinum Award, a utility must first win the association's Gold Award, which GLWA received in 2017. It must then, over the next three years, exhibit measurable progress in implementing the industry standard 10 Attributes of Effective Utility Management and Keys to Management Success, as well as a distinctive level of management expertise and expanded utility achievement.

Partnership for Safe Water ("PSW") Award - GLWA's Water Works Park received the "2019 Directors Award for Water Treatment" from PSW, a program developed by the EPA, American Water Works Association ("AWWA"), and associated partner organizations to guide water systems toward improving water quality by optimizing system operations. GLWA was one of six select groups in the nation honored in this category for its long-term commitment to innovation, outstanding performance achieved and environment and public-health protection. The PSW awards program recognizes utilities who demonstrate an outstanding commitment to delivering superior quality drinking water to customers, directly aligning with GLWA's commitment to providing water of unquestionable quality. In 2016, three GLWA facilities including Lake Huron, Northeast and Southwest received this important designation from PSW.

Hub Utility - In April 2019 GLWA was invited to participate as a national hub model in Hub Utility program which was initiated by the Environmental Protection Agency. The concept is peer-to-peer assistance to assure safe, sustainable water services. Demonstrated successes to-date include joint capital planning and execution; the One Water Institute, for GLWA team members and member partners' staff a no- or low-cost, that provides academies for operations, technology, safety, and leadership training; local distribution system artificial intelligence platform leveraging GLWA's live network data; real-time data and dashboards for coordinated wastewater operations; providing GLWA's corrosion study for use by local systems to comply with lead and copper rule; joint emergency planning and exercises (local, state, and federal); and several others, with the list continuing to grow.

Utility of the Future Today - A group of five national professional organizations, led by the National Association of Clean Water Agencies ("NACWA") has recognized GLWA as a Utility of the Future Today for the third consecutive year. The award is given to water systems for transforming operations through innovations and technology. GLWA won in 2020 for its commitment to and innovation in watershed stewardship.

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, 2019. 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 comprehensive annual financial report ("CAFR") for the fiscal year ended June 30, 2019. The CAFR 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 CAFR. 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

GLWA has implemented a COVID-19 response policy to maintain the health and safety of its team members, the quality and continuity of its operations, provide water of unquestionable quality and safe and sanitary wastewater services to the region. GLWA will utilize the best available information and resources to respond to the COVID-19 pandemic to offer protection to its team, engage the vendor community to align with all safety protocols, and always preserve the quality and continuity of its essential operations.

Acknowledgements

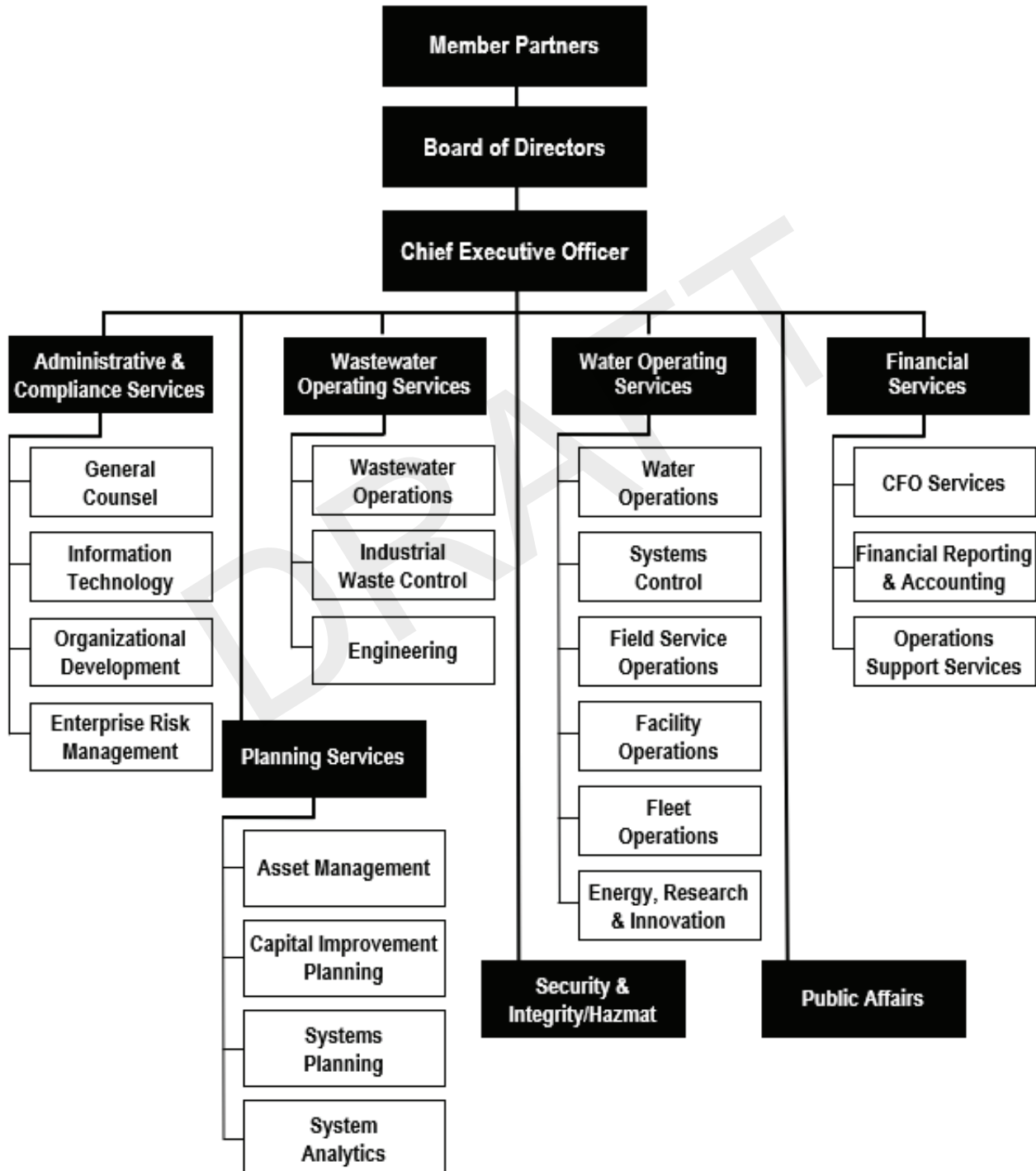
When we say "our" system, it is "our" system that we mutually support and foster in collaboration with our member partners, team members, vendor community, board of directors, other stakeholders and the public. Thank you for your continued engaged participation and interest.

Sue F. McCormick
Chief Executive Officer

Nicolette N. Bateson, CPA
Chief Financial Officer & Treasurer



Organizational Line of Reporting Chart





Great Lakes Water Authority Board of Directors

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

Great Lakes Water Authority Executive Leadership Team

Sue F. McCormick 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, PE Chief Operating Officer – Wastewater Operating Services
Suzanne R. Coffey, PE Chief Planning Officer
Jeffrey E. Small Chief Information Officer
Terri Tabor Conerway Chief Organizational Development Officer
W. Barnett Jones Chief Security & Integrity Officer
Randal Brown General Counsel
Michelle A. Zdrodowski Chief Public Affairs Officer

Mission Statement

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



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**Great Lakes Water Authority
Michigan**

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morill

Executive Director/CEO

FINANCIAL SECTION

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INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Great Lakes Water Authority
Detroit, Michigan

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities, and each major fund of the Great Lakes Water Authority, as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the Great Lakes Water Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control over financial reporting relevant to the Great Lakes Water Authority's preparation and fair presentation of the financial statements 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 Great Lakes Water Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the 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 Great Lakes Water Authority as of June 30, 2020 and the respective changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information, 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 management's discussion and analysis and 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 Great Lakes Water 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

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Great Lakes Water Authority's basic financial statements. The introductory and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Prior-Year Comparative Information

We have previously audited the Great Lakes Water Authority's 2019 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 20, 2019. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2019, 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 18, 2020 on our consideration of the Great Lakes Water 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 Great Lakes Water 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 Great Lakes Water Authority's internal control over financial reporting and compliance.

Baker Tilly US, LLP
Madison, Wisconsin
_____, 2020

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MANAGEMENT'S DISCUSSION AND ANALYSIS

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GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

June 30, 2020

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, 2020. 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.

Introduction to the Great Lakes Water Authority

The regional 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 nearly 3.8 million or approximately 38% of Michigan's population. Suburban wholesale service contracts comprise approximately 82% of the population served by the Authority while the retail water customers served by the City of Detroit Water and Sewerage Department (DWSD) comprise the remaining 18%.

The regional sewage disposal system is also one of the largest in the United States, both in terms of treatment capacity and population served. The Sewage Disposal System currently serves an area of 944 square miles located in three Michigan counties and an estimated population of nearly 2.8 million or approximately 28% of Michigan's population. Suburban wholesale service contracts comprise approximately 76% of the population served by the Authority, while retail sewer customers served by DWSD comprise the remaining 24%.

GLWA began operations on January 1, 2016. This fiscal year ended June 30, 2020 report represents the fourth full twelve-month report for GLWA. Comparative information for the fiscal year-ended June 30, 2019 has been provided for Total Business-Type activities in the basic financial statements. Three years of data is provided in condensed format in this management's discussion and analysis.

Creation of a Regional Authority

The creation of a regional water authority was an outcome of the City of Detroit's Chapter 9 Bankruptcy. Collaboration among regional stakeholders, supported by mediation proceedings, resulted in a "Memorandum of Understanding Regarding the Formation of the Great Lakes Water Authority" signed on September 9, 2014 by the mayor of the City of Detroit, the chief executives of Wayne, Oakland, and Macomb counties, and the governor of the State of Michigan. The agreement established a framework for a regional water and sewer authority to be established pursuant to Act 233, Public Acts of Michigan, 1955, as amended. 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 and which were operated by DWSD. The purpose of DWSD is to be the 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.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Subsequently, on June 12, 2015, the City of Detroit and GLWA entered into a Regional Water Supply Lease, a Regional Sewage Disposal Lease (collectively the "Regional System Leases") and a Water and Sewer Services Agreement ("WSSA"). Prior to implementation of the Regional System Leases, several conditions precedent were necessary to establish the financial and legal parameters before GLWA could assume control of the Regional Systems. Those conditions precedent included execution of the Regional System Leases, WSSA, a Shared Services Agreement, and a Detroit General Retirement ("GRS") pension agreement; adoption of a Master Bond Ordinance ("MBO") for both the Water System and the Sewage Disposal System; confirmation from the Michigan Department of Environmental Quality (now known as the Michigan Environment, Great Lakes and Energy Department) that all permits were secured for the Leased Facilities; certification from the bond trustee that no less than 51 percent of bondholders of the outstanding DWSD Water Bonds and DWSD Sewer Bonds, respectively, consented to the adoption by GLWA of the Master Bond Ordinance ("MBO") for the Water System and the Sewage Disposal System and to the assumption by GLWA of the outstanding DWSD Water Bonds and DWSD Sewer Bonds on the Effective Date; certification from the feasibility consultant that GLWA had the ability to issue at least one dollar of additional indebtedness at each level of lien priority pursuant to the Additional Bonds Test set forth in the MBO for each system; legal opinions that each Regional System Lease is valid, binding, and enforceable and that the rates adopted by DWSD for fiscal year 2016 for the wholesale and City customers were binding and effective; and all necessary consents to the assignment of the wholesale customer contracts. On December 17, 2015, the GLWA Board of Directors determined that all conditions precedent were satisfied to commence operations on January 1, 2016.

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.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Activity for the Regional System Leases was 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. An explanation of those categories and how they relate to the establishment of the Authority's opening Statement of Net Position is below.

Capital Assets: 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 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 System and the Sewage Disposal System for each entity.

Obligation Payable: The 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 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.

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 System and \$278.6 million attributable to the Sewage Disposal System. 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. 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.

Lease Payable: The 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% borrowing rate for both systems.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

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.

The Authority presents a combining statement for each system 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) operation and maintenance (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 fund 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

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. In total, GLWA ended June 30, 2020 with a \$221.6 million net deficit. The net deficit for the water fund was \$96.4 million and \$125.2 million for the sewage disposal fund. The deficit for June 30, 2019 was \$76.9 million for the water fund and \$123.9 million for the sewage disposal fund for a total deficit of \$200.8 million.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

	Net Position						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Assets							
Current assets	\$1,071,115,533	\$ 985,511,094	\$ 880,121,228	\$ 85,604,439	8.7%	\$ 105,389,866	12.0%
Restricted assets	87,325,090	245,163,552	341,961,047	(157,838,462)	-64.4%	(96,797,495)	-28.3%
Capital assets	4,408,912,610	4,534,188,908	4,690,263,860	(125,276,298)	-2.8%	(156,074,952)	-3.3%
Other noncurrent assets	1,105,369,288	1,058,739,534	992,399,584	46,629,754	4.4%	66,339,950	6.7%
Total assets	6,672,722,521	6,823,603,088	6,904,745,719	(150,880,567)	-2.2%	(81,142,631)	-1.2%
Deferred outflows of resources							
	217,096,999	273,596,423	332,991,599	(56,499,424)	-20.7%	(59,395,176)	-17.8%
Liabilities							
Current liabilities	308,601,229	326,966,513	283,126,328	(18,365,284)	-5.6%	43,840,185	15.5%
Long-term debt	5,474,913,736	5,630,571,800	5,714,095,283	(155,658,064)	-2.8%	(83,523,483)	-1.5%
Net pension liability	132,909,889	131,981,165	178,961,907	928,724	0.7%	(46,980,742)	-26.3%
Other liabilities	1,085,096,155	1,099,963,158	1,113,876,457	(14,867,003)	-1.4%	(13,913,299)	-1.2%
Total liabilities	7,001,521,009	7,189,482,636	7,290,059,975	(187,961,627)	-2.6%	(100,577,339)	-1.4%
Deferred inflows of resources							
	109,876,014	108,541,496	126,432,107	1,334,518	1.2%	(17,890,611)	-14.2%
Net position							
Net investment in capital assets	(311,137,102)	(228,867,586)	350,745,726	(82,269,516)	35.9%	(579,613,312)	-165.3%
Restricted for debt service	105,282,969	146,977,835	125,235,904	(41,694,866)	-28.4%	21,741,931	17.4%
Restricted for capital acquisition	-	-	243,238,577	-	0.0%	(243,238,577)	-100.0%
Restricted for payment assistance program	8,988,078	8,001,369	5,771,110	986,709	12.3%	2,230,259	38.6%
Unrestricted (deficit)	(24,711,448)	(126,936,239)	(903,746,081)	102,224,791	-80.5%	776,809,842	-86.0%
Total net position	\$ (221,577,503)	\$ (200,824,621)	\$ (178,754,764)	\$(20,752,882)	10.3%	\$ (22,069,857)	12.3%

In fiscal year 2019 the calculation of the components of net position was reassessed which is the main reason for the large net position variances between 2019 and 2018. The Regional System Leases liability was analyzed pursuant to the application of GASB 69 to record the acquisition and the net position components of the acquired water and sewage disposal systems. In previous years the liability for the Regional System Leases were entirely included in the unrestricted deficit calculation. Starting with fiscal year 2019 the Regional System Leases payable are now allocated among the net position components based on the net position components as of the operational effective date of January 1, 2016. The impact is a reclassification within net position categories only.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

There are three general components of a net position or deficit: 1) net investment in capital assets (in its simplest form, capital assets acquired less debt incurred to acquire those assets); 2) restricted (such as legally required bond reserves or net proceeds from bonds restricted for capital spending); and 3) unrestricted.

Net investments in capital assets is the largest component of the net position with a deficit balance of \$311.1 million (\$197.8 million deficit in the water system and \$113.3 million deficit for the sewage disposal system). The balances on June 30, 2019 were a deficit of \$166.5 million for the water system and a deficit of \$62.4 million for the sewage disposal system for a total net investment in capital assets deficit of \$228.9 million. The decrease for 2020 to 2019 of \$82.3 million (\$31.3 million for the water system and \$51 million for the sewage disposal system) is due to depreciation expense being larger than the acquisition of assets and repayment of debt. Most of the overall decrease for 2019 to 2018 of \$579.6 million, with \$227.3 million for water system and \$352.3 million for the sewage disposal system, relates to the reclassification of a portion of the Regional System Leases to this category of net position. The decrease related to the Regional Lease system classification change was \$664.8 million, with \$307.1 million for the water system and \$357.7 million for the sewage disposal system. Increases during the year were attributable to the acquisition of assets and repayment of debt which were offset by depreciation expense. These increases resulted in a positive increase of \$85.2 million, with 79.8 million for the water system and \$5.4 million for the sewage system. The deficit in the net investment in capital assets is representative of numerous cumulative historical financial activities via the predecessor entity. Those primarily related to terminated capital projects which have been subsequently addressed by other projects or approaches.

Net position restricted 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 year end was \$105.3 million, with \$19.5 million in the water system and \$85.8 million for the sewage disposal system. The amounts at June 30, 2019 were \$29.7 million in the water system and \$117.3 million for the sewage disposal system for a total of \$147 million.

Net position restricted for capital acquisition primarily represents unspent bond proceeds which have been offset by the outstanding balance of bond issues related to the unspent proceeds. Balances reported at June 30, 2018 were \$140.7 million in the water system and \$102.5 million in the sewage disposal system for a total of \$243.2 million. For June 30, 2019 and 2020 there is no balance shown as the unspent bond funds were offset by the bond liability from which they were funded.

Unrestricted net position (deficit) is generally defined as the net result of the other components of net position. The remaining unrestricted deficit totals of \$24.7 million, with \$78.1 million positive net position for the water fund offset by a deficit of \$102.8 for the sewage disposal fund. The overall improvement in the unrestricted net position from current operations was \$ 102.2 million of which \$21.6 million was in the water system and \$80.6 million in the sewage disposal system. The amounts of unrestricted net position at June 30, 2019 was \$183.4 million for the water system and a deficit of \$183.4 for the sewage disposal system for a total of \$126.9 million. One of the factors driving the improvement from 2019 to 2018 is \$776.8 million unrestricted net position is the change made in allocating a portion of the Regional System lease liability to the net investment in capital assets. The overall improvement in the water system was \$344.1 million and the sewage disposal system was \$432.7 million. The improvement related to the change in the classification of a portion of the regional system leases was \$664.8 million, with \$307.1 million for the water system and \$357.7 million for the sewage disposal system. This unrestricted deficit is representative of numerous cumulative historical financial activities via the predecessor entity. The largest dollar amounts were driven by swap termination fees paid by debt. Operations for FY 2019 contributed to \$112 million in improvement, with \$37 million in the water system and \$75 million in the sewage disposal system.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Addressing this deficit is a top priority for the GLWA Board and management but recognizes that it will take time. The Authority forecasts that it will be in a positive net position by the end of the ten-year planning horizon in FY 2030. GLWA continues to optimize its operations, focus on financial planning with a biennial budget, annually update the five-year capital and financial plan, semi-annual updates of the ten-year financial plan, and applying core principles of in asset management. Evidence of those efforts are demonstrated by key financial performance measures. These include strong days cash on hand, debt service coverage well above the minimum requirements, achievement of revenue targets, and positive operations and maintenance expense budget variances. The performance measures in the table below are presented in the Supplementary Information section and the Statistical section of this report.

Financial Performance Measure	Water Fund (Unaudited)	Sewage Disposal Fund (Unaudited)
Days cash on hand (Schedule of Days Cash – Liquidity)	1,086 days	593 days
Debt service coverage for all bonds including junior lien state revolving fund loans (Debt Service Coverage-GAAP Basis)	1.43x	1.30x
Revenue target (Schedules of Revenue Requirement)	\$1.4 million or 0.46% positive budget variance	\$0.4 million or 0.14% negative budget variance
Operations & maintenance budget (Schedules of Operations and Maintenance Expense)	\$5 million or 3.94% negative budget variance	\$7.4 million or 4.07% positive budget variance

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 Position						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Operating revenues	\$ 800,889,221	\$ 801,078,783	\$ 811,894,703	\$ (189,562)	0.0%	\$(10,815,920)	-1.3%
Operating expenses	593,153,157	606,544,905	618,232,739	(13,391,748)	-2.2%	(11,687,834)	-1.9%
Operating income	207,736,064	194,533,878	193,661,964	13,202,186	6.8%	871,914	0.5%
Nonoperating expenses	(234,448,946)	(216,603,735)	(269,581,735)	(17,845,211)	8.2%	52,978,000	-19.7%
Income (loss) before contributions and special item	(26,712,882)	(22,069,857)	(75,919,771)	(4,643,025)	21.0%	53,849,914	-70.9%
Capital contributions	5,960,000	-	-	5,960,000	100.0%	-	0.0%
Change in net position	(20,752,882)	(22,069,857)	(75,919,771)	1,316,975	-6.0%	53,849,914	-70.9%
Net position, beginning	(200,824,621)	(178,754,764)	(102,834,993)	(22,069,857)	12.3%	(75,919,771)	73.8%
Net position, end of year	<u>\$ (221,577,503)</u>	<u>\$ (200,824,621)</u>	<u>\$ (178,754,764)</u>	<u>\$(20,752,882)</u>	10.3%	<u>\$(22,069,857)</u>	12.3%

Overall, GLWA's financial performance is steady and in line with forecasts. During FY 2020, the ten-year forecast was presented in October 2019 and again later in the fiscal year for inclusion in the official statements for the water and sewage disposal bond refunding transactions. This commitment to long-term forecasting informs current decisions with a focus on improved net position.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Water Fund

Water Fund Changes in Net Position								
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018		
2020	Percentage of Operating Revenue	2019	2018	Amount	Percent	Amount	Percent	
Wholesale customer charges	\$ 312,701,777	93.6%	\$ 311,399,136	\$ 323,117,344	\$ 1,302,641	0.4%	\$ (11,718,208)	-3.6%
Local system charges	21,295,500	6.4%	20,181,400	15,130,600	1,114,100	5.5%	5,050,800	33.4%
Other revenues	256,300	0.1%	21,340	64,200	234,960	1101.0%	(42,860)	-66.8%
Total operating revenues	334,253,577	100.0%	331,601,876	338,312,144	2,651,701	0.8%	(6,710,268)	-2.0%
Operating expenses	263,282,730	78.8%	263,959,730	254,602,752	(677,000)	-0.3%	9,356,978	3.7%
Operating Income	70,970,847	21.2%	67,642,146	83,709,392	3,328,701	4.9%	(16,067,246)	-19.2%
Nonoperating expenses	(90,498,763)	-27.1%	(84,088,425)	(107,670,603)	(6,410,338)	7.6%	23,582,178	-21.9%
Change in net position	(19,527,916)	-5.8%	(16,446,279)	(23,961,211)	(3,081,637)	18.7%	7,514,932	-31.4%
Net position, beginning	(76,881,640)		(60,435,361)	(36,474,150)	(16,446,279)	27.2%	(23,961,211)	65.7%
Net position, end of year	\$ (96,409,556)		\$ (76,881,640)	\$ (60,435,361)	\$ (19,527,916)	25.4%	\$ (16,446,279)	27.2%

Operating revenues are primarily from wholesale water charges of \$312.7 million (93.6% of Water System revenues). There was not much change from 2020 to 2019 as the wholesale customer charge adjustment was budgeted at 0.3%. The slight decrease in water customer charges revenue from 2019 to 2018 was due to several factors. First, an intended outcome as the result of entering into a 30-year contract with the City of Flint in November 2017 which provided a favorable service charge and a credit for an agreement to transfer their interest in the Karegnondi Water Authority (KWA) rights; second, the known transition for the Genesee County Drain Commission (GCDC) to an alternate source (KWA) with an emergency backup service agreement with GLWA; third, a general downward trend in water usage consistent with that seen by other water utilities and very mild weather conditions in the summer of 2019.

Local system revenues of \$21.3 million account for 6.4% of the total operating revenue. The increase in 2020 local system charges is due to increases in max day and peak hour demands which was slightly offset by and adjustment to remove volumes and demands associated with a proposed change in account status for certain GLWA sewer facilities that were previous served as retail customers of DWSD. Local system charges increased in FY 2019 due to Phase 1 of the Units of Service Study (USS). The USS is a study to determine the usage of non-mastered metered customers prepared by an outside engineering firm. 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.

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GLWA provides services to 88 member partners across 112 communities. 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 from their 36 prior months of usage ending September 30th each year
2. 60% is based on fixed monthly charges

Fiscal year 2020 revenue billed was 100.5% of the amended budget meeting the goal of revenue stability and was net of the KWA credit. Fiscal year 2019 revenue billed was 99% of budget and was net of the KWA credit.

Operating income after operating expenses (including depreciation) equals \$71 million or 21.2% of operating revenue. Operating expenses are detailed below.

Water Fund Operating Expenses								
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018		
2020	Percentage of Operating Expense	2019	2018	Amount	Percent	Amount	Percent	
Operating expenses before depreciation and amortization								
Personnel	\$ 43,946,225	16.7%	\$ 42,085,546	\$ 41,845,295	\$ 1,860,679	4.4%	\$ 240,251	0.6%
Contractual services	46,097,405	17.5%	43,083,078	35,794,549	3,014,327	7.0%	7,288,529	20.4%
Utilities	27,719,754	10.5%	26,247,858	26,871,081	1,471,896	5.6%	(623,223)	-2.3%
Chemicals	5,569,437	2.1%	5,088,827	4,804,768	480,610	9.4%	284,059	5.9%
Supplies and other expenses	12,034,192	4.6%	11,797,279	9,543,615	236,913	2.0%	2,253,664	23.6%
Capital adjustment	26,780	0.0%	-	-	26,780	100.0%	-	0.0%
Capital program allocation	(2,164,003)	-0.8%	(2,054,913)	(713,779)	(109,090)	5.3%	(1,341,134)	187.9%
Shared services allocation	(696,952)	-0.3%	(6,425,729)	(9,615,146)	5,728,777	-89.2%	3,189,417	-33.2%
Total operating expenses before depreciation and amortization	132,532,838	50.3%	119,821,946	108,530,383	12,710,892	10.6%	11,291,563	10.4%
Depreciation	127,183,228	48.3%	140,571,120	143,991,815	(13,387,892)	-9.5%	(3,420,695)	-2.4%
Amortization of intangible asset-raw water rights	3,566,664	1.4%	3,566,664	2,080,554	-	0.0%	1,486,110	71.4%
Total Operating Expenses	\$ 263,282,730	100.0%	\$ 263,959,730	\$ 254,602,752	\$ (677,000)	-0.3%	9,356,978	3.7%

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Operating expenses of \$263.3 million represent 78.8% of total operating revenue which consists primarily of depreciation expense and operations and maintenance activities. Depreciation is the larger category of expense at \$127.2 million or 48.3% 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.

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 \$3.0 million from 2020 to 2019 is a result of variances throughout various cost centers. The major variances which total \$1.7 million are detailed below:

- Decrease of \$1.9 million in the Field Services cost center as a result of a true up of construction activity reclass of \$1.0 million in 2019 and decreased costs of \$ 0.9 million for the 14 Mile water main condition assessment pilot study. Both of these projects were for the betterment of the system and therefore paid with I&E funds.
- Decrease of \$4.5 million at Springwells and Northeast water plants for reduced activity of sludge removal.
- Increase of \$8.1 million in allocated contractual centralized services. See the Centralized Services and Administrative Services section for a discussion of these variances. The discussion follows the Sewage Disposal Fund discussions.

Contractual services increased \$7.3 million from 2019 to 2018 which is mainly due to the following items:

- Increase of \$4.5 million for the Springwells water plant contractual services mostly due to the mobile dredging-alum sludge hauling contract which began in FY 2019.
- Increase of \$1.4 million in the Southwest water plant due to an increase of \$3.1 million for the mobile dredging-alum sludge hauling contract which began in FY 2019 and a decrease of \$1.7 million for the dewatering system installation project (SW-548) that incurred costs in FY 2018 but not in FY 2019.
- Increase of \$0.8 million in the Northeast water plant for the mobile dredging-alum sludge hauling contract which began in FY 2019.
- Increase of \$2.1 million in the Improvement and Extension (I&E) fund for projects that were for the betterment of the system and therefore paid with I&E funds. These projects included water main condition assessment, blow off valve condition assessment and Geographic Information System (GIS) data development.
- Decrease of \$0.9 million in the allocation of the administrative services cost. See the Centralized Services and Administrative Services section for a discussion of these variances. The discussion follows the Sewage Disposal Fund discussions.
- Decrease of \$1.6 million in the allocation of the centralized services costs. See the Centralized Services and Administrative Services section for a discussion of these variances. The discussion follows the Sewage Disposal Fund discussions.

Capital program allocation increased from 2019 to 2018 due to the implementation of a user-friendly software tracking system in 2019 for personnel time spent on capital projects.

The \$5.7 million decrease in the FY 2020 shared services allocation is due to a \$4 million true up decrease for 2018 and 2019 shared services. The remaining decrease is due to less services required by DWSD. The \$3.2 million decrease in the shared services allocation for FY 2019 is due to less services required by DWSD as some of the Information Technology services were terminated during the year in accordance with an agreed upon transition plan.

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Management's Discussion and Analysis

Water Fund Nonoperating Revenue (Expenses)								
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018		
2020	Percentage of Nonoperating Expense	2019	2018	Amount	Percent	Amount	Percent	
Earnings on Investments	\$ 13,744,774	-15.2%	\$ 14,754,401	\$ 6,129,530	\$ (1,009,627)	-6.8%	\$ 8,624,871	140.7%
Interest on loan and obligations receivable	22,945,866	-25.4%	22,921,380	23,351,220	24,486	0.1%	(429,840)	-1.8%
Interest expense	(133,537,621)	147.6%	(136,704,033)	(139,343,204)	3,166,412	-2.3%	2,639,171	-1.9%
Legacy pension income (expense)	(7,220,716)	8.0%	6,014,441	(8,933,691)	(13,235,157)	-220.1%	14,948,132	-167.3%
Other	13,568,934	-15.0%	8,925,386	11,125,542	4,643,548	52.0%	(2,200,156)	-19.8%
Total Nonoperating Expenses	(90,498,763)	100.0%	(84,088,425)	(107,670,603)	(6,410,338)	7.6%	23,582,178	-21.9%

Net nonoperating expense of \$90.5 million is primarily related to interest expense of \$133.5 million. The interest expense from debt service is \$111.3 million with the remainder related to the Regional Water System Lease, obligation payable and raw water rights lease. The largest offsets to the nonoperating expense are interest revenue on the obligation receivables of \$22.9 million, which is related to the terms of the Regional Water System Lease, and investment earnings of \$13.7 million.

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 increased in FY 2018 and FY 2019 as the Federal Reserve increased interest rates. The rate peaked in June 2019 at a range of 2.25 – 2.50%. Earnings dropped in FY 2020 as the Federal Reserve cut the Fed Funds interest rate to 0%.

The decrease in interest expense in 2020 and 2019 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 variances are a result of income being realized in 2019 versus an expense. The main reason for the income in 2019 was a change in actuarial assumptions that decreased the total pension liability. The decrease in 2020 is also related to a significant decrease in investment earnings on the plan assets.

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Sewage Disposal Fund

Sewage Disposal Fund Changes in Net Position								
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018		
2020	Percentage of Operating Revenue	2019	2018	Amount	Percent	Amount	Percent	
Wholesale customer charges	\$ 266,003,286	57.0%	\$ 272,772,460	\$ 268,978,831	\$ (6,769,174)	-2.5%	\$ 3,793,629	1.4%
Local system charges	185,807,300	39.8%	181,159,300	178,969,200	4,648,000	2.6%	2,190,100	1.2%
Industrial waste charges	7,854,593	1.7%	9,106,274	14,334,979	(1,251,681)	-13.7%	(5,228,705)	-36.5%
Pollutant surcharges	6,448,508	1.4%	5,932,550	6,908,404	515,958	8.7%	(975,854)	-14.1%
Other revenues	521,957	0.1%	506,323	4,391,145	15,634	3.1%	(3,884,822)	-88.5%
Total operating revenues	466,635,644	100.0%	469,476,907	473,582,559	(2,841,263)	-0.6%	(4,105,652)	-0.9%
Operating expenses	329,870,427	70.7%	342,585,175	363,629,987	(12,714,748)	-3.7%	(21,044,812)	-5.8%
Operating Income	136,765,217	29.3%	126,891,732	109,952,572	9,873,485	7.8%	16,939,160	15.4%
Nonoperating expenses	(143,950,183)	-30.8%	(132,515,310)	(161,911,132)	(11,434,873)	8.6%	29,395,822	-18.2%
Income (loss) before contributions and special item	(7,184,966)	-1.5%	(5,623,578)	(51,958,560)	(1,561,388)	27.8%	46,334,982	-89.2%
Capital contributions	5,960,000		-	-	5,960,000	100.0%	-	0.0%
Change in net position	(1,224,966)	-0.3%	(5,623,578)	(51,958,560)	4,398,612	-78.2%	46,334,982	-89.2%
Net position, beginning	(123,942,981)		(118,319,403)	(66,360,843)	(5,623,578)	4.8%	(51,958,560)	78.3%
Net position, end of year	\$ (125,167,947)		\$ (123,942,981)	\$ (118,319,403)	\$ (1,224,966)	1.0%	\$ (5,623,578)	4.8%

Operating revenues are primarily from wholesale sewer charges of \$266 million (57% of Sewage Disposal System revenues). The decrease from 2020 to 2019 in the wholesale customer charges is a result of a credit to a member on their wholesale charges of \$5.9 million for a capital contribution as shown on the capital contribution line item. The decrease also relates to an increase in bad debt charges of approximately \$518,000. The increase from 2019 to 2018 is a result of the budgeted wholesale charge increase of 1.3%

Local system revenues of \$185.8 million account for 39.8% of total operating revenues. The variances in the local system charges line up with the budgeted increases of 2.5% for FY 2020 and 1.2% for FY2019. 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.

The remaining 3.2% of operating revenue is due to other charges such as industrial waste charges and pollutant surcharges which are charged to non-residential users. The decrease in the industrial waste charges are due to decreases made in the charges for both FY2020 and FY2019. The decrease in the others revenue

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line item from 2019 to 2018 relates to \$3.7 million of insurance proceeds in FY2018 related to operations cost incurred for the cleanup of the fire damage at the WWTP.

GLWA provides services to 19 member partners across 79 communities. 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) equals \$136.8 million or 29.3% of operating revenue. Operating expenses are detailed below.

Sewage Disposal Fund Operating Expenses									
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018			
	2020	Percentage of Operating Expense	2019	2018	Amount	Percent	Amount	Percent	
Operating expenses before depreciation									
Personnel	\$ 60,320,195	18.3%	\$ 56,503,053	\$ 53,680,162	\$ 3,817,142	6.8%	\$ 2,822,891	5.3%	
Contractual services	63,350,953	19.2%	58,660,680	64,082,761	4,690,273	8.0%	(5,422,081)	-8.5%	
Utilities	23,432,981	7.1%	25,147,527	26,823,299	(1,714,546)	-6.8%	(1,675,772)	-6.2%	
Chemicals	8,672,406	2.6%	8,187,033	8,073,045	485,373	5.9%	113,988	1.4%	
Supplies and other expenses	23,393,081	7.1%	25,323,636	24,982,773	(1,930,555)	-7.6%	340,863	1.4%	
Capital adjustment	-	0.0%	2,258,351	-	(2,258,351)	-100.0%	2,258,351	100.0%	
Capital program allocation	(1,183,398)	-0.4%	(1,325,842)	(969,671)	142,444	-10.7%	(356,171)	36.7%	
Shared services allocation	(1,036,758)	-0.3%	(713,633)	(292,965)	(323,125)	45.3%	(420,668)	143.6%	
Total operating expenses before depreciation	176,949,460	53.6%	174,040,805	176,379,404	2,908,655	1.7%	(2,338,599)	-1.3%	
Depreciation	152,920,967	46.4%	168,544,370	187,250,583	(15,623,403)	-9.3%	(18,706,213)	-10.0%	
Total Operating Expenses	\$ 329,870,427	100.0%	\$ 342,585,175	\$ 363,629,987	\$(12,714,748)	-3.7%	\$(21,044,812)	-5.8%	

Operating expenses of \$329.9 million represent 70.7% of total operating revenue which consists primarily of depreciation expense and operations and maintenance activities. Depreciation is the larger category of expense at \$152.9 million or 46.4% 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 increase in FY 2020 is mainly due to increase 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.

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 increased \$4.7 million in FY 2020 which is due to the following:

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- Increase of \$2.2 million for CSO condition assessment beginning in FY 2020.
- Decrease of \$1.9 million due to various contract reductions in the following cost centers: Chief Operating Officer Wastewater, Wastewater Operations, Wastewater Process Control and Baby Creek Combined Sewer Overflow.
- Increase of \$4.4 million in allocated contractual centralized services. See the Centralized Services and Administrative Services section for a discussion of these variances. This discussion follows the Sewage Disposal Fund discussions.

Contractual services decreased \$5.4 million in FY 2019 from FY 2018 mainly due to the following items:

- Decrease of \$2.1 million relating to a generator rental incurred in fiscal year 2018 for backup electrical service for the wastewater treatment plant which was not incurred in fiscal year 2019.
- Decrease of \$3.0 million in the allocation of the administrative services costs. See the Centralized Services and Administrative Services section for a discussion of these variances. The discussion follows the Sewage Disposal Fund discussions.

The supplies and other expenses decrease of \$1.9 million in FY 2020 is mainly due to inventory reserve adjustments.

The Capital adjustment in FY 2019 relates to projects, generally design phase engineering costs, which did not move into the construction phase and were expensed to operations.

Capital program allocation increased in FY 2019 due to the implementation of a user-friendly software tracking system for personnel time spent on capital projects.

The variance in the shared services allocation for both FY 2020 and FY 2019 are due to true-up adjustments related to previous years.

Sewer Fund Nonoperating Revenue (Expenses)								
Fiscal Year				Change 2020 vs 2019		Change 2019 vs 2018		
2020	Percentage of Nonoperating Expense	2019	2018	Amount	Percent	Amount	Percent	
Earnings on Investments	\$ 11,671,932	-8.1%	\$ 11,763,401	\$ 5,266,255	\$ (91,469)	-0.8%	\$ 6,497,146	123.4%
Interest on loan and obligations receivable	19,489,018	-13.5%	18,856,322	15,505,300	632,696	3.4%	3,351,022	21.6%
Interest expense	(155,410,235)	108.0%	(159,893,300)	(161,052,102)	4,483,065	-2.8%	1,158,802	-0.7%
Legacy pension income (expense)	(12,922,789)	9.0%	10,763,940	(15,988,471)	(23,686,729)	-220.1%	26,752,411	-167.3%
Sewer lookback-MOU adjustment	-	0.0%	(6,527,200)	-	6,527,200	-100.0%	(6,527,200)	100.0%
Other	(6,778,109)	4.7%	(7,478,473)	(5,723,114)	700,364	-9.4%	(1,755,359)	30.7%
Total Nonoperating Expenses	(143,950,183)	100.0%	(132,515,310)	(161,992,132)	(11,434,873)	8.6%	29,476,822	-18.2%

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Net nonoperating expense of \$144 million is primarily related to \$155.4 million of interest expense. Interest expense from debt service is \$136 million with the remainder related to the Regional Sewage Disposal Lease and obligation payable. The largest offset to the expense is interest revenue of \$19.5 million on the obligations receivable, which is related to the terms of the Regional Sewage Disposal Lease, and investment income of \$11.7 million.

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 increased in FY 2018 and FY 2019 as the Federal Reserve increased interest rates. The rate peaked in June 2019 at a range of 2.25 – 2.50%. Earnings dropped in FY 2020 as the Federal Reserve cut the Fed Funds interest rate to 0%.

Interest earnings on loan and obligation receivable have increased due to increases in the obligation receivable related to additional new money bonds and SRF loans and the loan receivable from DWSD due to budget shortfalls.

The decrease in interest expense in 2020 and 2019 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 variances are a result of income being realized in 2019 versus an expense. The main reason for the income in 2019 was a change in actuarial assumptions that decreased the total pension liability. The decrease in 2020 is also related to a significant decrease in investment earnings on the plan assets.

The sewer lookback-MOU adjustment in 2019 was a one-time charge which was part of the 2018 MOU with DWSD.

Centralized Services and Administrative Services

The following table summarizes the activity in the centralized services and administrative services for FY 2018 through FY 2020.

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Centralized and Administrative Services											
Fiscal Year			Change 2020 vs 2019				Change 2019 vs 2018				
			Amount	Percent	Variance Allocation		Amount	Percent	Variance Allocation		
2020	2019	2018			Water	Sewer			Water	Sewer	
Centralized Services											
Personnel	\$ 28,797,647	\$ 24,964,641	\$ 20,383,476	\$ 3,833,006	15.4%	1,585,442	2,247,564	\$ 4,581,165	22.5%	3,206,802	1,374,363
Contractual services	59,999,485	47,549,831	49,342,452	12,449,654	26.2%	8,093,610	4,356,044	(1,792,621)	-3.6%	(1,606,577)	(186,044)
Utilities	65,869	168,415	139,041	(102,546)	-60.9%	(52,444)	(50,102)	29,374	21.1%	26,943	2,431
Supplies and other expenses	13,835,669	12,505,211	11,739,576	1,330,458	10.6%	753,733	576,725	765,635	6.5%	1,033,426	(267,791)
Total Centralized Services	102,698,670	85,188,098	81,604,545	17,510,572	20.6%	10,380,341	7,130,231	3,583,553	4.4%	2,660,594	922,959
Administrative Services											
Personnel	\$ 17,629,161	\$ 13,746,076	\$ 11,870,111	\$ 3,883,085	28.2%	1,941,542	1,941,543	\$ 1,875,965	15.8%	1,741,723	134,242
Contractual services	10,125,848	10,133,886	14,055,182	(8,038)	-0.1%	(4,019)	(4,019)	(3,921,296)	-27.9%	(920,846)	(3,000,450)
Utilities	28,220	59,510	21,158	(31,290)	-52.6%	(15,645)	(15,645)	38,352	181.3%	20,724	17,628
Supplies and other expenses	1,172,887	1,179,715	913,865	(6,828)	-0.6%	(3,414)	(3,414)	265,850	29.1%	190,447	75,403
Total Administrative Services	28,956,116	25,119,187	26,860,316	3,836,929	15.3%	1,918,464	1,918,465	(1,741,129)	-6.5%	1,032,048	(2,773,177)

Centralized services personnel costs increased \$3.8 million and administrative services personnel cost increased \$3.9 million in FY 2020. There was an increase in staff of 7 employees in the centralized services cost center and 5 employees in the administrative services cost center. Overall employee benefit costs also increased in FY 2020. In FY 2019 centralized services personnel cost increased \$4.6 million due to an increase in staff of 19 employees. Administrative services personnel cost increased \$1.9 million due to an increase in staff of 18 employees.

Centralized contractual services increased \$12.4 million in FY 2020. The major variances which total \$10.2 million are detailed below:

- Increase of \$6.7 million in Capital Improvement Planning due to a full year of activity from AECOM.
- Increase of \$5.0 million is due to an AT&T contract renewal credit (\$1.3 million) received in FY 2019 and increase in billing rate for AT&T AVPN services.
- Increase of \$1.7 million related to COVID-19 deep cleaning performed at various GLWA facilities.
- Increase of \$1.5 million for increase in legal services.
- Decrease of \$2.1 million in Systems Planning upon completion of the Wastewater Master Plan in FY 2020.
- Decrease of \$1.3 million in Systems Analytics with more engineering work performed in house.
- Decrease of \$1.3 million resulting from reduced IT needs related to our human resources information services system.

Centralized services contractual services decreased \$1.8 million in FY 2019. This variance is spread among many cost centers. The cost centers with the largest variances are detailed below:

- Increase of \$1.6 million in asset management.
- Increase of \$0.7 million in energy research and innovation.
- Decrease of \$2.4 million in the facility operations cost center.
- Decrease of \$1.3 million in the information technology cost centers.
- Decrease of \$0.8 million in systems operations control.
- Decrease of \$0.5 million in systems analytics.

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Administrative contractual services decreased \$3.9 million in FY 2019. The majority of this decrease was due to a decrease of \$2.9 million in legal services during the fiscal year.

Capital Assets and Debt Administration

GLWA's investment in capital assets is \$4.4 billion (net of accumulated depreciation) with \$1.8 billion assigned to the Water System and \$2.6 billion assigned to the Sewage Disposal System. The investment in capital assets includes land, buildings, plants, transmission lines, vehicles and other equipment. Total net capital assets decreased in both 2019 and 2020. The net decrease is primarily attributable to depreciation in excess of current year additions. 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)						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Land	\$ 61,801,364	\$ 62,813,656	\$ 63,151,369	\$ (1,012,292)	-1.6%	\$ (337,713)	-0.5%
Easements	354,843,720	354,843,720	354,843,720	-	0.0%	-	0.0%
Construction in progress	303,220,406	368,747,744	288,051,906	(65,527,338)	-17.8%	80,695,838	28.0%
Site improvements	69,475,012	60,997,618	71,714,835	8,477,394	13.9%	(10,717,217)	-14.9%
Buildings and structures	1,378,065,401	1,410,653,813	1,477,410,969	(32,588,412)	-2.3%	(66,757,156)	-4.5%
Infrastructure	1,040,603,244	1,055,039,221	1,076,353,519	(14,435,977)	-1.4%	(21,314,298)	-2.0%
Machinery and equipment	1,186,649,320	1,215,918,905	1,354,950,446	(29,269,585)	-2.4%	(139,031,541)	-10.3%
Vehicles	3,477,294	1,999,598	2,164,263	1,477,696	73.9%	(164,665)	-7.6%
Leasehold improvements	10,776,849	3,174,633	1,622,833	7,602,216	239.5%	1,551,800	95.6%
Total capital assets (net of depreciation)	<u>\$4,408,912,610</u>	<u>\$4,534,188,908</u>	<u>\$4,690,263,860</u>	<u>\$(125,276,298)</u>	<u>-2.8%</u>	<u>\$(156,074,952)</u>	<u>-3.3%</u>

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Water Fund

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

	Water Fund Capital Assets						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Land	\$ 34,166,736	\$ 34,166,736	\$ 34,166,736	\$ -	0.0%	\$ -	0.0%
Easements	258,632,397	258,632,397	258,632,397	-	0.0%	-	0.0%
Construction in progress	126,197,521	175,031,085	141,885,762	(48,833,564)	-27.9%	33,145,323	23.4%
Site improvements	83,676,052	75,140,791	72,997,639	8,535,261	11.4%	2,143,152	2.9%
Buildings and structures	584,306,009	570,825,066	565,935,211	13,480,943	2.4%	4,889,855	0.9%
Infrastructure	654,216,242	625,947,979	608,034,346	28,268,263	4.5%	17,913,633	2.9%
Machinery and equipment	681,905,655	614,916,708	608,518,357	66,988,947	10.9%	6,398,351	1.1%
Vehicles	3,217,111	2,347,827	2,204,434	869,284	37.0%	143,393	6.5%
Leasehold improvements	8,061,657	499,484	272,983	7,562,173	1514.0%	226,501	83.0%
Accumulated depreciation	(625,253,253)	(498,912,420)	(358,844,277)	(126,340,833)	25.3%	(140,068,143)	39.0%
Total water fund capital assets (net of depreciation)	\$1,809,126,127	\$1,858,595,653	\$1,933,803,588	\$ (49,469,526)	-2.7%	\$ (75,207,935)	-3.9%

Water Fund additions in 2020 and 2019 were mainly due to transfers out of construction in progress to the applicable asset category. Total additions in FY 2020 to construction in progress was \$76.5 million and transfers out of \$125.1 million. The total additions in FY 2019 to the construction in progress were \$61.5 million with \$28.4 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/>.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Water Fund (millions)								
Project Number	Description	Expected Completion Date	Project Plan Estimate	Expenditures		Amounts Placed in Service		CIP at 6/30/2020
				FY 2019	FY 2020	FY 2019	FY 2020	
116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements	FY 2024	\$ 61.2	\$ 8.0	\$ 8.3	\$ -	\$ -	\$ 18.5
114011	Springwells Steam Condensate Improvements	FY 2023	23.9	1.6	7.7	-	-	10.0
111002	LHWTP Backflow Replacement	FY 2020	8.3	4.9	1.7	-	-	8.5
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwell Water Treatment	FY 2020	7.1	2.9	1.9	-	-	8.2
122006	Wick Road Parallel Transmission Improvements	FY 2022	22.3	0.3	5.5	-	-	5.9
111007	Raw Sludge Clarifier and Pumping	FY 2021	8.9	0.4	5.2	-	-	5.9
122011	Park-Merriman Road Water Transmission Main	FY 2021	7.6	0.8	4.2	-	-	5.2
114001	1958 Filter Rehabilitation at the Springwell Water Treatment Plant	FY 2020	97.3	7.4	3.1	-	77.0	-
122001	Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	FY 2020	33.2	-	-	-	33.2	-
115004	Water Works Park Water Treatment Plant Chlorine System Upgrade	FY 2020	8.8	4.2	0.3	-	7.0	-
122012	36-inch Water Main in Telegraph	FY 2020	10.0	0.6	-	10.1	-	-
114012	Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement	FY 2020	3.9	2.8	-	3.9	-	-
	Other projects			27.6	38.6	14.4	7.9	64.0
Total				\$ 61.5	\$ 76.5	\$ 28.4	\$ 125.1	\$ 126.2

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund

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

	Sewage Disposal Fund Capital Assets						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Land	\$ 27,634,628	\$ 28,646,920	\$ 28,984,633	\$ (1,012,292)	-3.5%	\$ (337,713)	-1.2%
Easements	96,211,323	96,211,323	96,211,323	-	0.0%	-	0.0%
Construction in progress	177,022,885	193,716,659	146,166,144	(16,693,774)	-8.6%	47,550,515	32.5%
Site improvements	51,282,571	39,620,707	38,584,812	11,661,864	29.4%	1,035,895	2.7%
Buildings and structures	1,156,168,738	1,138,610,722	1,133,361,703	17,558,016	1.5%	5,249,019	0.5%
Infrastructure	619,049,149	609,683,574	597,177,020	9,365,575	1.5%	12,506,554	2.1%
Machinery and equipment	1,242,297,233	1,188,042,500	1,170,781,940	54,254,733	4.6%	17,260,560	1.5%
Vehicles	3,621,907	2,589,611	2,328,916	1,032,296	39.9%	260,695	11.2%
Leasehold improvements	3,066,052	2,801,008	1,363,821	265,044	9.5%	1,437,187	105.4%
Accumulated depreciation	(776,568,003)	(624,329,769)	(458,500,040)	(152,238,234)	24.4%	(165,829,729)	36.2%
Total sewage disposal fund capital assets (net of depreciation)	\$2,599,786,483	\$2,675,593,255	\$2,756,460,272	\$ (75,806,772)	-2.8%	\$ (80,867,017)	-2.9%

Sewage Disposal Fund additions in 2020 and 2019 were mainly due to transfers out of construction in progress to the applicable asset category. Total additions for FY 2020 to construction in progress was \$73.8 million and transfers out of \$90.5 million. The total additions for FY 2019 to the construction in progress were \$82.1 million with \$34.6 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/>.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund (millions)								
Project Number	Description	Expected Completion Date	Project Plan Estimate	Expenditures		Amounts Placed in Service		CIP at 6/30/2020
				FY 2019	FY 2020	FY 2019	FY 2020	
211001	Rehabilitation of Primary Clarifiers, Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	FY 2021	\$ 54.9	\$ 20.3	\$ 7.5	\$ -	\$ -	\$ 52.9
211004	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	FY 2020	28.3	2.0	1.1	-	-	27.6
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	FY2025	81.7	8.0	9.5	-	-	20.2
213007	WRRF Modification to Incinerator Sludge Feed Systems at Complex -II	FY 2021	20.0	8.5	6.1	-	-	16.9
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	FY 2022	37.3	1.9	10.8	-	-	14.3
214001	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations	FY 2021	14.0	1.7	8.3	2.3	-	8.3
260201	Conveyance System Interceptor Rehab Program	FY 2026	154.7	5.1	5.5	9.2	9.4	1.0
212006	WRRF Rouge River Outfall (RRO) Disinfection	FY 2020	48.0	15.2	2.1	-	43.8	-
212003	WRRF Aeration System Improvements	FY 2020	16.5	4.5	0.2	-	16.5	-
212002	WRRF Rouge River Outfall (RRO) Disinfection Design	FY 2020	10.8	-	-	-	10.8	-
260113	Fire Remediation	FY 2019	19.4	0.2	-	19.4	-	-
	Other projects			14.7	22.7	3.7	10.0	35.8
Total				\$ 82.1	\$ 73.8	\$ 34.6	\$ 90.5	\$ 177.0

Intangible Asset and Related Obligation - Water Fund

Effective December 1, 2017, GLWA, the city of Flint, Karegnondi Water Authority (KWA), Genesee County Drain Commission (GCDC) and the 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 comprised of seven separate exhibits includes: 1) A 30-year water service contract with Flint that establishes GLWA as the long-term water source for the city and credits the city of its debt service payment obligations on existing KWA bonds for the building of its water facilities; 2) a long-term lease to GLWA of the 72-inch line serving the city; and 3) a 30-year contract for reciprocal, emergency water services between GLWA 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 licensed rights constitute an intangible asset under governmental accounting standards. Therefore, the Authority has recorded an offsetting intangible asset and lease obligation of approximately \$107 million associated with this agreement as part of the fiscal year ending June 30, 2018 financial statements. The Authority recognized \$3.6 million of amortization expense during the current and previous year. The lease obligation for the raw water rights was reduced by \$2.5 million in the current year and by \$3 million during the previous year.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Long-term Debt

At year-end, the Authority had \$5.3 billion of long-term debt. All of the outstanding bonds are revenue bonds, including capital appreciation bonds and state revolving fund loans. Of the total, \$2.3 billion is assigned to the Water System and \$3 billion is assigned to the Sewage Disposal System.

During the year, the Authority refunded both water system and sewage disposal system bonds. The details of these refunding transactions are described in Note 13. These transactions included debt reserve releases of \$10.5 million for the Water Fund and \$33.6 million for the Sewage Disposal Fund. The transactions also achieved all necessary bondholder consents on the debt service reserve fund springing amendments for the potential future elimination of the Water System Bond Reserve Funds and the Sewage Disposal System Bond Reserve Funds once GLWA attains two AA category ratings.

	Outstanding Debt						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Revenue bonds	\$4,840,155,000	\$4,824,710,000	\$4,868,890,000	\$ 15,445,000	0.3%	\$(44,180,000)	-0.9%
Capital appreciation bonds	11,335,000	14,780,000	17,250,000	\$ (3,445,000)	-20.0%	\$ (2,470,000)	-14.3%
State revolving loans	488,984,795	504,037,930	501,113,442	(15,053,135)	-3.0%	2,924,488	0.6%
Total outstanding debt	<u>\$5,340,474,795</u>	<u>\$5,343,527,930</u>	<u>\$5,387,253,442</u>	<u>\$ (3,053,135)</u>	<u>-0.1%</u>	<u>\$(43,725,512)</u>	<u>-0.8%</u>

Water Fund

The total outstanding debt for the Water System is \$2.3 billion, increasing by \$51.1 million from the prior year.

The Authority issued \$463.1 million in refunding and new money water system revenue bonds during the year ended June 30, 2020. The new money bonds totaling \$85.6 million and were a pass-through to DWSD for local system improvements.

Less than 1.7% 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 \$16.1 million in new state revolving fund loans and received \$4.7 million in loan forgiveness. The amount of state revolving fund loans pass-through to DWSD for local system improvements was \$6.8 million.

	Water Fund Outstanding Debt						
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Revenue bonds	\$2,261,935,000	\$2,220,320,000	\$2,284,825,000	\$ 41,615,000	1.8%	\$(64,505,000)	-2.8%
State revolving loans	39,318,264	29,860,802	25,435,902	9,457,462	37.2%	4,424,900	17.4%
Total outstanding debt	<u>\$2,301,253,264</u>	<u>\$2,250,180,802</u>	<u>\$2,310,260,902</u>	<u>\$ 51,072,462</u>	<u>2.2%</u>	<u>\$(60,080,100)</u>	<u>-2.6%</u>

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 \$3 billion, decreasing by \$54.1 million from the prior year.

The Authority issued \$687.5 million of sewage disposal system refunding revenue bonds during the year ended June 30, 2020.

Approximately 14.8% 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 \$25.2 million in new state revolving fund loans.

Sewage Disposal Fund Outstanding Debt							
	Fiscal Year			Change 2020 vs 2019		Change 2019 vs 2018	
	2020	2019	2018	Amount	Percent	Amount	Percent
Revenue bonds	\$2,578,220,000	\$2,604,390,000	\$2,584,065,000	\$(26,170,000)	-1.0%	\$ 20,325,000	0.8%
Capital appreciation bonds	11,335,000	14,780,000	17,250,000	(3,445,000)	-20.0%	\$ (2,470,000)	-14.3%
State revolving loans	449,666,531	474,177,128	475,677,540	(24,510,597)	-5.2%	(1,500,412)	-0.3%
Total outstanding debt	\$3,039,221,531	\$3,093,347,128	\$3,076,992,540	\$(54,125,597)	-1.8%	\$ 16,354,588	0.5%

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 March 2020 the Authority's ratings were upgraded or affirmed. For both the Water Fund and the Sewage Disposal Fund, Fitch Ratings upgraded the ratings with senior lien debt at A+ and second lien at A, both with a stable outlook; Standard & Poor's affirmed the Authority's ratings with water senior lien debt at AA- and second lien at A+, and upgraded the sewage disposal senior lien one notch to AA- and second lien at A+, all with a stable outlook; and Moody's upgraded the Authority's ratings one notch with senior lien debt at A1 and second lien at A2, all were assigned a stable outlook.

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

Economic Factors Affecting Next Year's Operations and Rates

On March 11, 2020, the GLWA Board adopted the biennial budget for the Authority for fiscal years 2021 and 2022. That two-year financial plan remains true to a foundational commitment to control the budget within a 4% revenue cap as further described below.

Water Fund

For FY 2021 the budget increased by 0.6 percent. This translated into a system average charge increase of 3.2 percent and suburban wholesale member partner average charge increase of 3.1 percent depending on each customers usage in relation to other customers.

GREAT LAKES WATER AUTHORITY

Management's Discussion and Analysis

Sewage Disposal Fund

For FY 2021 budget increased by 1.3 percent. This translated into a system average charge increase of 2.0 percent and suburban wholesale member partner average charge decrease of 1.7 percent.

COVID-19 Pandemic

Charge increases to member partners were to take effect on July 1, 2020. Due to the COVID-19 pandemic the Board delayed implementation of charge increases until October 1, 2020 resulting in a revenue reduction of \$3 million for the water system and \$2.65 million for the sewer system. In September 2020, the Board passed a second delay of implementation to January 1, 2021, resulting in another revenue reduction of \$3 million for the water system and \$2.65 million for the sewer system. These delays in implementation of increased charges along with a substantial decrease in investment earnings as a result of the pandemic will require budget amendments for FY 2021 which the Authority is working on. In addition to these revenue reductions, the Authority is incurring additional operating costs for cleaning and providing a safe workplace for our team members. The Authority is working with its insurance provided for possible insurance recoveries as well as requesting reimbursement of qualifying costs from FEMA.

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

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GREAT LAKES WATER AUTHORITY

STATEMENT OF NET POSITION

As of June 30, 2020

With Comparative Amounts at June 30, 2019

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Assets				
Current Assets				
Cash and cash equivalents	\$ 88,786,996	\$ 119,569,724	\$ 208,356,720	\$ 309,015,559
Restricted cash and cash equivalents	39,304,453	26,060,277	65,364,730	164,495,839
Restricted cash for the benefit of DWSD	1,544,529	-	1,544,529	3,318,316
Investments	305,653,818	167,895,196	473,549,014	274,246,497
Restricted investments	30,900,352	87,066,562	117,966,914	34,852,593
Receivables, net	61,382,764	43,988,570	105,371,334	108,207,271
Due from other governments	20,343,238	11,459,398	31,802,636	30,243,156
Due from other funds	2,134,191	-	2,134,191	2,889,522
Contractual obligation receivable, current portion	15,620,163	14,041,327	29,661,490	26,418,147
Loan receivable - DWSD	-	18,206,431	18,206,431	17,542,669
Prepaid items and other assets	6,458,613	3,691,723	10,150,336	8,448,932
Inventories	636,621	6,370,587	7,007,208	5,832,593
Total Current Assets	572,765,738	498,349,795	1,071,115,533	985,511,094
Noncurrent Assets				
Restricted cash and cash equivalents	20,491,397	27,014,187	47,505,584	94,185,040
Restricted investments	10,770,585	29,048,921	39,819,506	150,978,512
Contractual obligation receivable	554,942,283	399,355,626	954,297,909	883,248,672
Loan receivable - DWSD	-	8,296,578	8,296,578	26,503,010
Prepaid lease	11,250,000	13,750,000	25,000,000	25,000,000
Assets not subject to depreciation	418,996,654	300,868,836	719,865,490	786,405,120
Capital assets being depreciated, net	1,390,129,473	2,298,917,647	3,689,047,120	3,747,783,788
Intangible asset - raw water rights, net	97,786,037	-	97,786,037	101,352,701
Prepaid insurance on debt	7,958,703	12,030,061	19,988,764	22,635,151
Total Noncurrent Assets	2,512,325,132	3,089,281,856	5,601,606,988	5,838,091,994
Total Assets	3,085,090,870	3,587,631,651	6,672,722,521	6,823,603,088
Deferred Outflows of Resources				
Deferred charge on refunding	47,358,590	127,077,205	174,435,795	241,879,138
Deferred pension amounts	15,292,494	27,368,710	42,661,204	31,717,285
Total Deferred Outflows of Resources	62,651,084	154,445,915	217,096,999	273,596,423

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

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 43,231,679	\$ 30,838,950	\$ 74,070,629	\$ 74,662,036
Accrued salaries, wages and benefits	5,321,864	-	5,321,864	4,284,220
Other accrued liabilities	5,357,056	-	5,357,056	7,109,589
Due to other governments	18,282,254	1,750,000	20,032,254	15,963,934
Due to other funds	-	2,134,191	2,134,191	2,889,522
Interest payable	30,887,915	27,565,045	58,452,960	84,456,284
Current portion of				
Long-term debt	33,058,615	88,939,460	121,998,075	117,602,109
Leases payable	5,232,465	6,395,235	11,627,700	11,153,602
Lease obligation, raw water rights	2,624,820	-	2,624,820	2,520,996
Obligation payable	184,992	416,105	601,097	572,474
Accrued compensated absences	2,981,827	899,422	3,881,249	3,188,156
Accrued workers' compensation	176,834	-	176,834	217,480
Claims and judgments	2,172,500	150,000	2,322,500	2,346,111
Total Current Liabilities	<u>149,512,821</u>	<u>159,088,408</u>	<u>308,601,229</u>	<u>326,966,513</u>
Noncurrent Liabilities				
Long-term debt	2,459,730,737	3,015,182,999	5,474,913,736	5,630,571,800
Long-term leases payable	411,237,284	502,623,348	913,860,632	925,488,338
Lease obligation - raw water rights	98,095,302	-	98,095,302	100,720,123
Obligation payable	16,736,534	37,645,781	54,382,315	54,983,412
Accrued compensated absences	1,954,359	-	1,954,359	2,049,655
Accrued workers' compensation	75,000	-	75,000	75,000
Claims and judgments	50,000	7,500,000	7,550,000	7,550,000
Other noncurrent liabilities	2,761,256	6,417,291	9,178,547	9,096,630
Net pension liability	47,643,374	85,266,515	132,909,889	131,981,165
Total Noncurrent Liabilities	<u>3,038,283,846</u>	<u>3,654,635,934</u>	<u>6,692,919,780</u>	<u>6,862,516,123</u>
Total Liabilities	<u>3,187,796,667</u>	<u>3,813,724,342</u>	<u>7,001,521,009</u>	<u>7,189,482,636</u>
Deferred Inflows of Resources				
Deferred amounts for swap terminations	70,890	35,625	106,515	240,839
Deferred gain on refunding	56,283,953	47,525,546	103,809,499	108,300,657
Deferred capital contribution	-	5,960,000	5,960,000	-
Total Deferred Inflows of Resources	<u>56,354,843</u>	<u>53,521,171</u>	<u>109,876,014</u>	<u>108,541,496</u>
Net Position				
Net investment in capital assets	(197,777,142)	(113,359,960)	(311,137,102)	(228,867,586)
Restricted for debt service	19,479,656	85,803,313	105,282,969	146,977,835
Restricted for payment assistance program	3,754,368	5,233,710	8,988,078	8,001,369
Unrestricted (deficit)	<u>78,133,562</u>	<u>(102,845,010)</u>	<u>(24,711,448)</u>	<u>(126,936,239)</u>
TOTAL NET POSITION	<u>\$ (96,409,556)</u>	<u>\$ (125,167,947)</u>	<u>\$ (221,577,503)</u>	<u>\$ (200,824,621)</u>

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

GREAT LAKES WATER AUTHORITY

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

For the Year Ended June 30, 2020

With Comparative Amounts for the Year Ended June 30, 2019

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water	Sewage		
	Fund	Disposal Fund		
Operating Revenues				
Wholesale customer charges	\$ 312,701,777	\$ 266,003,286	\$ 578,705,063	\$ 584,171,596
Local system charges	21,295,500	185,807,300	207,102,800	201,340,700
Industrial waste charges	-	7,854,593	7,854,593	9,106,274
Pollutant surcharges	-	6,448,508	6,448,508	5,932,550
Other revenues	<u>256,300</u>	<u>521,957</u>	<u>778,257</u>	<u>527,663</u>
Total Operating Revenues	<u>334,253,577</u>	<u>466,635,644</u>	<u>800,889,221</u>	<u>801,078,783</u>
Operating Expenses				
Operating expenses before depreciation and amortization				
Personnel	43,946,225	60,320,195	104,266,420	98,588,599
Contractual services	46,097,405	63,350,953	109,448,358	101,743,758
Utilities	27,719,754	23,432,981	51,152,735	51,395,385
Chemicals	5,569,437	8,672,406	14,241,843	13,275,860
Supplies and other expenses	12,034,192	23,393,081	35,427,273	37,120,915
Capital adjustment	26,780	-	26,780	2,258,351
Capital program allocation	(2,164,003)	(1,183,398)	(3,347,401)	(3,380,755)
Shared services allocation	<u>(696,952)</u>	<u>(1,036,758)</u>	<u>(1,733,710)</u>	<u>(7,139,362)</u>
Total operating expenses before depreciation and amortization	132,532,838	176,949,460	309,482,298	293,862,751
Depreciation	127,183,228	152,920,967	280,104,195	309,115,490
Amortization of intangible asset - raw water rights	<u>3,566,664</u>	<u>-</u>	<u>3,566,664</u>	<u>3,566,664</u>
Total Operating Expenses	<u>263,282,730</u>	<u>329,870,427</u>	<u>593,153,157</u>	<u>606,544,905</u>
Operating Income	<u>70,970,847</u>	<u>136,765,217</u>	<u>207,736,064</u>	<u>194,533,878</u>
Nonoperating Revenues (Expenses)				
Earnings on investments	10,485,467	8,959,638	19,445,105	22,368,312
Net increase in fair value of investments	3,259,307	2,712,294	5,971,601	4,149,490
Interest on loan and obligations receivable	22,945,866	19,489,018	42,434,884	41,777,702
Interest expense	(133,537,621)	(155,410,235)	(288,947,856)	(296,597,333)
Amortization of debt related items and cost of issuance	14,258,569	(3,956,009)	10,302,560	3,995,230
Legacy pension expense	(7,220,716)	(12,922,789)	(20,143,505)	16,778,381
WRAP (Water Residential Assistance Program)	(1,393,179)	(1,921,938)	(3,315,117)	(2,024,119)
Other	2,186,331	365,964	2,552,295	419,859
Sewer lookback - MOU adjustment	-	-	-	(6,527,200)
Gain (loss) on disposal of capital assets	(50,760)	(1,266,126)	(1,316,886)	81,284
Loss on impairment of capital assets	<u>(1,432,027)</u>	<u>-</u>	<u>(1,432,027)</u>	<u>(1,025,341)</u>
Total Nonoperating Expenses	<u>(90,498,763)</u>	<u>(143,950,183)</u>	<u>(234,448,946)</u>	<u>(216,603,735)</u>
Income before contributions	(19,527,916)	(7,184,966)	(26,712,882)	(22,069,857)
Capital Contributions	-	5,960,000	5,960,000	-
Change in net position	(19,527,916)	(1,224,966)	(20,752,882)	(22,069,857)
NET POSITION (DEFICIT), Beginning of Year	<u>(76,881,640)</u>	<u>(123,942,981)</u>	<u>(200,824,621)</u>	<u>(178,754,764)</u>
NET POSITION (DEFICIT), END OF YEAR	<u>\$ (96,409,556)</u>	<u>\$ (125,167,947)</u>	<u>\$ (221,577,503)</u>	<u>\$ (200,824,621)</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, 2020
With Comparative Amounts for the Year Ended June 30, 2019

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Cash Flows From Operating Activities				
Cash received from customers	\$ 323,266,850	\$ 472,912,969	\$ 796,179,819	\$ 791,692,007
Cash received from DWSD for shared services	11,758,901	696,878	12,455,779	-
Cash payments for shared services provided	(696,948)	(1,036,758)	(1,733,706)	(7,409,273)
Cash payments to suppliers for goods and services	(85,358,704)	(121,537,325)	(206,896,029)	(192,977,774)
Cash payments for employee services	(39,888,623)	(58,935,302)	(98,823,925)	(93,794,972)
Cash payments to other governments for:				
MOU and bifurcation liabilities	-	-	-	(6,574,739)
B&C obligation payable	(875,508)	(1,969,296)	(2,844,804)	(2,844,804)
Cash payments for WRAP	(1,393,179)	(1,921,938)	(3,315,117)	(2,024,119)
Cash payments for GLWA share pension agreement	(11,440,800)	(20,475,400)	(31,916,200)	(31,916,200)
Cash received for DWSD nonoperating pension	4,427,386	3,066,814	7,494,200	7,494,200
Cash paid for DWSD nonoperating pension	(4,427,393)	(3,066,807)	(7,494,200)	(7,494,201)
Cash received for DWSD WRAP	282,500	484,300	766,800	884,500
Cash payments for DWSD WRAP	(326,193)	(358,690)	(684,883)	(425,881)
Cash received (paid) for DWSD budgetary surplus (shortfall)	(934,683)	(10,817,816)	(11,752,499)	3,021,597
DWSD budgetary surplus cash transferred to DWSD I&E fund	-	-	-	(8,407,080)
Nonoperating cash received	1,656,349	9,666	1,666,015	1,050,072
Principal payments received on obligation receivable	14,171,800	13,111,100	27,282,900	24,711,725
Interest received on obligation receivable	22,259,510	18,533,342	40,792,852	41,457,775
Principal payments received on loan receivable	-	17,542,670	17,542,670	9,367,355
Interest received on loan receivable	-	1,299,047	1,299,047	1,104,242
Payments for bond issuance costs on DWSD debt	(180,078)	-	(180,078)	(273,397)
Payments of state revolving fund loan proceeds to DWSD	(6,791,655)	-	(6,791,655)	(5,855,865)
Net Cash Provided by Operating Activities	225,509,532	307,537,454	533,046,986	520,785,168
Cash Flows From Noncapital Financing Activities				
Proceeds from long-term debt for DWSD	202,231	-	202,231	278,725
Proceeds from state revolving fund loans for DWSD	6,791,655	-	6,791,655	5,855,865
Principal payments	(14,171,800)	(11,741,100)	(25,912,900)	(24,678,100)
Interest payments	(22,492,842)	(19,518,444)	(42,011,286)	(38,023,747)
Net Cash Used in Noncapital Financing Activities	(29,670,756)	(31,259,544)	(60,930,300)	(56,567,257)
Cash Flows From Capital and Related Financing Activities				
Proceeds from fire remediation	-	-	-	2,935,582
Proceeds from sale of assets	1,626	660,530	662,156	2,774,662
Capital contributions	-	11,920,000	11,920,000	-
Proceeds from issuance of long-term refunding debt for COI	891,881	1,122,117	2,013,998	1,311,345
Proceeds from state revolving fund loans	9,292,751	25,164,403	34,457,154	45,687,702
Payment to bond refunding escrow agent	(18,503,190)	(50,408,912)	(68,912,102)	(22,183,865)
Payment of bond issuance costs	(822,549)	(644,653)	(1,467,202)	(1,455,704)
Principal payments on bonds	(43,198,200)	(97,758,900)	(140,957,100)	(97,140,755)
Principal payments on lease	(5,019,121)	(6,134,486)	(11,153,607)	(10,698,830)
Interest payments	(108,672,382)	(134,646,698)	(243,319,080)	(242,034,833)
Purchase of capital assets	(75,299,288)	(82,332,156)	(157,631,444)	(152,936,867)
Net Cash Used in Capital and Related Financing Activities	(241,328,472)	(333,058,755)	(574,387,227)	(473,741,563)

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

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Cash Flows From Investing Activities				
Investment purchases	\$ (426,509,200)	\$ (457,158,002)	\$ (883,667,202)	\$ (956,992,419)
Investment maturities	361,480,123	361,004,326	722,484,449	850,611,385
Interest received	8,593,385	6,616,718	15,210,103	15,166,385
Net Cash Used in Investing Activities	<u>(56,435,692)</u>	<u>(89,536,958)</u>	<u>(145,972,650)</u>	<u>(91,214,649)</u>
Net change in cash and cash equivalents	(101,925,388)	(146,317,803)	(248,243,191)	(100,738,301)
CASH AND CASH EQUIVALENTS, Beginning of Year	<u>252,052,763</u>	<u>318,961,991</u>	<u>571,014,754</u>	<u>671,753,055</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 150,127,375	\$ 172,644,188	\$ 322,771,563	\$ 571,014,754
STATEMENT OF NET POSITION CLASSIFICATION OF CASH				
Cash and cash equivalents	\$ 88,786,996	\$ 119,569,724	\$ 208,356,720	\$ 309,015,559
Restricted cash and cash equivalents	39,304,453	26,060,277	65,364,730	164,495,839
Restricted cash for the benefit of DWSD	1,544,529	-	1,544,529	3,318,316
Noncurrent restricted cash and cash equivalents	<u>20,491,397</u>	<u>27,014,187</u>	<u>47,505,584</u>	<u>94,185,040</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 150,127,375	\$ 172,644,188	\$ 322,771,563	\$ 571,014,754
NONCASH OPERATING ACTIVITIES				
Credits given on billings-Flint KWA obligation	\$ (6,652,348)	\$ -	\$ (6,652,348)	\$ (6,979,503)
Interest income obligation receivable premium amortization	\$ (141,568)	\$ (348,679)	\$ (490,247)	\$ (385,326)
NONCASH FINANCING AND INVESTMENT ACTIVITIES				
Net proceeds deposited into an escrow account for refunding	\$ 375,510,909	\$ 683,960,757	\$ 1,059,471,666	\$ 371,242,130
Bond proceeds to DWSD construction account	\$ 99,531,655	\$ -	\$ 99,531,655	\$ 91,000,000
Decrease in lease liability raw water rights	\$ 2,520,997	\$ -	\$ 2,520,997	\$ 2,999,457
Change in unrealized gain on investments	\$ 853,201	\$ 968,910	\$ 1,822,111	\$ 5,780,770
Interest expense due to accretion	\$ -	\$ 734,587	\$ 734,587	\$ 863,930
Interest expense lease raw water rights	\$ 4,122,850	\$ -	\$ 4,122,850	\$ 4,225,950
Amortization expense	<u>\$ 16,193,326</u>	<u>\$ (1,476,725)</u>	<u>\$ 14,716,601</u>	<u>\$ (6,479,202)</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, 2020
With Comparative Amounts for the Year Ended June 30, 2019

	Enterprise Funds		Total Business-type Activities	2019 Total Business-type Activities
	Water Fund	Sewage Disposal Fund		
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:				
Operating income	\$ 70,970,847	\$ 136,765,217	\$ 207,736,064	\$ 194,533,878
Adjustments to reconcile operating income to net cash provided by operating activities:				
Depreciation	127,183,228	152,920,967	280,104,195	309,115,490
Amortization of intangible asset - raw water rights	3,566,664	-	3,566,664	3,566,664
Credits for raw water rights	(6,652,348)	-	(6,652,348)	(6,979,503)
Miscellaneous nonoperating income (expense)	1,656,349	9,666	1,666,015	1,050,072
Miscellaneous nonoperating income (expense)-MOU related	-	-	-	(6,527,200)
Legacy pension expense and administrative fee	(7,437,758)	(13,311,226)	(20,748,984)	16,148,168
WRAP (Water Residential Assistance Program)	(1,393,179)	(1,921,938)	(3,315,117)	(2,024,119)
Loan forgiveness pass-through to DWSD	(4,711,944)	-	(4,711,944)	(85,221)
Bond proceeds for DWSD treated as noncash (1)	99,783,785	-	99,783,785	91,253,046
Interest income on contractual obligation receivable	22,945,866	18,189,971	41,135,837	40,673,460
Interest income on loan receivable	-	1,299,047	1,299,047	1,104,242
Interest expense on obligation payable	(699,338)	(1,573,028)	(2,272,366)	(2,141,580)
Changes in:				
Receivables	(3,441,388)	6,277,325	2,835,937	(3,356,776)
Due from other governments	10,467,357	(10,535,078)	(67,721)	17,684,704
Due from other funds	742,763	12,568	755,331	888,698
Contractual obligation receivable	(87,752,359)	13,459,779	(74,292,580)	(72,238,990)
Loan receivable	-	17,542,670	17,542,670	(14,745,679)
Prepaid items and other assets (excludes investing item)	(850,534)	(719,345)	(1,569,879)	(2,609,886)
Inventories	(250,009)	(924,606)	(1,174,615)	2,639,034
Accounts and contracts payable (excludes capital items)	2,675,138	(3,874,067)	(1,198,929)	3,007,509
Accrued salaries, wages and benefits	1,037,644	-	1,037,644	(450,736)
Other accrued liabilities (excludes capital items)	(1,124,614)	(627,919)	(1,752,533)	(5,570,103)
Due to other governments (excludes non-capital financing)	2,318,320	1,750,000	4,068,320	3,980,527
Due to other funds	(12,568)	(742,763)	(755,331)	(888,698)
Obligation payable including accrued interest	(176,170)	(396,268)	(572,438)	(703,224)
Accrued compensated absences	455,703	142,094	597,797	133,893
Accrued workers' compensation	(40,646)	-	(40,646)	(10,759)
Claims and judgments	(117,500)	93,889	(23,611)	(183,281)
Other noncurrent liabilities	(43,693)	125,610	81,917	458,619
Net pension liability and deferred items	(3,590,084)	(6,425,111)	(10,015,195)	(46,937,081)
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ 225,509,532	\$ 307,537,454	\$ 533,046,986	\$ 520,785,168

(1) Represents bond proceeds for DWSD local system and DWSD share of underwriting costs from 2020 bond transaction that were paid directly by the bond trustee to the underwriter and the DWSD construction fund.

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

NOTES TO FINANCIAL STATEMENTS

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GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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, 2020

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 Deposits 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Cash Deposits and Investments (cont.)

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.

Accounts Receivable

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

Amounts owed to the Authority by DWSD for shared services and local revenue requirements, accrued interest receivable on the contractual obligation receivable and federal and state grants. Amounts owed by the Authority to DWSD for shared services and green infrastructure program.

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 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 and DWSD is also included in the contractual obligation receivable.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Loan Receivable – DWSD

The balance represents loan receivables from DWSD established per the 2018 Memorandum of Understanding (MOU) dated June 27, 2018 executed between DWSD and the Authority to cure any shortfall created from difference between cash receipts and the MBO obligations. An annual loan amount and interest rate is determined based on any shortfalls during each fiscal year. There was a sewer shortfall of local revenue requirements of \$10.2 million for the fiscal year ending June 30, 2020 that is included in the due from other governments as DWSD has one year to cure the shortfall before it becomes a loan receivable.

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 water and 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.

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.

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 the exception of certain information technology which is \$1 million dollars. 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Capital Assets (cont.)

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 Asset - Raw Water Rights

The Authority has recorded an intangible asset for raw water rights which is being amortized on a straight-line basis over 30 years. See Note 10 for a description of these rights.

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 position 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 the net pension liability. A portion of these costs represent contributions to the plan subsequent to the plan measurement date. More detailed information on pension amounts can be found in Note 18.

Other Accrued Liabilities

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

Current

- Under the terms of the MBO, the Authority retains cash on hand for the benefit of DWSD to be used for current revenue requirements.
- The Authority holds a customer deposit for \$3,750,000 plus interest earned net of bank fees.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Other Accrued Liabilities (cont.)

Noncurrent

- Under the terms of the MBO, the Authority retains cash on hand for the benefit of DWSD for budget stabilization funds to be used if DWSD has cash shortfalls.
- DWSD's local share of the Water Residential Assistance Program (WRAP) funds that have not been remitted to the administrator of the WRAP program.

Arbitrage Rebate Payable

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, 2020.

Long-Term Debt

In the financial statements, long-term debt and other long-term obligations are reported as liabilities in the statement of net position. 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.

Leases Payable

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.

Lease Obligation - Raw Water Rights

The Authority has recorded a liability for the lease obligation on its raw water rights. See Note 15 for the details of this obligation.

Obligation Payable

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 "Obligation Payable - City of Detroit 2014 Financial Recovery Bonds" in Note 13.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (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. The accrued compensated absences for PTO accrual are approximately \$2,802,000 for the Water Fund and \$899,000 for the Sewage Disposal Fund on June 30, 2020.

Due to the impact COVID-19 had on our team members, the Authority granted team members who were granted advanced PTO or used accrued PTO hours for a COVID-19 related absence between March 16, 2010 and June 30, 2020 replenishment of PTO, not to exceed 80 hours, for COVID-19 related absence.

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, 2020 balance of the accrued compensated absences for the liability assumed on January 1, 2016 is approximately \$2,134,000 of which \$179,000 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 includes the employers' share of Social Security and Medicare taxes.

Claims and Judgements

The Authority has accrued in its financial statements for known asserted claims in which future settlements may be necessary.

Net Pension Liability

Under the terms of the Regional System leases, the Authority participates 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, 2020

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

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (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 position 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 amounts on swap terminations, deferred gain on refunding and pension inflows in this reporting category. 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 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. Deferred pension inflows result when there is a change in total pension liability due to benefit changes, differences between expected and actual experience, changes in actuarial assumptions, or differences between expected and actual investment returns. The amount for the changes in actuarial assumptions is deferred and amortized over the estimated remaining service life. The amount for the difference between actual and projected assumptions in investment earnings is deferred and amortized over five years.

Deferred Capital Contribution – represents the balance of the amount received from a customer in exchange for elimination of future capital charges related to GLWA assets that the customer will maintain in the future. In March 2019, the Great Lakes Water Authority (GLWA) and the Oakland-Macomb Interceptor Drain Drainage District (OMIDDD) signed a contract amendment that redefined the operation, maintenance, repair and improvement responsibilities of each entity regarding the Northeast Sewer Pump Station (NESPS), interceptor PCI-5 and the North Interceptor East Arm (NIEA). As part of this agreement, OMIDDD is required to pay GLWA a one-time contribution in the amount of \$11,920,000, which generally reflects GLWA's determination of net book value of the assets as of the effective date. This amount was used to meet budgeted debt service requirements of \$5,960,000 in FY 2020 and \$5,960,000 in FY2021.

Net Position

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 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

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 bad debt expense of \$1,178,328 for the Water Fund and \$2,699,100 for the Sewage Disposal Fund.

Operating expenses include the direct costs of operating the water and sewage disposal systems, centralized support, utilities, administrative expenses and depreciation on capital assets. The capital program allocation represents personnel costs that support the project delivery of the Capital Improvement Plan and have been capitalized, therefore they are shown as a reduction to operating expenses. Costs related to shared facilities and personnel are allocated to the Water and Sewage Disposal Funds on a basis that relates costs incurred to the system benefited. By agreement, the Authority provides shared services to DWSD, which are shown as a reduction to operating expenses.

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

Capital Adjustment

As part of the Authority's capital improvement program the Authority incurs costs to design capital improvement projects. Periodically, the actual construction project may not be completed due to changes in plans or environmental requirements. Once it has been determined that construction will not proceed related costs are charged to the capital adjustment operating expense, including any costs previously recorded in construction in progress.

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 Loan and Obligations Receivable

Interest income is the interest earned on the loan 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (cont.)

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.

Centralized Services and Administrative Services

Various common costs incurred by the Authority are allocated between the Water and Sewerage Disposal Funds. The allocations are based on an annual cost allocation analysis and may change from year to year based upon that analysis. The following table shows the allocation of these common costs for the year ended June 30, 2020:

<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	47.2%	\$ 48,445,160	52.8%	\$ 54,253,510	\$ 102,698,670
Administrative services	50.0%	\$ 14,478,058	50.0%	\$ 14,478,058	\$ 28,956,116

Centralized services include security, systems operations control, field engineering and service operations, facility and fleet operations, information technology, planning, asset management, energy management, and system analytics service costs.

Administrative services includes executive, public affairs, general counsel, organizational development, risk management, finance, procurement, and other service costs.

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.

Effect of New Accounting Standards on Current Period Financial Statements

GASB Statement No. 83, *Certain Asset Retirement Obligations*, and Statement No. 88, *Certain Disclosures Related to Debt*, including direct borrowings and Direct Placements originally were effective for years beginning after June 15, 2018, which was changed to June 15, 2019 by GASB Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*. Both of these statements were implemented during the prior fiscal year.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

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

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (cont.)

Effect of New Accounting Standards on Current Period Financial Statements (cont.)

GASB has approved GASB Statement No. 84, *Fiduciary Activities*, Statement No. 87, *Leases*, Statement No. 90, *Majority Equity Interests – an amendment of GASB Statement No. 14 and No. 61*, Statement No. 91, *Conduit Debt Obligations*, Statement No. 92, *Omnibus 2020*, Statement 93, *Replacement of Interbank Offer Rates*, Statement 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, Statement No. 96, *Subscription-Based Information Technology Arrangements*, and 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*. When they become effective, application of these standards may restate portions of these financial statements.

The statements listed above through Statement No. 93 had their required effective dates postponed by one year with the issuance of Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance*, with the exception of Statement No. 87 which was postponed by one and a half years.

Reclassifications

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

NOTE 2 – BUDGETARY INFORMATION

The financial activity of the Authority is presented in two enterprise funds, which are not required under State statutes to adopt appropriated budgets. 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 B&C obligation payable; e) the required deposit to the Water Residential Assistance Program (WRAP) Fund, which shall be a common-to-all charge equal to 0.5% of the base budgeted operating revenues for the regional water and sewage disposal systems for each fiscal year; 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 sewage 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 sewage 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 2 – BUDGETARY INFORMATION (cont.)

BUDGET PROCESS (cont.)

As a result, the City agrees to provide the Authority with a budget for the local water and sewage disposal system as provided 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.

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, 2020 are reported in the basic financial statements as follows:

	Water Fund	Sewage Disposal Fund	Total
Statement of Net Position			
Cash and cash equivalents	\$ 88,786,996	\$ 119,569,724	\$ 208,356,720
Restricted cash and cash equivalents	39,304,453	26,060,277	65,364,730
Restricted cash for the benefit of DWSD	1,544,529	-	1,544,529
Investments	305,653,818	167,895,196	473,549,014
Restricted investments	30,900,352	87,066,562	117,966,914
Noncurrent restricted cash and cash equivalents	20,491,397	27,014,187	47,505,584
Noncurrent restricted investments	10,770,585	29,048,921	39,819,506
Total	\$ 497,452,130	\$ 456,654,867	\$ 954,106,997
Cash Deposits and Investments			
Bank deposits – checking and savings accounts \$	24,870,419	\$ 25,927,006	\$ 50,797,425
Money market accounts	125,256,956	146,717,182	271,974,138
Investments in securities	347,324,755	284,010,679	631,335,434
Total	\$ 497,452,130	\$ 456,654,867	\$ 954,106,997

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 3 – CASH DEPOSITS AND INVESTMENTS (cont.)

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 \$150,127,375 for the water fund and \$172,644,188 for the sewage disposal fund. The bank balance of the water fund deposits and money market accounts was \$153,498,105 of which \$133,666,917 was uninsured and uncollateralized. The bank balance of the sewage disposal fund deposits and money market accounts was \$172,644,188 of which \$172,394,188 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.

INVESTMENTS

Following is a summary of the Authority's investments as of June 30, 2020:

	Water Fund	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 143,270,327	AA+	1.36
U.S. government agencies	168,880,626	AA+	1.61
Commercial paper	35,173,802	A1	0.03
Total	\$ 347,324,755		
	Sewage Disposal Fund	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 124,630,048	AA+	1.45
U.S. government agencies	71,632,512	AA+	1.74
Commercial paper	87,748,119	A1	0.09
Total	\$ 284,010,679		
	Total	Standard & Poors Rating	Weighted Maturity In Years
U.S. treasury notes	\$ 267,900,375	AA+	1.40
U.S. government agencies	240,513,138	AA+	1.65
Commercial paper	122,921,921	A1	0.07
Total	\$ 631,335,434		

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 3 – CASH DEPOSITS AND INVESTMENTS (cont.)

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.

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, 2020, 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 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, 2020, 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 Home Loan Bank	15.88%
U.S. government agencies	Federal National Mortgage Association	15.17%
U.S. government agencies	Federal Home Loan Mortgage Company	17.58%
Sewage Disposal Fund		
U.S. government agencies	Federal National Mortgage Association	9.34%
U.S. government agencies	Federal Home Loan Mortgage Company	7.25%
U.S. government agencies	Federal Home Loan Bank	8.63%
Commercial paper	MUFG Bank New York	7.87%
Commercial paper	Royal Bank of Canada	5.48%

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, 2020

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 level 2:	
U.S. treasury notes	\$ 143,270,327
U.S. government agencies	168,880,626
Commercial paper	<u>35,173,802</u>
Water Fund Total Investments	<u>347,324,755</u>
Sewage Disposal Fund	
Investments by fair value level 2:	
U.S. treasury notes	124,630,048
U.S. government agencies	71,632,512
Commercial paper	<u>87,748,119</u>
Sewer Fund Total Investments	<u>284,010,679</u>
Total Investments – Business-type activities	<u>\$ 631,335,434</u>

The Authority has no Level 1 or 3 inputs at June 30, 2020.

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, 2020

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, 2020.

	Funded from Revenue and Other		Funded from Debt Issuance	Total
	Unrestricted	Restricted	Restricted	
Water Fund				
Receiving fund	\$ 65,203,201*	\$ -	\$ -	\$ 65,203,201
Operations and maintenance	16,067,977	10,532,623**	-	26,600,600
Operations and maintenance - pension		179,778	-	179,778
Senior lien debt service	-	17,057,431	-	17,057,431
Senior lien bond reserve	-	-	105,374,667	105,374,667
Second and junior lien debt service	-	28,761,647	-	28,761,647
Second and junior lien debt reserve	-	-	48,775,022	48,775,022
Pension obligation	-	353,636	-	353,636
Water residential assistance program (WRAP)	-	4,515,624	-	4,515,624
Budget stabilization	-	2,035,875	-	2,035,875
Extraordinary repair and replacement	27,906,126	-	-	27,906,126
Improvement and extension – regional	285,263,510	-	-	285,263,510
Subtotal – Reserves Defined by Ordinance	394,440,814	63,436,614	154,149,689	612,027,117
Less: Funded by surety (noncash)	-	-	(149,601,197)	(149,601,197)
Total – Reserves Defined by Ordinance (net of surety coverage)	394,440,814	63,436,614	4,548,492	462,425,920
Cash held for the benefit of DWSD	-	1,544,529	-	1,544,529
Unspent construction bond proceeds	-	13,319,689***	20,161,992	33,481,681
Total Cash, Cash Equivalents and Investments	\$ 394,440,814	\$ 78,300,832	\$ 24,710,484	\$ 497,452,130

*Balance for two months required transfers

**Construction retainage and deposits

*** Amount for current liabilities related to construction funds

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 4 – RESTRICTED ASSETS (cont.)

	Funded from Revenue and Other		Funded from Debt Issuance	Total
	Unrestricted	Restricted	Restricted	
Sewage Disposal Fund				
Receiving fund	\$ 91,706,033*	\$ -	\$ -	\$ 91,706,033
Operations and maintenance	22,853,448	9,016,894**	-	31,870,342
Operations and maintenance - pension	-	322,226	-	322,226
Senior lien debt service	-	48,139,718	-	48,139,718
Senior lien bond reserve	-	-	116,142,613	116,142,613
Second and junior lien debt service	-	44,443,209	-	44,443,209
Second and junior lien debt reserve	-	-	49,847,972	49,847,972
Pension obligation	-	494,241	-	494,241
Water residential assistance program (WRAP)	-	6,139,881	-	6,139,881
Budget stabilization	-	5,598,679	-	5,598,679
Extraordinary repair and replacement	44,622,796	-	-	44,622,796
Improvement and extension – regional	128,282,643	-	-	128,282,643
Subtotal – Reserves Defined by Ordinance	287,464,920	114,154,848	165,990,585	567,610,353
Less: Funded by surety (noncash)	-	-	(145,205,154)	(145,205,154)
Total – Reserves Defined by Ordinance (net of surety coverage)	287,464,920	114,154,848	20,785,431	422,405,199
Unspent construction bond proceeds	-	10,710,551***	23,539,117	34,249,668
Total Cash, Cash Equivalents and Investments	287,464,920	124,865,399	44,324,548	456,654,867
Total Cash, Cash Equivalents and Investments – Business-type Activities	\$ 681,905,734	\$ 203,166,231	\$ 69,035,032	\$ 954,106,997

*Balance for two months required transfers

**Construction retainage and deposits

*** Amount for current liabilities related to construction funds

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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	\$ 78,300,832	\$ 124,865,399	\$ 203,166,231
From debt issuance	24,710,484	44,324,548	69,035,032
Amounts payable to liabilities and debt	(79,777,292)	(78,152,924)	(157,930,216)
Restricted Net Position	\$ 23,234,024	\$ 91,037,023	\$ 114,271,047
Restricted net position for:			
Debt service	\$ 19,479,656	\$ 85,803,313	\$ 105,282,969
Payment assistance program	3,754,368	5,233,710	8,988,078
Total	\$ 23,234,024	\$ 91,037,023	\$ 114,271,047

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	\$ 88,786,996	\$ 39,304,453	\$ 20,491,397	\$ 148,582,846
Cash held for the benefit of DWSD	-	1,544,529	-	1,544,529
Investments	305,653,818	30,900,352	10,770,585	347,324,755
Total	394,440,814	71,749,334	31,261,982	497,452,130
Sewage Disposal Fund				
Cash and cash equivalents	119,569,724	26,060,277	27,014,187	172,644,188
Investments	167,895,196	87,066,562	29,048,921	284,010,679
Total	287,464,920	113,126,839	56,063,108	456,654,867
Total Business-type Activities	\$ 681,905,734	\$ 184,876,173	\$ 87,325,090	\$ 954,106,997

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, 2020

NOTE 5 – RECEIVABLES

The following is a summary of the net receivables as of June 30, 2020:

	Water Fund	Sewage Disposal Fund	Total
Receivables, net:			
Billed	\$ 38,769,605	\$ 56,390,056	\$ 95,159,661
Unbilled	31,032,237	23,861,029	54,893,266
Other	214,997	95,376	310,373
Subtotal	70,016,839	80,346,461	150,363,300
Allowance for doubtful accounts	(8,634,075)	(36,357,891)	(44,991,966)
Total	\$ 61,382,764	\$ 43,988,570	\$ 105,371,334

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	\$ 20,567,313	\$ 519,465
DWSD-Unbilled shared services	(1,647,492)	-
DWSD-Local System revenue requirement	-	10,195,198
DWSD-Accrued interest on obligation receivable	676,393	-
State of Michigan FEMA	747,024	744,735
Total	\$ 20,343,238	\$ 11,459,398

NOTE 7 – DUE TO AND DUE FROM OTHER FUNDS

Interfund balances result from the time lag between the dates interfund goods and services are provided or reimbursable expenditures occur and the payment between funds are made. Interfund balances for the year ended June 30, 2020 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	2,134,191	-	2,134,191
Total Due from	\$ 2,134,191	\$ -	\$ 2,134,191

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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. Total bonds assumed by GLWA 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. 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, 2020 were as follows:

	Beginning Balance	Increase	Decrease	Debt Forgiveness	Ending Balance	Due Within One Year
Water Fund						
Bifurcated debt	\$ 412,140,600	\$ -	\$ (13,820,900)	\$ -	\$ 398,319,700	\$ 14,478,800
New money bonds	50,740,000	85,580,000	-	-	136,320,000	-
State revolving funds	13,802,867	6,791,655	(350,900)	(4,711,944)	15,531,678	355,900
Total Installment Debt	<u>476,683,467</u>	<u>92,371,655</u>	<u>(14,171,800)</u>	<u>(4,711,944)</u>	<u>550,171,378</u>	<u>14,834,700</u>
Deferred amounts for:						
Unamortized premiums	<u>6,126,620</u>	<u>14,406,016</u>	<u>(141,568)</u>	<u>-</u>	<u>20,391,068</u>	<u>785,463</u>
Total Water Fund	<u>\$ 482,810,087</u>	<u>\$ 106,777,671</u>	<u>\$ (14,313,368)</u>	<u>\$ (4,711,944)</u>	<u>\$ 570,562,446</u>	<u>\$ 15,620,163</u>
Sewage Disposal Fund						
Bifurcated debt	\$ 335,574,500	\$ -	\$ (11,741,100)	\$ -	\$ 323,833,400	\$ 12,249,500
New money bonds	81,595,000	-	(1,370,000)	-	80,225,000	1,415,000
Total Installment Debt	<u>417,169,500</u>	<u>-</u>	<u>(13,111,100)</u>	<u>-</u>	<u>404,058,400</u>	<u>13,664,500</u>
Deferred amounts for:						
Unamortized premiums	<u>9,687,232</u>	<u>-</u>	<u>(348,679)</u>	<u>-</u>	<u>9,338,533</u>	<u>376,827</u>
Total Sewage Disposal Fund	<u>\$ 426,856,732</u>	<u>\$ -</u>	<u>\$ (13,459,779)</u>	<u>\$ -</u>	<u>\$ 413,396,953</u>	<u>\$ 14,014,327</u>
Total Business-type Activities	<u>\$ 909,666,819</u>	<u>\$ 106,777,671</u>	<u>\$ (27,773,147)</u>	<u>\$ (4,711,944)</u>	<u>\$ 983,959,399</u>	<u>\$ 29,661,490</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 8 – CONTRACTUAL OBLIGATION RECEIVABLE (cont.)

The current obligation receivable payment schedule is as follows:

	Year Ended June 30	Principal	Interest	Total
Water Fund				
	2021	\$ 14,834,700	\$ 26,733,206	\$ 41,567,906
	2022	15,820,056	25,450,640	41,270,696
	2023	16,552,100	24,713,710	41,265,810
	2024	18,991,500	23,942,220	42,933,720
	2025	19,895,100	23,050,890	42,945,990
	2026 - 2030	113,226,354	100,366,176	213,592,530
	2031 - 2035	142,082,900	70,971,602	213,054,502
	2036 - 2040	110,635,800	35,484,975	146,120,775
	2041 - 2045	63,639,000	18,868,895	82,507,895
	2046 - 2050	34,493,867	3,368,247	37,862,114
	Total	<u>\$ 550,171,377</u>	<u>\$ 352,950,561</u>	<u>\$ 903,121,938</u>
	Year Ended June 30	Principal	Interest	Total
Sewer Fund				
	2021	\$ 13,664,500	\$ 17,989,150	\$ 31,653,650
	2022	14,244,900	17,402,150	31,647,050
	2023	14,863,300	16,790,150	31,653,450
	2024	15,500,600	16,151,650	31,562,250
	2025	16,177,900	15,469,850	31,647,750
	2026 - 2030	92,233,100	66,023,900	158,257,000
	2031 - 2035	114,392,100	43,860,900	158,253,000
	2036 - 2040	88,212,000	17,496,600	105,708,600
	2041 - 2045	20,120,000	6,778,250	26,898,250
	2046 - 2050	14,650,000	1,489,000	16,139,000
	Total	<u>\$ 404,058,400</u>	<u>\$ 219,451,600</u>	<u>\$ 623,510,000</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 9 – LOAN 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 combined 2016 and 2017 budget shortfall and the 2018 budget shortfall had remaining balances of \$10,171,496 and \$16,331,513, respectively. The surcharge factor for the combined 2016 and 2017 budget shortfall and the 2018 budget shortfall were 4.125% and 3.209%, respectively.

The budget shortfall loan receivable to be paid by DWSD is as follows:

	Year Ended June 30	Principal	Interest	Total
2017 DWSD Loan Receivable	2021	\$ 10,171,496	\$ 228,699	\$ 10,400,195
	2022	8,296,578	144,918	8,441,496
Total		\$ 16,331,513	\$ 551,503	\$ 16,883,016

Total loan receivable to be paid by DWSD for 2016, 2017 and 2018 budget shortfalls:

	Year Ended June 30	Principal	Interest	Total
Total DWSD Loans Receivable	2021	\$ 18,206,431	\$ 635,284	\$ 18,841,715
	2022	8,296,578	144,918	8,441,496
Total		\$ 26,503,009	\$ 780,202	\$ 27,283,211

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 10 – CAPITAL ASSETS

Capital assets activity for the year ended June 30, 2020 was as follows:

	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Water Fund					
Nondepreciable capital assets					
Land	\$ 34,166,736	\$ -	\$ -	\$ -	\$ 34,166,736
Easements	258,632,397	-	-	-	258,632,397
Construction in progress	175,031,085	76,311,612	-	(125,145,176)	126,197,521
Total Nondepreciable Assets	467,830,218	76,311,612	-	(125,145,176)	418,996,654
Depreciated capital assets					
Site improvements	75,140,791	53,561	-	8,481,700	83,676,052
Buildings and structures	570,825,066	170,932	-	13,310,011	584,306,009
Infrastructure	625,947,979	-	-	28,268,263	654,216,242
Machinery and equipment	614,916,708	1,420,346	(2,244,982)	67,813,583	681,905,655
Vehicles	2,347,827	951,110	(81,826)	-	3,217,111
Leasehold improvements	499,484	290,554	-	7,271,619	8,061,657
Total Depreciable Assets	1,889,677,855	2,886,503	(2,326,808)	125,145,176	2,015,382,726
Less: Accumulated depreciation					
Site improvements	(31,789,201)	(8,135,259)	-	-	(39,924,460)
Buildings and structures	(119,497,870)	(26,122,100)	-	-	(145,619,970)
Infrastructure	(132,383,166)	(38,405,269)	-	-	(170,788,435)
Machinery and equipment	(213,808,502)	(54,177,882)	764,520	-	(267,221,864)
Vehicles	(1,408,230)	(304,451)	77,875	-	(1,634,806)
Leasehold improvements	(25,451)	(38,267)	-	-	(63,718)
Total Accumulated Depreciation	(498,912,420)	(127,183,228)	842,395	-	(625,253,253)
Total Capital Assets Being Depreciated, Net	1,390,765,435	(124,296,725)	(1,484,413)	125,145,176	1,390,129,473
Intangible asset – raw water rights	106,999,919	-	-	-	106,999,919
Less: Accumulated amortization	(5,647,218)	(3,566,664)	-	-	(9,213,882)
Total Intangible Assets, Net	101,352,701	(3,566,664)	-	-	97,786,037
Water Fund Net Capital and Intangible Assets	\$ 1,959,948,354	\$ (51,551,777)	\$ (1,484,413)	\$ -	\$ 1,906,912,164

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 10 – CAPITAL ASSETS (cont.)

	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Sewage Disposal Fund					
Nondepreciable capital assets					
Land	\$ 28,646,920	\$ -	(1,012,292)	\$ -	\$ 27,634,628
Easements	96,211,323		-	-	96,211,323
Construction in progress	193,716,659	73,826,518	-	(90,520,292)	177,022,885
Total Nondepreciable Assets	<u>318,574,902</u>	<u>73,826,518</u>	<u>(1,012,292)</u>	<u>(90,520,292)</u>	<u>300,868,836</u>
Depreciated capital assets					
Site improvements	39,620,707	152,669	-	11,509,195	51,282,571
Buildings and structures	1,138,610,722	78,061	-	17,479,955	1,156,168,738
Infrastructure	609,683,574	-	-	9,365,575	619,049,149
Machinery and equipment	1,188,042,500	3,604,570	(1,515,404)	52,165,567	1,242,297,233
Vehicles	2,589,611	1,113,987	(81,691)	-	3,621,907
Leasehold improvements	2,801,008	265,044	-	-	3,066,052
Total Depreciable Assets	<u>2,981,348,122</u>	<u>5,214,331</u>	<u>(1,597,095)</u>	<u>90,520,292</u>	<u>3,075,485,650</u>
Less: Accumulated depreciation					
Site improvements	(21,974,679)	(3,584,472)	-	-	(25,559,151)
Buildings and structures	(179,284,105)	(37,505,271)	-	-	(216,789,376)
Infrastructure	(48,209,166)	(13,664,546)	-	-	(61,873,712)
Machinery and equipment	(373,231,801)	(97,700,944)	601,041	-	(470,331,704)
Vehicles	(1,529,610)	(279,000)	81,692	-	(1,726,918)
Leasehold improvements	(100,408)	(186,734)	-	-	(287,142)
Total Accumulated Depreciation	<u>(624,329,769)</u>	<u>(152,920,967)</u>	<u>682,733</u>	<u>-</u>	<u>(776,568,003)</u>
Total Capital Assets Being Depreciated, Net	<u>2,357,018,353</u>	<u>(147,706,636)</u>	<u>(914,362)</u>	<u>90,520,292</u>	<u>2,298,917,647</u>
Sewage Disposal Fund					
Net Capital Assets	<u>\$ 2,675,593,255</u>	<u>\$ (73,880,118)</u>	<u>\$ (1,926,654)</u>	<u>\$ -</u>	<u>\$ 2,599,786,483</u>
Business-type					
Activities Capital and Intangible Assets, Net	<u>\$ 4,635,541,609</u>	<u>\$ (125,431,895)</u>	<u>\$ (3,411,067)</u>	<u>\$ -</u>	<u>\$ 4,506,698,647</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. The Authority recorded impairments of \$1,432,027 in the Water Fund and no impairments in the Sewage Disposal Fund, for a total of \$1,432,027 of impairments. The majority of the impairments were for filters at the Springwells Water Treatment Plant that incurred sink holes in the media due to high turbidity.

As part of the Authority's capital improvement program the Authority incurs costs to design capital improvement projects. Periodically the actual construction project may not be completed due to changes in plans or environmental requirements. Once it has been determined that construction will not proceed related costs are charged to the capital adjustment operating expense, including any costs previously recorded in construction in progress. The Authority recorded capital adjustments of \$26,780 in the Water Fund for the year ended June 30, 2020.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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 long-term lease 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.

NOTE 11 – OTHER ACCRUED LIABILITIES

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

	Water Fund	Sewage Disposal Fund
Current		
Cash held for the benefit of DWSD	\$ 1,544,529	\$ -
Customer deposit	3,812,527	-
Total	\$ 5,357,056	\$ -
Noncurrent		
Cash held for the benefit of DWSD budget stabilization	\$ 2,000,000	\$ 5,500,000
DWSD local system WRAP	761,256	917,291
Total	\$ 2,761,256	\$ 6,417,291

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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	\$ 18,282,254	\$ -
Green infrastructure	-	1,750,000
Total	\$ 18,282,254	\$ 1,750,000

NOTE 13 – LONG-TERM DEBT

Changes in long-term debt and accrued compensated absences for the year ended June 30, 2020 were as follows:

	Beginning Balance	Increase	Decrease*	Debt Forgiveness	Ending Balance	Due Within One Year
Water Fund						
Revenue bonds	\$ 2,220,320,000	\$ 463,095,000	\$ (421,480,000)	\$ -	\$ 2,261,935,000	\$ 15,690,000
Notes from direct borrowings and direct placements - State revolving loan	29,860,802	16,084,406	(1,915,000)	(4,711,944)	39,318,264	1,955,000
Total Installment Debt	2,250,180,802	479,179,406	(423,395,000)	(4,711,944)	2,301,253,264	17,645,000
Deferred amounts for:						
Unamortized premiums	256,790,215	14,406,016	(70,697,020)	-	200,499,211	16,779,986
Unamortized discounts	(10,549,123)	-	1,586,000	-	(8,963,123)	(1,366,371)
Total Debt, Net	2,496,421,894	493,585,422	(492,506,020)	(4,711,944)	2,492,789,352	33,058,615
Obligation payable	17,097,709	-	(176,183)	-	16,921,526	184,992
Compensated absences	4,480,483	3,733,952	(3,278,249)	-	4,936,186	2,981,827
Total Water Fund	\$ 2,518,000,086	\$ 497,319,374	\$ (495,960,452)	\$ (4,711,944)	\$ 2,514,647,064	\$ 36,225,434

*Of the \$421,480,000 decrease in the revenue bonds, \$366,025,000 relates to refundings. Of the \$70,697,020 decrease in unamortized premiums, \$52,324,146 relates to refundings.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

	Beginning Balance	Increase	Decrease*	Debt Forgiveness	Ending Balance	Due Within One Year
Sewage Disposal Fund						
Revenue bonds	\$ 2,604,390,000	\$ 687,455,000	\$ (713,625,000)	-	\$ 2,578,220,000	\$ 30,235,000
Capital appreciation bonds	14,780,000	-	(3,445,000)	-	11,335,000	5,660,000
Notes from direct borrowings and direct placements-State revolving loan	474,177,128	25,164,403	(49,675,000)	-	449,666,531	50,160,000
Total Installment Debt	3,093,347,128	712,619,403	(766,745,000)	-	3,039,221,531	86,055,000
Discount on capital appreciation bonds	(1,402,028)	-	734,588	-	(667,440)	(496,509)
Deferred amounts for:						
Unamortized premiums	248,551,859	-	(104,937,774)	-	143,614,085	12,935,379
Unamortized discounts	(88,744,944)	-	10,699,227	-	(78,045,717)	(9,554,410)
Total Debt, Net	3,251,752,015	712,619,403	(860,248,959)	-	3,104,122,459	88,939,460
Obligation payable	38,458,177	-	(396,291)	-	38,061,886	416,105
Compensated absences	757,328	1,835,352	(1,693,258)	-	899,422	899,422
Total Sewage Disposal Fund	3,290,967,520	714,454,755	(862,338,508)	-	3,143,083,767	90,254,987
Total Business-type Activities	<u>\$ 5,808,967,606</u>	<u>\$ 1,211,774,129</u>	<u>\$(1,358,298,960)</u>	<u>\$ (4,711,944)</u>	<u>\$ 5,657,730,831</u>	<u>\$ 126,480,421</u>

*Of the \$713,625,000 decrease in the revenue bonds, \$657,245,000 relates to refundings. Of the \$104,937,774 decrease in unamortized premiums, \$88,198,708 relates to refundings. Of the \$10,699,227 decrease in unamortized discounts, \$374,233 relates to refundings.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

As of June 30, 2020, aggregate debt service requirements of the Authority's debt (fixed and variable-rate) instruments 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					
2021	\$ 15,690,000	\$ 81,356,372	\$ 1,955,000	\$ 862,449	\$ 99,863,821
2022	68,125,000	103,458,167	2,628,056	819,585	175,030,808
2023	69,395,000	100,051,172	3,915,000	761,970	174,123,142
2024	76,930,000	96,484,833	3,990,000	678,595	178,083,428
2025	82,590,000	92,746,039	4,080,000	593,582	180,009,621
2026-2030	474,535,000	400,193,965	9,331,930	2,034,170	886,095,065
2031-2035	615,955,000	269,255,744	4,238,636	1,400,172	890,849,552
2036-2040	431,480,000	133,883,228	3,120,000	982,580	569,465,808
2041-2045	293,400,000	65,957,661	3,500,000	572,705	363,430,366
2046-2050	133,835,000	8,816,125	2,559,642	129,010	145,339,777
Total	\$ 2,261,935,000	\$ 1,352,203,306	\$ 39,318,264	\$ 8,834,818	\$ 3,662,291,388

Year Ended June 30	Bonds		Notes from Direct Borrowings and Direct Placements		Total
	Principal	Interest	Principal	Interest	
Sewage Disposal Fund					
2021	\$ 35,985,000	\$ 73,744,741	\$ 50,160,000	\$ 9,894,954	\$ 169,694,695
2022	69,750,000	99,686,437	46,935,000	8,768,369	225,139,806
2023	79,830,000	96,328,547	47,969,430	7,667,990	231,795,967
2024	83,475,000	92,593,928	38,725,000	6,657,799	221,451,727
2025	98,650,000	88,458,880	39,590,870	5,770,937	232,470,687
2026 - 2030	597,790,000	374,516,265	121,750,660	19,872,831	1,113,929,756
2031 - 2035	765,255,000	248,917,584	75,565,763	8,805,007	1,098,543,354
2036 - 2040	702,055,000	85,048,628	28,969,808	1,042,438	817,115,874
2041 - 2045	137,780,000	17,952,444	-	-	155,732,444
2046 - 2049	19,075,000	1,965,875	-	-	21,040,875
Total	\$ 2,589,555,000	\$ 1,179,213,329	\$ 449,666,531	\$ 68,480,325	\$ 4,286,915,185

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, 2020 are not included in the debt service requirements amounts above as they were paid on June 24, 2020.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

REVENUE AND CAPITAL APPRECIATION BONDS PAYABLE

Net revenues of the Authority are pledged to repayment of bonds; following are the revenue bonds payable at June 30, 2020:

Issue	Bond Date	Original Issue Amount	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance	Callable
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 2011A	12/22/11	379,590,000	5.00%	7/01/20	2,955,000	-
Series 2011B	12/22/11	17,195,000	5.00%	7/01/20-21	1,130,000	-
Series 2011C	12/22/11	103,890,000	5.00%	7/01/21	1,020,000	-
Series 2014D-1	9/04/14	206,540,000	5.00%	7/01/21-37	152,710,000	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%	7/01/21-36	57,925,000	43,690,000
Series 2015D-1	12/15/15	89,430,000	5.00%	7/01/21-35	82,320,000	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%	7/01/21-46	88,000,000	87,970,000
Series 2016B	10/27/16	163,830,000	5.00%	7/01/21-46	163,830,000	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%	7/01/20-29	147,425,000	-
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	<u>377,515,000</u>	377,515,000
Total Water Fund Revenue Bonds Payable					<u>\$ 2,261,935,000</u>	

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

REVENUE AND CAPITAL APPRECIATION BONDS PAYABLE (cont.)

Issue	Bond Date	Original Issue Amount	Range of Interest Rates	Maturity Dates	Outstanding Ending Balance	Callable
Sewage Disposal Fund						
Series 1999A***	12/01/99	\$ 35,510,118	-	7/01/20-21	\$ 10,667,560	\$ -
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%	7/01/20-24	26,130,000	-
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%	7/01/21-22	17,115,000	-
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%	7/01/20-23	55,435,000	17,985,000
Series 2014C-1	9/04/14	123,220,000	5.00%	7/01/21-22	10,000	-
Series 2014C-2	9/04/14	27,470,000	5.00%	7/01/21-22	10,000	-
Series 2014C-3	9/04/14	446,170,000	5.00%	7/01/21-33	446,170,000	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%	7/01/21-36	62,305,000	44,065,000
Series 2015C	12/15/15	197,660,000	5.00%	7/01/26-35	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	3.00-5.00%	7/1/20-48	81,595,000	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	3.152-3.613%	7/1/20-24	44,180,000	-
Series 2020A**	6/16/20	594,930,000	1.503-3.506%	7/01/23-44	594,930,000	594,930,000
Series 2020B**	6/16/20	92,525,000	1.442-3.606%	7/1/21-44	92,525,000	92,525,000
Total Sewage Disposal Fund Revenue and Capital Appreciation Bonds Payable					<u>2,588,887,560</u>	
Total Business-type Activities					<u>\$ 4,850,822,560</u>	

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

** Taxable bond

*** Bonds are capital appreciation bonds. The outstanding balance represents the discounted present value.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

REVENUE BONDS – 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, 2020 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 2050 and the sewage disposal bonds is through 2049.

See table below for pledged revenue coverage as of June 30, 2020:

	Water Fund	Sewage Disposal Fund
	<u> </u>	<u> </u>
Remaining principal and interest requirement	\$ 3,662,291,388	\$ 4,286,915,185
Principal and interest funding requirement for the year ending June 30, 2020 (computed consistent with rate covenant basis for rate determination purposes. Not applicable for purpose of additional bond test)	\$ 169,183,461	\$ 245,783,258
Pledged revenue for the year ending June 30, 2020	\$ 241,505,884	\$ 318,735,411
Pledged revenue collected as a percentage of funding requirement	143 %	130 %

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

STATE REVOLVING LOANS PAYABLE

The Authority participates in direct borrowings through the State of Michigan Drinking Water Revolving fund (DWRF) to finance qualified water supply system projects and the Clean Water Revolving Fund (CWRF) to finance qualified sewage disposal system projects. Net revenues of the Authority are pledged to repayment of bonds. The following is a schedule of the state revolving loans payable at June 30, 2020:

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%	10/01/20-26	\$ 5,320,164
Series 2005 SRF-2	9/22/05	8,891,730	2.125%	10/01/20-26	3,356,730
Series 2006 SRF-1	9/21/06	5,180,926	2.125%	10/01/20-26	1,980,926
Series 2008 SRF-1	9/29/08	2,590,941	2.50%	10/01/20-28	940,941
Series 2016 SRF-1	9/16/16	8,273,168	2.50%	4/01/21-48	7,858,168
Series 2016 SRF-2	9/16/16	3,393,543	2.50%	4/01/21-44	3,218,543
Series 2017 SRF-1	6/23/17	5,807,931	2.50%	10/1/20-48	5,657,931
Series 2019 SRF-1	6/7/19	8,330,000	2.00%	10/1/21-33	4,778,636
Series 2019 SRF-2	8/30/19	29,950,000	2.00%	4/1/24-27	4,514,115
Series 2019 SRF-3	8/30/19	11,788,056	2.00%	10/1/20-25	1,692,110
Total Water Fund State Revolving Loans Payable					39,318,264
Sewage Disposal Fund					
Series 1999 SRF-2	9/30/99	46,000,000	2.50%	10/01/20-22	8,445,000
Series 1999 SRF-3	9/30/99	31,030,000	2.50%	10/01/20	1,950,000
Series 1999 SRF-4	9/30/99	40,655,000	2.50%	10/01/20	2,550,000
Series 2000 SRF-1	3/30/00	44,197,995	2.50%	10/01/20-22	7,647,995
Series 2000 SRF-2	9/28/00	64,401,066	2.50%	10/01/20-22	11,766,066
Series 2001 SRF-1	6/28/01	82,200,000	2.50%	10/01/20-24	24,545,000
Series 2001-SRF-2	12/20/01	59,850,000	2.50%	10/01/20-24	17,875,000
Series 2002 SRF-1	6/27/02	18,985,000	2.50%	4/01/21-23	3,480,000
Series 2002 SRF-2	6/27/02	1,545,369	2.50%	4/01/21-23	285,369
Series 2002 SRF-3	12/19/02	31,549,466	2.50%	10/01/20-24	8,679,466
Series 2003 SRF-1	6/26/03	48,520,000	2.50%	10/01/20-25	17,175,000
Series 2003 SRF-2	9/25/03	25,055,370	2.50%	4/01/21-25	7,430,370
Series 2004 SRF-1	6/24/04	2,910,000	2.125%	10/01/20-24	845,000
Series 2004 SRF-2	6/24/04	18,353,459	2.125%	4/01/21-25	5,318,459
Series 2004 SRF-3	6/24/04	12,722,575	2.125%	4/01/21-25	3,677,575
Series 2007 SRF-1	9/20/07	167,540,598	1.625%	10/01/20-29	90,525,598
Series 2009 SRF-1	4/17/09	13,970,062	2.50%	4/01/21-30	7,595,062
Series 2010 SRF-1	1/22/10	4,214,763	2.50%	4/01/21-31	2,530,763
Series 2012 SRF-1	8/30/12	14,950,000	2.50%	10/01/20-34	11,875,000
Series 2015A SRF	3/20/15	79,500,000	2.50%	4/01/21-36	66,580,000
Series 2015B SRF	3/20/15	27,175,304	2.50%	10/01/20-35	22,340,304
Series 2015D SRF	12/11/15	15,321,478	2.50%	10/01/20-35	12,356,478
Series 2016 SAW-1	5/25/16	10,000,000	2.50%	10/01/20-38	9,610,000
Series 2016 SRF-1	9/16/16	15,463,628	2.50%	4/01/21-38	13,933,628
Series 2016 SRF-2	9/16/16	51,310,000	2.50%	4/01/21-33	44,445,670
Series 2017 SRF-1	6/23/17	38,450,000	2.50%	10/01/20-33	32,816,682
Series 2018 SRF-2	9/14/18	17,510,000	2.00%	10/01/23-28	13,387,046
Series 2020 SRF-1	2/28/20	28,350,000	2.00%	-	-
Total Sewage Disposal Fund State Revolving Loans Payable					449,666,531
Total Business-type Activities					\$ 488,984,795

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

STATE REVOLVING LOANS PAYABLE (cont.)

The state revolving loans are direct borrowings issued as part of the State of Michigan's Revolving Fund Loan Program. As GLWA draws additional amounts from time to time hereafter, the outstanding principal amounts of such bonds will correspondingly increase. All loans are callable under terms specified in the loan agreements.

REFUNDED DEBT – WATER FUND

On May 12, 2020, the Authority issued \$42,445,000 in Series 2020A senior lien revenue bonds, \$43,135,000 in second lien revenue bonds and \$377,515,000 in taxable senior lien revenue refunding bonds for a total issue of \$463,095,000. The net proceeds of the 2020A and 2020B bonds will be used to pay certain costs of improvements, enlargements and extension and repairs to the Local Water System. The net proceeds of the Series 2020C were used to purchase securities that were placed in an irrevocable trust with an escrow agent to refund \$289,605,000 Series 2011A revenue bonds, \$2,295,000 Series 2011B revenue bonds and \$74,125,000 of Series 2011C revenue bonds for a total of \$366,025,000 of refunded bonds with a call date of July 1, 2021. 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. The refunding resulted in a savings of \$103,077,566 over the next 21 years and an economic gain of \$66,489,475.

REFUNDED DEBT AND NEW MONEY BOND– SEWAGE DISPOSAL FUND

On June 16, 2020, the Authority issued \$594,930,000 in Series 2020A taxable senior lien revenue refunding bonds and \$92,525,000 in Series 2020B taxable second lien revenue refunding bonds for a total issue of \$687,455,000. The net proceeds of the bonds were used to purchase securities that were placed in an irrevocable trust with an escrow agent to refund \$419,810,000 Series 2012A revenue bonds (call date July 1, 2022), \$123,200,000 Series 2014C-1 revenue bonds (call date July 1, 2022), \$27,450,000 2014C-2 revenue bonds (call date July 1, 2022), \$31,785,000 Series 2005A revenue bonds (call date July 1, 2021) and \$55,000,000 Series 2006B revenue bonds (call date July 1, 2021) for a total of \$657,245,000 in refunded bonds. 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. The refunding resulted in a savings of \$221,039,756 over the next 24 years and an economic gain of \$122,880,865.

ISSUANCE OF STATE REVOLVING LOANS

The Authority's Water Fund received direct borrowing loans from the State of Michigan Revolving Loan Fund totaling \$16,084,406 of which \$4,711,944 has been forgiven, and the Sewage Disposal Fund received \$25,164,403 during the year ended June 30, 2020. The water loans forgiven and \$6,791,655 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 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, 2020, \$39,083,195 for the Water Fund and \$42,210,602 for the Sewage Disposal Fund was authorized and unissued.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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.

The Authority was asked by the State to seek a rating for the junior lien debt, as this is the debt category of the state revolving fund bonds. In November 2018, S&P Global Ratings assigned an A+ rating to the Authority's junior lien water system SRF bonds and an A rating to the Authority's junior lien sewage disposal system SRF bonds. In March 2020, the junior lien sewage disposal system SRF bonds were upgraded to A+.

OBLIGATION PAYABLE – CITY OF DETROIT 2014 FINANCIAL RECOVERY BONDS

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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

The following is a schedule of the obligation payable for the Financial Recovery Bonds at June 30, 2020:

Bond Issue	Original Issue Amount	Range of Interest Rates	Maturity Date	Outstanding Ending Balance
Water Fund				
Series 2014-B	\$ 26,540,080	4.00% and variable	4/1/44	\$ 15,556,024
Series 2014-C	3,829,794	5.00%	6/30/27	<u>1,365,502</u>
Total Water Fund				<u>16,921,526</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	<u>3,071,447</u>
Total Sewage Disposal Fund				<u>38,061,886</u>
Total Business-type Activities				<u>\$ 54,983,412</u>

As of June 30, 2020, debt service requirements of the Financial Recovery Bonds were as follows:

Year Ended June 30	Principal	Interest	Total
Water Fund			
2021	\$ 184,992	\$ 690,516	\$ 875,508
2022	194,242	681,267	875,509
2023	203,954	671,555	875,509
2024	214,151	661,357	875,508
2025	1,002,661	650,649	1,653,310
2026 - 2030	4,232,312	2,667,051	6,899,363
2031 - 2035	3,889,008	2,022,284	5,911,292
2036 - 2040	3,889,008	1,633,383	5,522,391
2041 - 2044	3,111,198	466,681	<u>3,577,879</u>
Total	<u>\$ 16,921,526</u>	<u>\$ 10,144,743</u>	<u>\$ 27,066,269</u>
Sewage Disposal Fund			
2021	\$ 416,105	\$ 1,553,190	\$ 1,969,295
2022	436,911	1,532,384	1,969,295
2023	458,757	1,510,539	1,969,296
2024	481,694	1,487,601	1,969,295
2025	2,255,301	1,463,516	3,718,817
2026 - 2030	9,519,808	5,999,040	15,518,848
2031 - 2035	8,747,608	4,548,756	13,296,364
2036 - 2040	8,747,608	3,673,995	12,421,603
2041 - 2044	6,998,094	1,049,713	<u>8,047,807</u>
Total	<u>\$ 38,061,886</u>	<u>\$ 22,818,734</u>	<u>\$ 60,880,620</u>
Total Business-type Activities	<u>\$ 54,983,412</u>	<u>\$ 32,963,477</u>	<u>\$ 87,946,889</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 13 – LONG-TERM DEBT (cont.)

INTEREST EXPENSE

The following represents the amounts recorded as interest expense for the year ended June 30, 2020:

	Water Fund	Sewage Disposal Fund	Total Business-type Activities
Bonded debt	\$ 111,251,995	\$ 132,493,006	\$ 243,745,001
Lease payable	17,463,438	21,344,201	38,807,639
Raw water rights	4,122,850	-	4,122,850
Obligation payable	699,338	1,573,028	2,272,366
Total	<u>\$ 133,537,621</u>	<u>\$ 155,410,235</u>	<u>\$ 288,947,856</u>

NOTE 14 – LONG-TERM 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, 2020

NOTE 14 – LONG-TERM 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 long-term leases payable for the year ended June 30, 2020 were as follows:

	Beginning Balance	Increase	Decrease	Ending Balance	Amount due Within One Year*
Water fund	\$ 421,488,871	\$ -	\$ (5,019,122)	\$ 416,469,749	\$ 5,232,465
Sewage disposal fund	515,153,069	-	(6,134,486)	509,018,583	6,395,235
Total Business-type Activities	\$ 936,641,940	\$ -	\$ (11,153,608)	\$ 925,488,332	\$ 11,627,701

* The current portion of the long-term leases payable represents the 12 monthly payments required from July 1, 2019 through June 30, 2020. Future revenues are intended to cover these payments.

As of June 30, 2020, aggregate requirements of the Authority's leases were as follows:

Water Fund	Year Ended June 30	Principal	Interest	Total
	2021	\$ 5,232,465	\$ 17,267,535	\$ 22,500,000
	2022	5,454,878	17,045,122	22,500,000
	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 - 2030	35,073,528	77,426,472	112,500,000
	2031 - 2035	43,188,974	69,311,026	112,500,000
	2036 - 2040	53,182,203	59,317,797	112,500,000
	2041 - 2045	65,487,702	47,012,298	112,500,000
	2046 - 2050	80,640,495	31,859,505	112,500,000
	2051 - 2055	99,299,398	13,200,602	112,500,000
	2056	11,114,430	135,570	11,250,000
	Total	416,469,749	382,280,251	798,750,000

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 14 – LONG-TERM LEASES PAYABLE AND RELATED PREPAID LEASE (cont.)

	Year Ended June 30	Principal	Interest	Total
Sewage Disposal Fund				
	2021	\$ 6,395,235	\$ 21,104,765	\$ 27,500,000
	2022	6,667,073	20,832,927	27,500,000
	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 - 2030	42,867,646	94,632,354	137,500,000
	2031 - 2035	52,786,524	84,713,476	137,500,000
	2036 - 2040	65,000,470	72,499,530	137,500,000
	2041 - 2045	80,040,525	57,459,475	137,500,000
	2046 - 2050	98,560,605	38,939,395	137,500,000
	2051 - 2055	121,365,931	16,134,069	137,500,000
	2056	13,584,303	165,697	13,750,000
	Total	509,018,583	467,231,417	976,250,000
Total Business-type Activities		<u>\$ 925,488,332</u>	<u>\$ 849,511,668</u>	<u>\$ 1,775,000,000</u>

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 in the Sewage Disposal Fund.

NOTE 15 – LEASE OBLIGATION – RAW WATER RIGHTS

A lease 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 lease 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).

	Beginning Balance	Increase	Decrease	Ending Balance	Due Within One Year
Lease obligation – raw water rights	<u>\$ 103,241,119</u>	<u>\$ -</u>	<u>\$ (2,520,997)</u>	<u>\$ 100,720,122</u>	<u>\$ 2,624,820</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 15 – LEASE OBLIGATION – RAW WATER RIGHTS (cont.)

The future credits to be issued are detailed below:

Year Ended June 30	Principal	Interest	Total
2021	\$ 2,624,820	\$ 4,027,432	\$ 6,652,252
2022	2,734,246	3,919,206	6,653,452
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 - 2030	17,443,460	15,818,802	33,262,262
2031 - 2035	21,344,740	11,914,757	33,259,497
2036 - 2040	26,127,148	7,136,560	33,263,708
2041 - 2045	21,113,506	1,749,069	22,862,575
2046	437,307	3,693	441,000
Total	<u>\$ 100,720,122</u>	<u>\$ 55,632,230</u>	<u>\$ 156,352,352</u>

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 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	5% of insured value
Cyber Breach	\$10,000,000	\$250,000
Fiduciary	\$10,000,000	\$1,000
General and Auto Liability	\$10,000,000/ \$12,000,000	\$1,000,000
Pollution Legal Liability	\$25,000,000	\$500,000
Property Damage	\$750,000,000	\$1,000,000
Public Officials and Employment Practices	\$25,000,000	\$250,000
Underground Storage Tanks	\$2,000,000	\$5,000
Workers' Compensation	Statutory/ \$2,000,000	\$1,250,000

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

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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

The Authority assumes all risk for motor vehicle physical damage.

The Authority maintains a self-insurance program for workers' compensation coverage up to the amount of its retention. The program is administered by a third-party who provides claim review and medical bill review services.

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. 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.

Medical insurance. The Authority provides medical benefits to a significant number of employees through a self-insured health plan that is administered by third party administrators. The Authority purchased stop loss insurance for its self-insured health plan with terms of \$300,000 per contract to reduce risk exposure for the group. 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. The unpaid claims estimate is accrued within the Water Fund's accrued salaries, wages and benefits payable account on the Statement of Net Position.

	2020	2019
Unpaid claims, beginning of year	\$ 1,001,198	\$ 1,044,067
Incurred claims (including change in IBNR provisions)	13,429,897	10,655,927
Claims payments	(13,054,664)	(10,698,796)
Unpaid Claims, End of Year	\$ 1,376,431	\$ 1,001,198

Workers' compensation. The Authority maintains a self-insurance program for workers' compensation coverage up to the amount of its retention. The program is administered by a third party who provides claim review and medical bill review services. The unpaid claims estimate is accrued within the Water Fund's accrued workers' compensation account on the Statement of Net Position.

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

	2020	2019
Unpaid claims, beginning of year	\$ 292,480	\$ 303,239
Incurred claims (including change in IBNR provisions)	252,998	246,138
Claims payments	(293,644)	(256,897)
Unpaid Claims, End of Year	\$ 251,834	\$ 292,480

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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 \$5,162,376, which is net of forfeitures of \$301,942, for the year ended June 30, 2020. The Authority has accrued approximately \$234,000 of expense on the accrued payroll at June 30, 2020. At June 30, 2020, there were 1,160 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 are 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, 2020 there are 34 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, 2020 there were 1,102 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, 2020 there were 60 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 \$2,007,299, which is net of forfeitures of \$181,822, for the year ended June 30, 2020. The Authority has accrued approximately \$91,000 of expense on the accrued payroll at June 30, 2020. Employee contributions were \$260,580 for the year ended June 30, 2020. At June 30, 2020, there were 1,448 plan members.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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 "Combined Plan for the General Retirement System of the City of Detroit" 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, 2019 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, 2020

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 fiscal year 2019, employer contributions were not actuarially determined, but are determined by the provisions of the POA. Included within contributions for fiscal year 2019 are contributions from the Foundation for Detroit's Future in the amount of \$375,000 and approximately \$67.9 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 2020. 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, 2019. The total share for the DWSD is estimated to be between \$8.2 million and \$10.5 million. GLWA's share of the 2024 estimated contribution will be between \$5.8 million and \$7.3 million with approximately \$2.1 million to \$2.6 million allocated to the Water Fund and approximately \$3.7 million to \$4.7 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, 2019, there were no employee contributions into Component II, as the plan was frozen as of June 30, 2014; contributions into Component I began thereafter.

Net Pension Liability. As permitted by GASB Statement No. 68, the net pension liability was measured as of June 30, 2019, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date.

Actuarial Assumptions. The total pension liability was actuarial determined as of June 30, 2018, which used updated procedures to roll forward the estimated liability to June 30, 2019. The actuarial valuation used the following actuarial assumptions applied to all periods included in the measurement.

Inflation	Not applicable
Salary increases	Not applicable
Investment rate of return	7.38%, net of investment expense and including inflation

The actuarial assumptions were 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.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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

The actuarial assumptions other than mortality and the investment rate of return used in the June 30, 2018 valuation to calculate the total pension liability as of June 30, 2019 were based on the results of an actuarial experience study for the period from 2002-2007.

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 asset class. These real 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. For each asset class that is included in the pension plan's target asset allocation as of June 30, 2019, these best estimates are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Expected Money-Weighted Rate of Return
Global equity	43.0%	5.26%	2.26%
Global fixed income	20.0%	3.73%	0.75%
Private equity	8.0%	7.97%	0.64%
Cash	1.0%	0.39%	0.00%
Real estate	15.0%	4.56%	0.68%
Diversifying strategies	8.0%	3.03%	0.24%
Hedge funds	5.0%	4.26%	0.21%
	<u>100%</u>		<u>4.78%</u>
Inflation			<u>2.60%</u>
Investment rate of return			<u>7.38%</u>

Discount Rate. The discount rate used to measure the total pension liability was 7.38%, as was the single discount rate used at the beginning of the year. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that City of Detroit's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees both at the beginning of the year, as well as at the end of the year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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	\$ 184,323,353	\$ 329,880,290	\$ 514,203,643
Plan fiduciary net position	<u>(136,679,979)</u>	<u>(244,613,775)</u>	<u>(381,293,754)</u>
Authority's Net Pension Liability	<u>\$ 47,643,374</u>	<u>\$ 85,266,515</u>	<u>\$ 132,909,889</u>

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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, 2019	\$ 186,597,995	\$ 139,287,535	\$ 47,310,460
Changes for the year:			
Interest	13,155,758	-	13,155,758
Difference between expected and actual experience	1,241,001	-	1,241,001
Changes in assumptions	-	-	-
Employer contributions	-	10,810,800	(10,810,800)
Net investment income	-	3,295,871	(3,295,871)
Benefit payments, including refunds of employee contributions	(16,671,401)	(16,671,401)	-
Other changes	-	(42,826)	42,826
Net changes	(2,274,642)	(2,607,556)	332,914
Balances at June 30, 2020	\$ 184,323,353	\$ 136,679,979	\$ 47,643,374
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Sewage Disposal Fund			
Balances at June 30, 2019	\$ 333,951,176	\$ 249,280,471	\$ 84,670,705
Changes for the year:			
Interest	23,544,630	-	23,544,630
Difference between expected and actual experience	2,220,999	-	2,220,999
Changes in assumptions	-	-	-
Employer contributions	-	19,347,900	(19,347,900)
Net investment income	-	5,898,562	(5,898,562)
Benefit payments, including refunds of employee contributions	(29,836,515)	(29,836,515)	-
Other changes	-	(76,643)	76,643
Net changes	(4,070,886)	(4,666,696)	595,810
Balances at June 30, 2020	\$ 329,880,290	\$ 244,613,775	\$ 85,266,515

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 7.38%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is 1% lower (6.38%) or 1% higher (8.38%) than the current rate:

	1% Decrease (6.38%)	Current Discount Rate (7.38%)	1% Increase (8.38%)
Water fund	\$ 59,652,614	\$ 47,643,374	\$ 37,354,637
Sewage Disposal Fund	106,759,241	85,266,515	66,852,942
Authority's Net Pension Liability	\$ 166,411,855	\$ 132,909,889	\$ 104,207,579

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

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, 2020, the Authority recognized pension expense of \$7,220,716 and \$12,922,789 for the Water and Sewage Disposal Funds, respectively. At June 30, 2020, 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	\$ 4,481,694	\$ -	\$ 4,481,694
Employer contributions to the plan subsequent to the measurement date	10,810,800	-	10,810,800
Total Water Fund	15,292,494	-	15,292,494
Sewage Disposal Fund			
Net difference between projected and actual earnings on pension plan investments	8,020,810	-	8,020,810
Employer contributions to the plan subsequent to the measurement date	19,347,900	-	19,347,900
Total Sewage Disposal Fund	27,368,710	-	27,368,710
Total Business-type Activities	\$ 42,661,204	\$ -	\$ 42,661,204

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, 2021. 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
2021	\$ 2,140,274	\$ 3,830,412	\$ 5,970,686
2022	(3,072)	(5,497)	(8,569)
2023	991,349	1,774,200	2,765,549
2024	1,353,143	2,421,695	3,774,838
Total	\$ 4,481,694	\$ 8,020,810	\$ 12,502,504

Payable to the Pension Plan. At June 30, 2020, 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, 2020

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 is anticipated to be approximately \$935.4 million with a 75% spend rate assumption of \$701.6 million for the Water Fund and \$739.4 million with a 75% spend rate assumption of \$554.6 million for the Sewage Disposal Fund through fiscal year 2025. The Program is being financed primarily from revenue bond proceeds in addition to the Improvement and Extension Funds. As of June 30, 2020, the Water Fund has unspent bond proceeds of \$20.2 million and Improvement and Extension funds of \$285.3 million available for use in addition to state revolving fund loan resources of \$39,083,195 in funding these commitments. Similarly, the Sewage Disposal Fund has unspent bond proceeds of \$23.5 million and Improvement and Extension funds of \$128.3 million available for use in addition to state revolving loan resources of \$42,210,602 in funding these commitments.

The total amount of construction contract commitments outstanding at June 30, 2020 was approximately \$137 million for the Water Fund and \$76 million for the Sewage Disposal Fund.

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, 2020.

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, 2020.

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 expires on October 1, 2022.

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS As of and for the Year Ended June 30, 2020

NOTE 19 – COMMITMENTS AND CONTINGENCIES (cont.)

CONTINGENCIES (cont.)

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 \$2,222,500 for the Water Fund and \$7,650,000 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.

NOTE 20 – NET INVESTMENT IN CAPITAL ASSETS

The composition of net investment in capital assets as of June 30, 2020 was as follows:

	Water Fund	Sewage Disposal Fund	Total Business-type Activities
Capital Assets and Intangible Asset			
Capital assets not being depreciated	\$ 418,996,654	\$ 300,868,836	\$ 719,865,490
Capital assets being depreciated, net	1,390,129,473	2,298,917,647	3,689,047,120
Intangible asset – raw water rights, net	97,786,037	-	97,786,037
Total Capital Assets and Intangible Asset	1,906,912,164	2,599,786,483	4,506,698,647
Less: Related Debt			
Total debt, net (Note 13)	2,492,789,352	3,104,122,459	5,596,911,811
Less: Portion of bonds used for SWAP termination agreements	(210,502,599)	(233,859,889)	(444,362,488)
Less: Obligation receivable-local share of debt (Note 8)	(570,562,446)	(413,396,953)	(983,959,399)
Less: Bonds applicable to unspent construction proceeds (Note 4)	(20,161,992)	(23,539,117)	(43,701,109)
Deferred charge on refunding	(47,358,590)	(127,077,205)	(174,435,795)
Deferred gain on refunding	56,283,953	47,525,546	103,809,499
Deferred capital contribution	-	5,960,000	5,960,000
Capital portion of lease payable	303,481,506	353,411,602	656,893,108
Lease obligation – raw water rights (Note 15)	100,720,122	-	100,720,122
Total Related Debt	2,104,689,306	2,713,146,443	4,817,835,749
Net Investment in Capital Assets	\$ (197,777,142)	\$ (113,359,960)	\$ (311,137,102)

GREAT LAKES WATER AUTHORITY

NOTES TO FINANCIAL STATEMENTS
As of and for the Year Ended June 30, 2020

NOTE 20 – NET INVESTMENT IN CAPITAL ASSETS (cont.)

The capital portion of the 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 EVENT

JUNIOR LIEN REVENUE BONDS

In July 2020, the GLWA Board approved \$40 million (Ordinance No. 2020-5) and \$7 million (Ordinance No. 2020-06) of State Revolving Funds (SRF) Junior Lien Revenue Bonds for the Water and Sewage Disposal systems, respectively. Of the \$40 million approved for the water system, the Department of Environment, Great Lakes, and Energy (EGLE) issued orders of approval for \$18 million, in August 2020, to be used for regional water system improvements and \$13.3 million, in September 2020, for local water system improvements. Of the \$7 million approved for the sewage disposal system, EGLE issued an order of approval for \$4 million, in September 2020, for local sewage disposal system improvements.

The Authority received an order of approval from EGLE, in July 2020, for \$22.6 million for local water system improvements. This order of approval is part of a \$35 million SRF Junior Lien Revenue Bonds (Ordinance No. 2020-3) approved by the GLWA Board in February 2020.

The above SRF loans bear a fixed interest rate of 2.00% for varying terms of twenty (20) to thirty (30) years.

REQUIRED SUPPLEMENTARY INFORMATION

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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 Based on Measurement Date				
	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability					
Interest	\$ 36,700,388	\$ 36,577,126	\$ 37,829,066	\$ 40,381,626	\$ 51,393,411
Differences between expected and actual experience	3,462,000	(320,610)	2,369,183	(5,063,923)	(427,134)
Changes in assumptions	-	(21,345,359)	15,153,104	17,627,395	(19,789,958)
Benefit changes	-	-	-	-	(152,368,108)
Benefit payments, including refunds of employee contributions	(46,507,916)	(47,396,240)	(51,081,380)	(69,639,576)	(54,293,644)
Net change	(6,345,528)	(32,485,083)	4,269,973	(16,694,478)	(175,485,433)
Share of total pension liability, beginning of year	520,549,171	553,034,254	548,764,281	565,458,759	740,944,192
Share of Total Pension Liability, End of Year	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	30,150,889
Employee contributions	-	-	-	-	130,951
Net investment income (loss)	9,194,433	30,347,172	38,812,244	(1,311,974)	17,280,285
Benefit payments, including refunds of employee contributions	(46,507,916)	(47,396,240)	(51,081,380)	(69,639,576)	(54,293,644)
Administrative expense	-	-	-	-	(21,294)
Other changes	(119,469)	1,386,027	1,494,049	252,263	27,758,558
Net change	(7,274,252)	14,495,659	19,383,613	(40,540,587)	21,005,745
Share of plan fiduciary net position, beginning of year	388,568,006	374,072,347	354,688,734	395,229,321	374,223,576
Share of Plan Fiduciary Net Position, End of Year	381,293,754	388,568,006	374,072,347	354,688,734	395,229,321
SHARE OF NET PENSION LIABILITY	\$ 132,909,889	\$ 131,981,165	\$ 178,961,907	\$ 194,075,547	\$ 170,229,438
Nonemployer contributing entity share of collective net pension liability	14.2%	15.9%	19.0%	19.5%	20.6%
Plan fiduciary net position as a percentage of total pension liability	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.

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 Based on Measurement Date				
	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability					
Interest	\$ 13,155,758	\$ 13,111,573	\$ 13,560,348	\$ 14,475,348	\$ 18,422,673
Differences between expected and actual experience	1,241,001	(114,927)	849,266	(1,815,233)	(153,112)
Changes in assumptions	-	(7,651,537)	5,431,838	6,318,782	(7,093,982)
Benefit changes	-	-	-	-	(54,618,440)
Benefit payments, including refunds of employee contributions	(16,671,401)	(16,989,833)	(18,310,822)	(24,963,262)	(19,462,302)
Net change	(2,274,642)	(11,644,724)	1,530,630	(5,984,365)	(62,905,163)
Share of total pension liability, beginning of year	186,597,995	198,242,719	196,712,089	202,696,454	265,601,617
Share of Total Pension Liability, End of Year	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	10,808,000
Employee contributions	-	-	-	-	46,941
Net investment income (loss)	3,295,871	10,878,360	13,912,782	(470,295)	6,194,355
Benefit payments, including refunds of employee contributions	(16,671,401)	(16,989,833)	(18,310,822)	(24,963,262)	(19,462,302)
Administrative expense	-	-	-	-	(7,633)
Other changes	(42,826)	496,841	535,562	90,427	9,950,436
Net change	(2,607,556)	5,196,168	6,948,322	(14,532,330)	7,529,797
Share of plan fiduciary net position, beginning of year	139,287,535	134,091,367	127,143,045	141,675,375	134,145,578
Share of Plan Fiduciary Net Position, End of Year	136,679,979	139,287,535	134,091,367	127,143,045	141,675,375
SHARE OF NET PENSION LIABILITY	\$ 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	5.1%	5.7%	6.8%	7.0%	7.4%
Plan fiduciary net position as a percentage of total pension liability	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 Based on Measurement Date				
	2019*	2018*	2017*	2016*	2015**
Share of Total Pension Liability					
Interest	\$ 23,544,630	\$ 23,465,553	\$ 24,268,718	\$ 25,906,278	\$ 32,970,738
Differences between expected and actual experience	2,220,999	(205,683)	1,519,917	(3,248,690)	(274,022)
Changes in assumptions	-	(13,693,822)	9,721,266	11,308,613	(12,695,976)
Benefit changes	-	-	-	-	(97,749,668)
Benefit payments, including refunds of employee contributions	(29,836,515)	(30,406,407)	(32,770,558)	(44,676,314)	(34,831,342)
Net change	(4,070,886)	(20,840,359)	2,739,343	(10,710,113)	(112,580,270)
Share of total pension liability, beginning of year	333,951,176	354,791,535	352,052,192	362,762,305	475,342,575
Share of Total Pension Liability, End of Year	329,880,290	333,951,176	354,791,535	352,052,192	362,762,305
Share of Plan Fiduciary Net Position					
Employer contributions	19,347,900	19,347,900	19,347,900	19,347,900	19,342,889
Employee contributions	-	-	-	-	84,010
Net investment income (loss)	5,898,562	19,468,812	24,899,462	(841,679)	11,085,930
Benefit payments, including refunds of employee contributions	(29,836,515)	(30,406,407)	(32,770,558)	(44,676,314)	(34,831,342)
Administrative expense	-	-	-	-	(13,661)
Other changes	(76,643)	889,186	958,487	161,836	17,808,122
Net change	(4,666,696)	9,299,491	12,435,291	(26,008,257)	13,475,948
Share of plan fiduciary net position, beginning of year	249,280,471	239,980,980	227,545,689	253,553,946	240,077,998
Share of Plan Fiduciary Net Position, End of Year	244,613,775	249,280,471	239,980,980	227,545,689	253,553,946
SHARE OF NET PENSION LIABILITY	<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	9.1%	10.2%	12.2%	12.5%	13.2%
Plan fiduciary net position as a percentage of total pension liability	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 Based on Measurement Date			
	2019*	2018*	2017*	2016*
Total Business-type Activities				
Contractually required contribution**	\$ 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>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Water Fund				
Contractually required contribution**	\$ 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>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Sewage Disposal Fund				
Contractually required contribution**	\$ 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>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

* 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.

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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, 2020

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.

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.

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SUPPLEMENTARY INFORMATION

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COMBINING AND INDIVIDUAL FUND SCHEDULES

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GREAT LAKES WATER AUTHORITY

COMBINING SCHEDULE OF NET POSITION - WATER FUND

As of June 30, 2020

	Water Operations	Water Improvement and Extension	Water Construction Fund	Water Total
Assets				
Current Assets				
Cash and cash equivalents	\$ 81,283,233	\$ 7,503,763	\$ -	\$ 88,786,996
Restricted cash and cash equivalents	19,590,727	263,223	19,450,503	39,304,453
Restricted cash for the benefit of DWSD	1,544,529	-	-	1,544,529
Investments	27,894,072	277,759,746	-	305,653,818
Restricted investments	30,900,352	-	-	30,900,352
Receivables				
Billed	38,769,605	-	-	38,769,605
Unbilled	31,032,237	-	-	31,032,237
Other	214,997	-	-	214,997
Allowance for doubtful accounts	(8,634,075)	-	-	(8,634,075)
Due from other governments	20,343,238	-	-	20,343,238
Due from other funds	38,878	1,961,555	133,758	2,134,191
Due from other water funds	78,830	3,788,380	589,349	4,456,559
Contractual obligation receivable, current portion	15,620,163	-	-	15,620,163
Prepaid items and other assets	5,438,678	1,019,935	-	6,458,613
Inventories	636,621	-	-	636,621
Total Current Assets	<u>264,752,085</u>	<u>292,296,602</u>	<u>20,173,610</u>	<u>577,222,297</u>
Noncurrent Assets				
Restricted cash and cash equivalents	2,078,714	-	18,412,683	20,491,397
Restricted investments	9,021,276	-	1,749,309	10,770,585
Contractual obligation receivable	554,942,283	-	-	554,942,283
Prepaid lease	11,250,000	-	-	11,250,000
Assets not subject to depreciation	418,996,654	-	-	418,996,654
Capital assets being depreciated, net	1,390,129,473	-	-	1,390,129,473
Intangible asset - raw water rights, net	97,786,037	-	-	97,786,037
Prepaid insurance on debt	7,958,703	-	-	7,958,703
Total Noncurrent Assets	<u>2,492,163,140</u>	<u>-</u>	<u>20,161,992</u>	<u>2,512,325,132</u>
Total Assets	<u>2,756,915,225</u>	<u>292,296,602</u>	<u>40,335,602</u>	<u>3,089,547,429</u>
Deferred outflows of resources				
Deferred charge on refunding	47,358,590	-	-	47,358,590
Deferred pension amounts	15,292,494	-	-	15,292,494
Total Deferred Outflows of Resources	<u>62,651,084</u>	<u>-</u>	<u>-</u>	<u>62,651,084</u>

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

	Water Operations	Water Improvement and Extension	Water Construction Fund	Water Total
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 20,826,540	\$ 2,954,636	\$ 19,450,503	\$ 43,231,679
Accrued salaries, wages and benefits	5,321,864	-	-	5,321,864
Other accrued liabilities	5,357,056	-	-	5,357,056
Due to other governments	18,282,254	-	-	18,282,254
Due to other water funds	3,788,380	589,349	78,830	4,456,559
Interest payable	30,887,915	-	-	30,887,915
Current portion of:				
Long-term debt	33,058,615	-	-	33,058,615
Lease payable	5,232,465	-	-	5,232,465
Lease obligation - raw water rights	2,624,820	-	-	2,624,820
Obligation payable	184,992	-	-	184,992
Accrued compensated absences	2,981,827	-	-	2,981,827
Accrued workers' compensation	176,834	-	-	176,834
Claims and judgments	2,172,500	-	-	2,172,500
Total Current Liabilities	<u>130,896,062</u>	<u>3,543,985</u>	<u>19,529,333</u>	<u>153,969,380</u>
Noncurrent Liabilities				
Long-term debt	2,459,730,737	-	-	2,459,730,737
Long-term lease payable	411,237,284	-	-	411,237,284
Lease obligation - raw water rights	98,095,302	-	-	98,095,302
Obligation payable	16,736,534	-	-	16,736,534
Accrued compensated absences	1,954,359	-	-	1,954,359
Accrued workers' compensation	75,000	-	-	75,000
Claims and judgments	50,000	-	-	50,000
Other noncurrent liabilities	2,761,256	-	-	2,761,256
Net pension liability	47,643,374	-	-	47,643,374
Total Noncurrent Liabilities	<u>3,038,283,846</u>	<u>-</u>	<u>-</u>	<u>3,038,283,846</u>
Total Liabilities	<u>3,169,179,908</u>	<u>3,543,985</u>	<u>19,529,333</u>	<u>3,192,253,226</u>
Deferred Inflows of Resources				
Deferred amounts for swap terminations	70,890	-	-	70,890
Deferred gain on refunding	56,283,953	-	-	56,283,953
Total Deferred Inflows of Resources	<u>56,354,843</u>	<u>-</u>	<u>-</u>	<u>56,354,843</u>
Net Position				
Net investment in capital assets	(218,583,411)	-	20,806,269	(197,777,142)
Restricted for debt service	19,479,656	-	-	19,479,656
Restricted for payment assistance program	3,754,368	-	-	3,754,368
Unrestricted (deficit)	<u>(210,619,055)</u>	<u>288,752,617</u>	<u>-</u>	<u>78,133,562</u>
TOTAL NET POSITION	<u>\$ (405,968,442)</u>	<u>\$ 288,752,617</u>	<u>\$ 20,806,269</u>	<u>\$ (96,409,556)</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 - WATER FUND

For the Year Ended June 30, 2020

	Water Operations	Water Improvement and Extension	Water Construction Fund	Water Total
Operating Revenues				
Wholesale customer charges	\$ 312,701,777	\$ -	\$ -	\$ 312,701,777
Local system charges	21,295,500	-	-	21,295,500
Other revenues	<u>256,300</u>	-	-	<u>256,300</u>
Total Operating Revenues	<u>334,253,577</u>	-	-	<u>334,253,577</u>
Operating Expenses				
Operating expenses before depreciation and amortization				
Personnel	43,946,225	-	-	43,946,225
Contractual services	45,404,607	692,798	-	46,097,405
Utilities - gas	1,021,105	-	-	1,021,105
Utilities - electric	26,135,605	-	-	26,135,605
Utilities - sewage	561,410	-	-	561,410
Utilities - water	1,634	-	-	1,634
Chemicals	5,569,437	-	-	5,569,437
Supplies and other expenses	12,034,192	-	-	12,034,192
Capital adjustment	26,780	-	-	26,780
Capital program allocation	(2,164,003)	-	-	(2,164,003)
Shared services allocation	<u>(696,952)</u>	-	-	<u>(696,952)</u>
Total Operating Expenses Before				
Depreciation and Amortization	131,840,040	692,798	-	132,532,838
Depreciation	127,183,228	-	-	127,183,228
Amortization of intangible asset - raw water rights	<u>3,566,664</u>	-	-	<u>3,566,664</u>
Total Operating Expenses	<u>262,589,932</u>	<u>692,798</u>	-	<u>263,282,730</u>
Operating Income (Loss)	<u>71,663,645</u>	<u>(692,798)</u>	-	<u>70,970,847</u>
Nonoperating Revenues (Expenses)				
Earnings on investments	3,358,036	5,830,404	1,297,027	10,485,467
Net increase in fair value of investments	198,602	3,125,878	(65,173)	3,259,307
Interest on obligations receivable	22,945,866	-	-	22,945,866
Interest expense	(133,537,621)	-	-	(133,537,621)
Amortization of debt related items and cost of issuance	14,258,569	-	-	14,258,569
Legacy pension expense	(7,220,716)	-	-	(7,220,716)
WRAP (Water Residential Assistance Program)	(1,393,179)	-	-	(1,393,179)
Other	2,186,331	-	-	2,186,331
Capital outlay	79,428,961	(5,901,237)	(73,527,724)	-
Gain (loss) on disposal of capital assets	(50,760)	-	-	(50,760)
Loss on impairment of capital assets	<u>(1,432,027)</u>	-	-	<u>(1,432,027)</u>
Total Nonoperating Revenues (Expenses)	<u>(21,257,938)</u>	<u>3,055,045</u>	<u>(72,295,870)</u>	<u>(90,498,763)</u>
Income (Loss) Before Transfers	50,405,707	2,362,247	(72,295,870)	(19,527,916)
Transfer in	5,826,127	29,456,300	9,292,746	44,575,173
Transfer out	<u>(38,981,528)</u>	<u>(5,593,645)</u>	-	<u>(44,575,173)</u>
Change in net position	17,250,306	26,224,902	(63,003,124)	(19,527,916)
NET POSITION (DEFICIT), Beginning of Year	<u>(423,218,748)</u>	<u>262,527,715</u>	<u>83,809,393</u>	<u>(76,881,640)</u>
NET POSITION (DEFICIT), END OF YEAR	<u>\$ (405,968,442)</u>	<u>\$ 288,752,617</u>	<u>\$ 20,806,269</u>	<u>\$ (96,409,556)</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, 2020

	Sewer Operations	Sewer Improvement and Extension	Sewer Construction Fund	Sewage Disposal Total
Assets				
Current Assets				
Cash and cash equivalents	\$ 114,577,893	\$ 4,991,831	\$ -	\$ 119,569,724
Restricted cash and cash equivalents	6,857,505	8,259	19,194,513	26,060,277
Investments	44,604,386	123,290,810	-	167,895,196
Restricted investments	87,066,562	-	-	87,066,562
Receivables:				
Billed	56,390,056	-	-	56,390,056
Unbilled	23,861,029	-	-	23,861,029
Other	95,376	-	-	95,376
Allowance for doubtful accounts	(36,357,891)	-	-	(36,357,891)
Due from other governments	11,459,398	-	-	11,459,398
Due from other sewage disposal funds	100,979	1,728,988	-	1,829,967
Contractual obligation receivable, current portion	14,041,327	-	-	14,041,327
Loan receivable - DWSD	18,206,431	-	-	18,206,431
Prepaid items and other assets	3,273,899	417,824	-	3,691,723
Inventories	6,370,587	-	-	6,370,587
Total Current Assets	<u>350,547,537</u>	<u>130,437,712</u>	<u>19,194,513</u>	<u>500,179,762</u>
Noncurrent assets				
Restricted cash and cash equivalents	4,974,478	-	22,039,709	27,014,187
Restricted investments	27,549,513	-	1,499,408	29,048,921
Contractual obligation receivable	399,355,626	-	-	399,355,626
Loan receivable - DWSD	8,296,578	-	-	8,296,578
Prepaid lease	13,750,000	-	-	13,750,000
Assets not subject to depreciation	300,868,836	-	-	300,868,836
Capital assets being depreciated, net	2,298,917,647	-	-	2,298,917,647
Prepaid insurance on debt	12,030,061	-	-	12,030,061
Total Noncurrent Assets	<u>3,065,742,739</u>	<u>-</u>	<u>23,539,117</u>	<u>3,089,281,856</u>
Total Assets	<u>3,416,290,276</u>	<u>130,437,712</u>	<u>42,733,630</u>	<u>3,589,461,618</u>
Deferred Outflows of Resources				
Deferred charge on refunding	127,077,205	-	-	127,077,205
Deferred pension amounts	27,368,710	-	-	27,368,710
Total Deferred Outflows of Resources	<u>154,445,915</u>	<u>-</u>	<u>-</u>	<u>154,445,915</u>

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

	Sewer Operations	Sewer Improvement and Extension	Sewer Construction Fund	Sewage Disposal Total
Liabilities				
Current Liabilities				
Accounts and contracts payable	\$ 10,438,036	\$ 1,206,401	\$ 19,194,513	\$ 30,838,950
Due to other governments	1,750,000	-	-	1,750,000
Due to other funds	-	2,007,176	127,015	2,134,191
Due to other sewage disposal funds	1,728,988	-	100,979	1,829,967
Interest payable	27,565,045	-	-	27,565,045
Current portion of:				
Long-term debt	88,939,460	-	-	88,939,460
Lease payable	6,395,235	-	-	6,395,235
Obligation payable	416,105	-	-	416,105
Accrued compensated absences	899,422	-	-	899,422
Claims and judgments	150,000	-	-	150,000
Total Current Liabilities	<u>138,282,291</u>	<u>3,213,577</u>	<u>19,422,507</u>	<u>160,918,375</u>
Noncurrent Liabilities				
Long-term debt	3,015,182,999	-	-	3,015,182,999
Long-term lease payable	502,623,348	-	-	502,623,348
Obligation payable	37,645,781	-	-	37,645,781
Claims and judgments	7,500,000	-	-	7,500,000
Other noncurrent liabilities	6,417,291	-	-	6,417,291
Net pension liability	85,266,515	-	-	85,266,515
Total Noncurrent Liabilities	<u>3,654,635,934</u>	<u>-</u>	<u>-</u>	<u>3,654,635,934</u>
Total Liabilities	<u>3,792,918,225</u>	<u>3,213,577</u>	<u>19,422,507</u>	<u>3,815,554,309</u>
Deferred Inflows of Resources				
Deferred amounts for swap terminations	35,625	-	-	35,625
Deferred gain on refunding	47,525,546	-	-	47,525,546
Deferred capital contribution	5,960,000	-	-	5,960,000
Total Deferred Inflows of Resources	<u>53,521,171</u>	<u>-</u>	<u>-</u>	<u>53,521,171</u>
Net Position				
Net investment in capital assets	(136,671,083)	-	23,311,123	(113,359,960)
Restricted for debt service	85,803,313	-	-	85,803,313
Restricted for payment assistance program	5,233,710	-	-	5,233,710
Unrestricted (deficit)	<u>(230,069,145)</u>	<u>127,224,135</u>	<u>-</u>	<u>(102,845,010)</u>
TOTAL NET POSITION	<u>\$ (275,703,205)</u>	<u>\$ 127,224,135</u>	<u>\$ 23,311,123</u>	<u>\$ (125,167,947)</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, 2020

	Sewer Operations	Sewer Improvement and Extension	Sewer Construction Fund	Sewage Disposal Total
Operating Revenues				
Wholesale customer charges	\$ 266,003,286	\$ -	\$ -	\$ 266,003,286
Local system charges	185,807,300	-	-	185,807,300
Industrial waste charges	7,854,593	-	-	7,854,593
Pollutant surcharges	6,448,508	-	-	6,448,508
Other revenues	521,957	-	-	521,957
Total Operating Revenues	466,635,644	-	-	466,635,644
Operating Expenses				
Operating expenses before depreciation				
Personnel	60,320,195	-	-	60,320,195
Contractual services	60,916,055	2,434,898	-	63,350,953
Utilities - gas	4,174,581	-	-	4,174,581
Utilities - electric	14,533,662	-	-	14,533,662
Utilities - sewage	1,547,871	-	-	1,547,871
Utilities - water	3,176,867	-	-	3,176,867
Chemicals	8,672,406	-	-	8,672,406
Supplies and other expenses	23,393,081	-	-	23,393,081
Capital program allocation	(1,183,398)	-	-	(1,183,398)
Shared services allocation	(1,036,758)	-	-	(1,036,758)
Total Operating Expenses Before Depreciation	174,514,562	2,434,898	-	176,949,460
Depreciation	152,920,967	-	-	152,920,967
Total Operating Expenses	327,435,529	2,434,898	-	329,870,427
Operating Income	139,200,115	(2,434,898)	-	136,765,217
Nonoperating Revenues (Expenses)				
Earnings on investments	5,742,682	2,134,700	1,082,256	8,959,638
Net increase in fair value of investments	749,761	1,957,190	5,343	2,712,294
Interest on obligations receivable	19,489,018	-	-	19,489,018
Interest expense	(155,410,235)	-	-	(155,410,235)
Amortization of debt related items and cost of issuance	(3,956,009)	-	-	(3,956,009)
Legacy pension expense	(12,922,789)	-	-	(12,922,789)
WRAP (Water Residential Assistance Program)	(1,921,938)	-	-	(1,921,938)
Other	365,964	-	-	365,964
Capital outlay	79,040,848	(6,439,343)	(72,601,505)	-
Gain (loss) on disposal of capital assets	(1,266,126)	-	-	(1,266,126)
Total nonoperating				
Total Nonoperating Revenues (Expenses)	(70,088,824)	(2,347,453)	(71,513,906)	(143,950,183)
Income (Loss) Before Transfers	69,111,291	(4,782,351)	(71,513,906)	(7,184,966)
Transfer in	2,738,152	39,639,315	25,164,403	67,541,870
Transfer out	(65,464,248)	(2,077,622)	-	(67,541,870)
Contributed Capital	5,960,000	-	-	5,960,000
Change in net position	12,345,195	32,779,342	(46,349,503)	(1,224,966)
NET POSITION (DEFICIT), Beginning of Year	(288,048,400)	94,444,793	69,660,626	(123,942,981)
NET POSITION (DEFICIT), END OF YEAR	\$ (275,703,205)	\$ 127,224,135	\$ 23,311,123	\$ (125,167,947)

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, 2020

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, 2020 consisted of the following:

	Sewage Disposal Fund due to Water Fund			Total
	Sewer Operations	Sewer Improvement and Extension	Sewer Construction Fund	
Water Operations	\$ -	\$ 2,448	\$ 36,430	\$ 38,878
Water Improvement and Extension	-	1,961,555	-	1,961,555
Water Construction Fund	-	43,173	90,585	133,758
TOTALS	<u>\$ -</u>	<u>\$ 2,007,176</u>	<u>\$ 127,015</u>	<u>\$ 2,134,191</u>

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATIONS AND MAINTENANCE EXPENSE FOR WATER OPERATIONS COST TYPE CATEGORY - BUDGET TO ACTUAL For the Year Ended June 30, 2020

	Original Budget	Amended Budget	Administrative and Centralized Services Reclassification
Operating Expenses			
Personnel	\$ 68,871,869	\$ 66,040,119	\$ (23,470,957)
Contractual services	87,292,958	79,511,143	(33,087,816)
Utilities	25,253,840	26,091,830	(93,612)
Chemicals	4,774,680	5,244,680	-
Supplies and other expenses	21,537,179	20,727,929	(8,407,727)
Capital adjustment	-	-	-
Capital program allocation	(4,174,921)	(1,882,121)	-
Shared services allocation	(4,693,600)	(4,663,850)	-
Centralized services allocation	(55,650,200)	(50,818,800)	50,818,800
Administrative services allocation	(15,421,700)	(15,121,700)	15,121,700
Unallocated reserve	3,700,395	1,710,970	(880,388)
TOTAL OPERATING EXPENSES	\$ 131,490,500	\$ 126,840,200	\$ -

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

Final Amended Budget	Actual	Variance Actual-Budget	Percent Under (Over) Budget
\$ 42,569,162	\$ 43,946,225	\$ (1,377,063)	-3.23%
46,423,327	45,404,607	1,018,720	2.19%
25,998,218	27,719,754	(1,721,536)	-6.62%
5,244,680	5,569,437	(324,757)	-6.19%
12,320,202	12,034,192	286,010	2.32%
-	26,780	(26,780)	-100.00%
(1,882,121)	(2,164,003)	281,882	-14.98%
(4,663,850)	(696,952)	(3,966,898)	85.06%
-	-	-	0.00%
-	-	-	0.00%
830,582	-	830,582	100.00%
<u>\$ 126,840,200</u>	<u>\$ 131,840,040</u>	<u>\$ (4,999,840)</u>	-3.94%

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATIONS AND MAINTENANCE EXPENSE FOR SEWAGE DISPOSAL OPERATIONS
 COST TYPE CATEGORY - BUDGET TO ACTUAL
 For the Year Ended June 30, 2020

	Original Budget	Amended Budget	Administrative and Centralized Services Reclassification
Operating Expenses			
Personnel	\$ 36,218,916	\$ 35,463,288	\$ 23,470,957
Contractual services	28,012,897	24,462,897	33,087,816
Utilities	26,079,975	24,439,375	93,612
Chemicals	9,123,900	8,773,900	-
Supplies and other expenses	14,855,752	13,396,852	8,407,727
Capital program allocation	(1,239,391)	(1,239,391)	-
Shared services allocation	(331,600)	(331,600)	-
Centralized services allocation	55,650,200	50,818,800	(50,818,800)
Administrative services allocation	15,421,700	15,121,700	(15,121,700)
Unallocated reserve	3,264,851	11,019,979	880,388
TOTAL OPERATING EXPENSES	<u>\$ 187,057,200</u>	<u>\$ 181,925,800</u>	<u>\$ -</u>

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

Final Amended Budget	Actual	Variance Actual-Budget	Percent Under (Over) Budget
\$ 58,934,245	\$ 60,320,195	\$ (1,385,950)	-2.35%
57,550,713	60,916,055	(3,365,342)	-5.85%
24,532,987	23,432,981	1,100,006	4.48%
8,773,900	8,672,406	101,494	1.16%
21,804,579	23,393,081	(1,588,502)	-7.29%
(1,239,391)	(1,183,398)	(55,993)	4.52%
(331,600)	(1,036,758)	705,158	-212.65%
-	-	-	0.00%
-	-	-	0.00%
<u>11,900,367</u>	<u>-</u>	<u>11,900,367</u>	100.00%
<u>\$ 181,925,800</u>	<u>\$ 174,514,562</u>	<u>\$ 7,411,238</u>	4.07%

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF OPERATIONS AND MAINTENANCE EXPENSE FOR COMBINED WATER AND SEWAGE DISPOSAL OPERATIONS
 COST TYPE CATEGORY - BUDGET TO ACTUAL
 For the Year Ended June 30, 2020

	Original Budget	Final Amended Budget	Actual	Variance Actual-Budget	Percent Under (Over) Budget
Operating Expenses					
Personnel	\$ 105,090,785	\$ 101,503,407	\$ 104,266,420	\$ (2,763,013)	-2.72%
Contractual services	115,305,855	103,974,040	106,320,662	(2,346,622)	-2.26%
Utilities	51,333,815	50,531,205	51,152,735	(621,530)	-1.23%
Chemicals	13,898,580	14,018,580	14,241,843	(223,263)	-1.59%
Supplies and other expenses	36,392,931	34,124,781	35,427,273	(1,302,492)	-3.82%
Capital adjustment	-	-	26,780	(26,780)	-100.00%
Capital program allocation	(5,414,312)	(3,121,512)	(3,347,401)	225,889	-7.24%
Shared services allocation	(5,025,200)	(4,995,450)	(1,733,710)	(3,261,740)	65.29%
Centralized services allocation	-	-	-	-	0.00%
Administrative services allocation	-	-	-	-	0.00%
Unallocated reserve	6,965,246	12,730,949	-	12,730,949	100.00%
TOTAL OPERATING EXPENSES	\$ 318,547,700	\$ 308,766,000	\$ 306,354,602	\$ 2,411,398	0.78%

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF REVENUE REQUIREMENT BUDGET TO ACTUAL - WATER SYSTEM OPERATIONS For the Year Ended June 30, 2020

The Great Lakes Water Authority Board adopts a budget using a revenue requirement 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, the Water System experienced a positive variance of approximately \$7.5 million.

	2020 Adopted Budget	2020 Amended Budget	2020 Actual	Variance Over (Under) Budget
Revenues				
Revenue from Charges - Suburban Wholesale Customers [1]	\$ 309,284,500	\$ 304,634,200	\$ 306,049,429	\$ 1,415,229
Revenue from Charges - Detroit Customers	21,295,500	21,295,500	21,295,500	-
Total Revenue from Charges	<u>330,580,000</u>	<u>325,929,700</u>	<u>327,344,929</u>	<u>1,415,229</u>
Other Revenue [2]	-	2,400	2,659,660	2,657,260
Investment earnings [3]	<u>9,084,200</u>	<u>8,084,200</u>	<u>9,115,115</u>	<u>1,030,915</u>
Total Revenues	<u>\$ 339,664,200</u>	<u>\$ 334,016,300</u>	<u>\$ 339,119,704</u>	<u>\$ 5,103,404</u>
Revenue Requirements				
Operations and Maintenance Regional System Wholesale [4]	\$ 131,490,500	\$ 126,840,200	\$ 131,840,040	\$ 4,999,840
General Retirement System Legacy Pension	6,048,000	6,048,000	6,048,000	-
Debt Service	137,557,600	135,998,800	132,835,624	(3,163,176)
General Retirement System Accelerated Pension	6,268,300	6,268,300	6,268,300	-
Water Residential Assistance Program Contribution	1,698,300	1,698,300	1,698,300	-
Contribution to Operating Reserves	3,976,000	3,976,000	-	(3,976,000)
Local System Budget Shortfall	-	1,230,400	937,400	(293,000)
Lease Payment to Local System Improvement & Extension Fund	22,500,000	22,500,000	22,500,000	-
Transfer to the Regional Improvement & Extension Fund	<u>30,125,500</u>	<u>29,456,300</u>	<u>29,456,300</u>	<u>-</u>
Total Revenue Requirements	<u>\$ 339,664,200</u>	<u>\$ 334,016,300</u>	<u>\$ 331,583,964</u>	<u>\$ (2,432,336)</u>
Revenue Requirement Variance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 7,535,740</u>	<u>\$ 7,535,740</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 \$6,652,348 of revenue which was credited for the KWA debt service which is a non-cash transaction that is the lease payment 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 construction fund and WRAP earnings.

[4] See the Combining Schedule of Revenues, Expenses and Changes in Net Position for the Water Fund. 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 REQUIREMENT BUDGET TO ACTUAL - SEWAGE SYSTEM OPERATIONS For the Year Ended June 30, 2020

The Great Lakes Water Authority Board adopts a budget using a revenue requirement 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, the Sewage System experienced a positive variance of approximately \$11.3 million.

	2020 Adopted Budget	2020 Amended Budget	2020 Actual	Variance Over (Under) Budget
Revenues				
Revenue from Charges - Suburban Wholesale Customers	\$ 266,363,600	\$ 266,363,600	\$ 266,003,286	\$ (360,314)
Revenue from Charges - Suburban Wholesale Other	5,960,000	5,960,000	5,960,000	-
Revenue from Charges - Detroit Customers	185,807,300	185,807,300	185,807,300	-
Revenue from Charges - Industrial Waste Control	13,743,600	7,833,600	7,854,593	20,993
Pollutant Surcharges	-	5,910,000	6,448,508	538,508
Total Revenue from Charges	<u>471,874,500</u>	<u>471,874,500</u>	<u>472,073,687</u>	<u>199,187</u>
Other Revenue [1]	-	400,000	1,276,352	876,352
Investment earnings [2]	8,730,800	7,730,800	7,775,080	44,280
Total Revenues	<u>\$ 480,605,300</u>	<u>\$ 480,005,300</u>	<u>\$ 481,125,119</u>	<u>\$ 1,119,819</u>
Revenue Requirements				
Operations and Maintenance Regional System Wholesale [3]	187,057,200	181,925,800	174,514,562	(7,411,238)
General Retirement System Legacy Pension	10,824,000	10,824,000	10,824,000	-
Debt Service	215,738,800	214,690,700	211,331,439	(3,359,261)
General Retirement System Accelerated Pension	11,620,700	11,620,700	11,620,700	-
Water Residential Assistance Program Contribution	2,403,000	2,403,000	2,403,000	-
Local System Budget Shortfall	-	10,243,500	10,817,800	574,300
Lease Payment to Local System Improvement & Extension Fund	27,500,000	27,500,000	27,500,000	-
Transfer to the Regional System Improvement & Extension Fund [4]	25,461,600	20,797,600	20,797,600	-
Total Revenue Requirements	<u>\$ 480,605,300</u>	<u>\$ 480,005,300</u>	<u>\$ 469,809,101</u>	<u>\$ (10,196,199)</u>
Revenue Requirement Variance	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 11,316,018</u>	<u>\$ 11,316,018</u>

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

[2] Investment earnings excludes construction fund and WRAP earnings.

[3] Refer to the Combining Schedule of Revenues, Expenses and Changes in Net Position for the Sewage Disposal Fund. Operations and Maintenance expenses in this schedule are based on activities relating only to the Sewer Operations Fund.

[4] DWSD loan 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 REQUIREMENT TO STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION CROSSWALK For the Year Ended June 30, 2020

The Great Lakes Water Authority establishes a Revenue Requirement 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 (principal and interest) is 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.
- Lease payments (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.
- 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	Sewage Disposal	Combined
Revenue Requirement Variance from Schedule of Revenue Requirement	\$ 7,535,740	\$ 11,316,018	\$ 18,851,758
Budgetary categories adjustments to financial reporting basis			
Pension delayed accounting election adjustments			
Current year pension transfers/ payments recorded as deferral	10,810,800	19,347,900	30,158,700
Prior year pension contribution accounted for in current year	(7,220,716)	(12,922,789)	(20,143,505)
Administrative prepaid adjustment	412,958	739,063	1,152,021
Debt service	44,529,306	97,028,401	141,557,707
Accelerated pension and B&C notes obligation	176,170	396,268	572,438
Lease payment	5,036,563	6,155,803	11,192,366
Water Residential Assistance Program (WRAP)	305,121	481,062	786,183
DWSD short term allocation	937,400	10,817,800	11,755,200
Improvement & Extension fund	29,456,300	20,797,600	50,253,900
Nonbudgeted financial reporting categories adjustments			
Depreciation	(127,183,228)	(152,920,967)	(280,104,195)
Amortization	10,691,905	(3,956,009)	6,735,896
Other nonoperating income	-	1,299,046	1,299,046
Gain (loss) on disposal of capital assets	(50,760)	(1,266,126)	(1,316,886)
Loss on impairment of capital assets	(1,432,027)	-	(1,432,027)
Raw water rights	2,529,685	-	2,529,685
Net increase in fair value of investments	3,259,307	2,712,294	5,971,601
Investment earnings for WRAP account and construction fund	1,370,358	1,184,568	2,554,926
Improvement & Extension fund operating expenses	(692,798)	(2,434,898)	(3,127,696)
Change in Net Position per Statement of Revenues, Expenses and Changes in Net Position	<u>\$ (19,527,916)</u>	<u>\$ (1,224,966)</u>	<u>\$ (20,752,882)</u>

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF DAYS CASH - LIQUIDITY
June 30, 2020

	2020	2019	2018	2017	2016*
Water Fund					
Cash and investments - Unrestricted	\$ 394,440,814	\$ 347,204,928	\$ 317,089,746	\$ 267,335,558	\$ 167,292,572
Operating Expense					
Operating expense	\$ 263,282,730	\$ 263,959,730	\$ 254,602,752	\$ 245,868,861	\$ 120,841,204
Less: depreciation	(127,183,228)	(140,571,120)	(143,991,815)	(144,137,912)	(71,295,545)
Less: amortization of intangible asset - raw water rights	(3,566,664)	(3,566,664)	(2,080,554)	-	-
Net Operating Expense	\$ 132,532,838	\$ 119,821,946	\$ 108,530,383	\$ 101,730,949	\$ 49,545,659
Operating Expense per Day (365 days)	\$ 363,104	\$ 328,279	\$ 297,344	\$ 278,715	\$ 273,733
Days Cash					
Number of days cash	1,086	1,058	1,066	959	611
Sewage Disposal Fund					
Cash and investments - Unrestricted	\$ 287,464,920	\$ 236,057,128	\$ 208,563,268	\$ 205,179,312	\$ 188,063,375
Operating Expense					
Operating expense	\$ 329,870,427	\$ 342,585,175	\$ 363,629,987	\$ 336,946,731	\$ 170,401,050
Less: depreciation	(152,920,967)	(168,544,370)	(187,250,583)	(185,628,465)	(86,021,029)
Net Operating Expense	\$ 176,949,460	\$ 174,040,805	\$ 176,379,404	\$ 151,318,266	\$ 84,380,021
Operating Expense per Day (365 days)	\$ 484,793	\$ 476,824	\$ 483,231	\$ 414,571	\$ 466,188
Days Cash					
Number of days cash	593	495	432	495	403
Combined					
Cash and investments - Unrestricted	\$ 681,905,734	\$ 583,262,056	\$ 525,653,014	\$ 472,514,870	\$ 355,355,947
Operating Expense					
Operating expense	\$ 593,153,157	\$ 606,544,905	\$ 618,232,739	\$ 582,815,592	\$ 291,242,254
Less: depreciation	(280,104,195)	(309,115,490)	(331,242,398)	(329,766,377)	(157,316,574)
Less: amortization of intangible asset - raw water rights	(3,566,664)	(3,566,664)	(2,080,554)	-	-
Net Operating Expense	\$ 309,482,298	\$ 293,862,751	\$ 284,909,787	\$ 253,049,215	\$ 133,925,680
Operating Expense per Day (365 days)	\$ 847,897	\$ 805,103	\$ 780,575	\$ 693,286	\$ 739,921
Days Cash					
Number of days cash	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, 2020

Note 1 – Combining and Individual Fund Schedules

The Combining and Individual 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 & Maintenance (O&M) – 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 revenue requirement for establishing service charges.

Sewer Operations & Maintenance (O&M) – 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 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. 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. 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, 2020

Note 2 – Budget to Actual Schedules

Schedule of Operations and Maintenance Expense Cost Type Activity – Budget to Actual

The schedule of operations and maintenance expense (O&M) for the water system operations and the sewage disposal system operations provides the detail of the major expense categories of the O&M budget compared to the actual results. The actual expenditures are the operating expenses before depreciation for the Water Operations and the Sewer Operations reported in the Combining Schedule of Revenues, Expenses and Changes in Net position for the Water Fund and the Sewage Disposal Fund.

Schedule of Revenue Requirement – Budget to Actual

The revenue requirement is the basis for GLWA's budget and calculating Member Partner service charges. The revenue requirement is 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 in addition to cash payments for debt service, legacy pension obligations, and lease related activities.

The revenue requirement 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 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.

Note 3 – Schedule of Revenue Requirement 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 is provided to provide a reconciliation between the different basis of accounting used for the budget and the financial report.

STATISTICAL SECTION

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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.	104
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.	113
Debt Capacity Information Schedules 8 through 13	Debt capacity information is intended to show the Authority's debt burden and its ability to issue additional debt.	119
Demographic and Economic Schedules 14 through 15	Demographic and economic information is intended to show the socioeconomic environment within which the Authority operates.	136
Operating Information Schedules 16 through 18	Operating information is intended to show contextual information about operations and resources to provide understanding and assessing the Authority's economic condition.	138

Sources: Unless otherwise noted, information presented in these schedules was obtained from GLWA's comprehensive annual 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, 2019

	2020	2019	2018	2017	2016
Assets					
Current Assets					
Cash and cash equivalents	\$ 208,356,720	\$ 309,015,559	\$ 509,141,777	\$ 470,231,842	\$ 311,735,186
Restricted cash and cash equivalents	65,364,730	164,495,839	105,929,392	132,967,081	134,210,268
Restricted cash for the benefit of DWSD	1,544,529	3,318,316	8,418,827	288,378	62,078
Investments	473,549,014	274,246,497	16,511,237	2,283,028	43,620,761
Restricted investments	117,966,914	34,852,593	33,025,340	32,541,021	56,661,000
Receivables					
Billed	95,159,661	98,886,172	88,712,190	88,694,341	85,676,104
Unbilled	54,893,266	50,441,488	54,429,817	53,818,603	55,345,336
Other	310,373	1,137,526	3,728,886	3,158,350	114,648,035
Allowance for doubtful accounts	(44,991,966)	(42,257,915)	(39,084,816)	(35,352,009)	(124,009,242)
Due from other governments	31,802,636	30,243,156	47,927,860	50,789,041	107,688,300
Due from other funds	2,134,191	2,889,522	3,778,220	-	65,971
Contractual obligation receivable, current portion	29,661,490	26,418,147	24,813,886	23,339,242	11,929,259
Loan receivable - DWSD	18,206,431	17,542,669	9,367,355	-	-
Prepaid items and other assets	10,150,336	8,448,932	4,949,631	3,526,568	2,591,049
Inventories	7,007,208	5,832,593	8,471,626	8,509,454	9,984,063
Total Current Assets	<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	47,505,584	94,185,040	48,263,059	306,318,331	160,949,722
Restricted investments	39,819,506	150,978,512	293,697,988	101,708,122	105,028,079
Contractual obligation receivable	954,297,909	883,248,672	812,613,943	830,432,680	832,571,741
Loan 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	-
Assets not subject to depreciation	719,865,490	786,405,120	706,046,995	730,471,792	711,434,348
Capital assets being depreciated, net	3,689,047,120	3,747,783,788	3,984,216,865	4,178,315,045	4,427,945,555
Intangible asset - raw water rights, net	97,786,037	101,352,701	104,919,365	-	-
Prepaid insurance on debt	19,988,764	22,635,151	29,933,631	32,694,221	48,653,581
Total Noncurrent Assets	<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>6,672,722,521</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	174,435,795	241,879,138	280,975,963	297,646,441	328,659,457
Deferred pension amounts	42,661,204	31,717,285	52,015,636	59,954,478	37,997,043
Total Deferred Outflows of Resources	<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>

	2020	2019	2018	2017	2016
Liabilities					
Current Liabilities					
Accounts and contracts payable	\$ 74,070,629	\$ 74,662,036	\$ 67,832,136	\$ 64,298,400	\$ 85,626,614
Accrued salaries, wages and benefits	5,321,864	4,284,220	4,734,956	3,190,038	2,887,280
Other accrued liabilities	5,357,056	7,109,589	12,679,692	2,252,616	1,550,254
Due to other governments	20,032,254	15,963,934	11,983,407	61,242,386	37,893,903
Due to other funds	2,134,191	2,889,522	3,778,220	-	65,971
Interest payable	58,452,960	84,456,284	80,431,318	80,340,520	81,139,013
Current portion of:					
Long-term debt	121,998,075	117,602,109	81,756,050	89,314,212	96,552,356
Leases payable	11,627,700	11,153,602	10,698,835	10,262,609	9,844,169
Lease obligation - raw water rights	2,624,820	2,520,996	2,999,458	-	-
Obligation payable	601,097	572,474	545,213	519,251	494,524
Accrued compensated absences	3,881,249	3,188,156	2,929,412	2,837,148	2,239,376
Accrued workers' compensation	176,834	217,480	228,239	25,000	785,953
Claims and judgments	2,322,500	2,346,111	2,529,392	3,852,062	4,763,944
Total Current Liabilities	<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					
Long-term debt	5,474,913,736	5,630,571,800	5,714,095,283	5,842,482,161	5,876,115,822
Long-term leases payable	913,860,632	925,488,338	936,641,935	947,340,770	957,603,379
Lease obligation - raw water rights	98,095,302	100,720,123	103,241,118	-	-
Obligation payable	54,382,315	54,983,412	55,555,887	56,101,100	56,620,351
Accrued compensated absences	1,954,359	2,049,655	2,174,506	2,288,125	3,511,934
Accrued workers' compensation	75,000	75,000	75,000	225,000	7,953,474
Claims and judgments	7,550,000	7,550,000	7,550,000	262,500	25,914,350
Other noncurrent liabilities	9,178,547	9,096,630	8,638,011	8,565,277	8,622,785
Net pension liability	132,909,889	131,981,165	178,961,907	194,075,547	170,229,438
Total Noncurrent Liabilities	<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>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 amounts for swap terminations	106,515	240,839	270,150	299,461	4,373,886
Deferred gain on refunding	103,809,499	108,300,657	105,907,267	112,080,430	-
Deferred capital contribution	5,960,000	-	-	-	-
Deferred pension amounts	-	-	20,254,690	18,316,430	43,342,798
Total Deferred Inflows of Resources	<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					
Net investment in capital assets	(311,137,102)	(228,867,586)	350,745,726	528,875,506	851,734,519
Restricted for debt service	105,282,969	146,977,835	125,235,904	134,125,957	178,540,029
Restricted for capital acquisition	-	-	243,238,577	323,905,502	164,326,618
Restricted for payment assistance program	8,988,078	8,001,369	5,771,110	5,336,117	977,278
Unrestricted deficit	<u>(24,711,448)</u>	<u>(126,936,239)</u>	<u>(903,746,081)</u>	<u>(1,095,078,075)</u>	<u>(1,210,262,324)</u>
TOTAL NET POSITION	<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>

* 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, 2020

	2020	2019	2018	2017	2016
Assets					
Current Assets					
Cash and cash equivalents	\$ 88,786,996	148,643,793	\$ 310,085,221	\$ 266,483,138	\$ 155,712,891
Restricted cash and cash equivalents	39,304,453	68,564,311	51,097,342	60,753,268	53,028,844
Restricted cash for the benefit of DWSD	1,544,529	2,690,397	8,418,827	288,378	10,430
Investments	305,653,818	198,561,135	7,004,525	852,420	11,579,681
Restricted investments	30,900,352	1,468,148	1,234,954	1,169,187	27,818,000
Receivables					
Billed	38,769,605	38,336,701	38,272,740	36,459,563	37,629,170
Unbilled	31,032,237	26,144,348	29,229,709	29,539,433	32,307,945
Other	214,997	916,074	5,850	1,300	21,899,046
Allowance for doubtful accounts	(8,634,075)	(7,455,747)	(6,221,815)	(4,941,777)	(25,040,612)
Due from other governments	20,343,238	30,063,571	23,588,754	21,327,713	41,486,157
Due from other funds	2,134,191	2,876,954	330,293	-	-
Contractual obligation receivable, current portion	15,620,163	14,328,368	13,560,086	12,076,942	6,851,584
Prepaid items and other assets	6,458,613	5,647,661	3,265,972	2,437,047	2,183,690
Inventories	636,621	386,612	-	-	-
Total Current Assets	<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	20,491,397	32,154,262	18,261,706	177,939,494	5,460,942
Restricted investments	10,770,585	77,075,423	150,436,225	20,530,374	42,841,345
Contractual obligation receivable	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	-
Assets not subject to depreciation	418,996,654	467,830,218	434,684,895	452,185,674	415,558,090
Capital assets being depreciated, net	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	97,786,037	101,352,701	104,919,365	-	-
Prepaid insurance on debt	7,958,703	8,754,897	13,002,376	14,112,324	20,831,496
Total Noncurrent Assets	<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>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	47,358,590	82,508,971	94,431,823	99,294,499	116,511,949
Deferred pension amounts	15,292,494	11,369,496	18,645,719	21,491,506	13,620,562
Total Deferred Outflows of Resources	<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>

	2020	2019	2018	2017	2016
Liabilities					
Current Liabilities					
Accounts and contracts payable	\$ 43,231,679	36,657,714	\$ 33,754,534	\$ 36,751,842	\$ 49,474,527
Accrued salaries, wages and benefits	5,321,864	4,284,220	4,734,956	3,190,038	2,887,280
Other accrued liabilities	5,357,056	6,481,670	12,679,692	1,353,816	875,796
Due to other governments	18,282,254	15,963,934	11,935,868	25,393,813	13,668,890
Due to other funds	-	12,568	3,447,927	-	65,971
Interest payable	30,887,915	40,325,682	39,322,324	39,329,322	37,226,125
Current portion of:					
Long-term debt	33,058,615	29,244,447	20,569,843	23,393,905	35,650,167
Leases payable	5,232,465	5,019,121	4,814,476	4,618,174	4,429,876
Lease obligation - raw water rights	2,624,820	2,520,996	2,999,458	-	-
Obligation payable	184,992	176,183	167,794	159,803	152,193
Accrued compensated absences	2,981,827	2,430,828	2,212,326	2,157,888	1,784,746
Accrued workers' compensation	176,834	217,480	228,239	25,000	395,788
Claims and judgments	2,172,500	2,290,000	2,195,000	-	4,494,694
Total Current Liabilities	<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					
Long-term debt	2,459,730,737	2,467,177,447	2,545,529,255	2,606,465,431	2,488,824,632
Long-term leases payable	411,237,284	416,469,750	421,488,871	426,303,346	430,921,520
Lease obligation - raw water rights	98,095,302	100,720,123	103,241,118	-	-
Obligation payable	16,736,534	16,921,526	17,097,709	17,265,503	17,425,306
Accrued compensated absences	1,954,359	2,049,655	2,174,506	2,288,125	3,511,934
Accrued workers' compensation	75,000	75,000	75,000	225,000	3,562,536
Claims and judgments	50,000	50,000	50,000	75,000	-
Other noncurrent liabilities	2,761,256	2,804,949	2,634,471	2,582,076	2,710,092
Net pension liability	47,643,374	47,310,460	64,151,352	69,569,044	61,021,079
Total Noncurrent Liabilities	<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>3,187,796,667</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 amounts for swap terminations	70,890	75,616	80,342	85,068	4,134,908
Deferred gain on refunding	56,283,953	60,317,719	59,252,431	62,822,646	-
Deferred pension amounts	-	-	7,260,572	6,565,776	15,536,821
Total Deferred Inflows of Resources	<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					
Net investment in capital assets	(197,777,142)	(166,485,092)	60,799,635	134,919,107	400,187,482
Restricted for debt service	19,479,656	29,731,576	23,239,368	26,194,280	69,797,836
Restricted for capital acquisition	-	-	140,732,216	172,974,994	-
Restricted for payment assistance program	3,754,368	3,369,875	2,462,214	2,218,373	977,278
Unrestricted (deficit)	<u>78,133,562</u>	<u>56,502,001</u>	<u>(287,668,794)</u>	<u>(372,780,904)</u>	<u>(475,054,191)</u>
TOTAL NET POSITION	<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>

* 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, 2020

	2020	2019	2018	2017	2016
Assets					
Current Assets					
Cash and cash equivalents	\$ 119,569,724	\$ 160,371,766	\$ 199,056,556	\$ 203,748,704	\$ 156,022,295
Restricted cash and cash equivalents	26,060,277	95,931,528	54,832,050	72,213,813	81,181,424
Restricted cash for the benefit of DWSD	-	627,919	-	-	51,648
Investments	167,895,196	75,685,362	9,506,712	1,430,608	32,041,080
Restricted investments	87,066,562	33,384,445	31,790,386	31,371,834	28,843,000
Receivables					
Billed	56,390,056	60,549,471	50,439,450	52,234,778	48,046,934
Unbilled	23,861,029	24,297,140	25,200,108	24,279,170	23,037,391
Other	95,376	221,452	3,723,036	3,157,050	92,748,989
Allowance for doubtful accounts	(36,357,891)	(34,802,168)	(32,863,001)	(30,410,232)	(98,968,630)
Due from other governments	11,459,398	179,585	24,339,106	29,461,328	66,202,143
Due from other funds	-	12,568	3,447,927	-	65,971
Contractual obligation receivable, current portion	14,041,327	12,089,779	11,253,800	11,262,300	5,077,675
Loan receivable - DWSD	18,206,431	17,542,669	9,367,355	-	-
Prepaid items and other assets	3,691,723	2,801,271	1,683,659	1,089,521	407,359
Inventories	6,370,587	5,445,981	8,471,626	8,509,454	9,984,063
Total Current Assets	<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	27,014,187	62,030,778	30,001,353	128,378,837	155,488,780
Restricted investments	29,048,921	73,903,089	143,261,763	81,177,748	62,186,734
Contractual obligation receivable	399,355,626	414,766,953	335,574,500	346,828,300	366,254,075
Loan 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	-
Assets not subject to depreciation	300,868,836	318,574,902	271,362,100	278,286,118	295,876,258
Capital assets being depreciated, net	2,298,917,647	2,357,018,353	2,485,098,172	2,591,023,442	2,699,891,145
Prepaid insurance on debt	12,030,061	13,880,254	16,931,255	18,581,897	27,822,085
Total Noncurrent Assets	<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>3,587,631,651</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	127,077,205	159,370,167	186,544,140	198,351,942	212,147,508
Deferred pension amounts	27,368,710	20,347,789	33,369,917	38,462,972	24,376,481
Total Deferred Outflows of Resources	<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>

	2020	2019	2018	2017	2016
Liabilities					
Current Liabilities					
Accounts and contracts payable	\$ 30,838,950	\$ 38,004,322	\$ 34,077,602	\$ 27,546,558	\$ 36,152,087
Other accrued liabilities	-	627,919	-	898,800	674,458
Due to other governments	1,750,000	-	47,539	35,848,573	24,225,013
Due to other funds	2,134,191	2,876,954	330,293	-	-
Interest payable	27,565,045	44,130,602	41,108,994	41,011,198	43,912,888
Current portion of:					
Long-term debt	88,939,460	88,357,662	61,186,207	65,920,307	60,902,189
Leases payable	6,395,235	6,134,481	5,884,359	5,644,435	5,414,293
Obligation payable	416,105	396,291	377,419	359,448	342,331
Accrued compensated absences	899,422	757,328	717,086	679,260	454,630
Accrued workers' compensation	-	-	-	-	390,165
Claims and judgments	150,000	56,111	334,392	3,852,062	269,250
Total Current Liabilities	<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					
Long-term debt	3,015,182,999	3,163,394,353	3,168,566,028	3,236,016,730	3,387,291,190
Long-term leases payable	502,623,348	509,018,588	515,153,064	521,037,424	526,681,859
Obligation payable	37,645,781	38,061,886	38,458,178	38,835,597	39,195,045
Accrued workers' compensation	-	-	-	-	4,390,938
Claims and judgments	7,500,000	7,500,000	7,500,000	187,500	25,914,350
Other noncurrent liabilities	6,417,291	6,291,681	6,003,540	5,983,201	5,912,693
Net pension liability	85,266,515	84,670,705	114,810,555	124,506,503	109,208,359
Total Noncurrent Liabilities	<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>3,813,724,342</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 amounts for swap terminations	35,625	165,223	189,808	214,393	238,978
Deferred gain on refunding	47,525,546	47,982,938	46,654,836	49,257,784	-
Deferred capital contribution	5,960,000	-	-	-	-
Deferred pension amounts	-	-	12,994,118	11,750,654	27,805,977
Total Deferred Inflows of Resources	<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					
Net investment in capital assets	(113,359,960)	(62,382,494)	289,946,091	393,956,399	451,547,037
Restricted for debt service	85,803,313	117,246,259	101,996,536	107,931,677	108,742,193
Restricted for capital acquisition	-	-	102,506,361	150,930,508	164,326,618
Restricted for payment assistance program	5,233,710	4,631,494	3,308,896	3,117,744	-
Unrestricted (deficit)	<u>(102,845,010)</u>	<u>(183,438,240)</u>	<u>(616,077,287)</u>	<u>(722,297,171)</u>	<u>(735,208,133)</u>
TOTAL NET POSITION	<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>

* 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

	2020	2019	2018	2017	2016*
Operating Revenues					
Wholesale customer charges	\$ 578,705,063	\$ 584,171,596	\$ 592,096,175	\$ 594,426,876	\$ 281,883,522
Local system charges	207,102,800	201,340,700	194,099,800	202,794,400	102,660,400
Industrial waste charges	7,854,593	9,106,274	14,334,979	14,381,106	6,910,192
Pollutant surcharges	6,448,508	5,932,550	6,908,404	5,206,294	2,423,910
Bad debt recovery	-	-	-	40,172,155	-
Other revenues	778,257	527,663	4,455,345	576,195	4,252,477
Total Operating Revenues	800,889,221	801,078,783	811,894,703	857,557,026	398,130,501
Operating Expenses					
Personnel	104,266,420	98,588,599	95,525,457	86,156,304	21,590,763
Contractual services	109,448,358	101,743,758	99,877,310	90,135,859	17,179,869
Utilities	51,152,735	51,395,385	53,694,380	55,661,469	25,037,499
Chemicals	14,241,843	13,275,860	12,877,813	14,765,181	6,451,484
Supplies and other expenses	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	(3,347,401)	(3,380,755)	(1,683,450)	(2,128,078)	-
Shared services allocation	(1,733,710)	(7,139,362)	(9,908,111)	(11,704,210)	-
Centralized services	-	-	-	-	35,228,282
Administrative services	-	-	-	-	10,534,428
Depreciation	280,104,195	309,115,490	331,242,398	329,766,377	157,316,574
Amortization of intangible asset - raw water rights	3,566,664	3,566,664	2,080,554	-	-
Total Operating Expenses	593,153,157	606,544,905	618,232,739	582,815,592	291,242,254
Operating Income	207,736,064	194,533,878	193,661,964	274,741,434	106,888,247
Nonoperating Revenues (Expenses)					
Earnings on investments	19,445,105	22,368,312	11,395,785	4,042,790	1,481,398
Net increase in fair value of investments	5,971,601	4,149,490	-	-	-
Interest on loan and obligations receivable	42,434,884	41,777,702	38,856,520	42,332,428	21,062,500
Interest expense	(288,947,856)	(296,597,333)	(300,395,306)	(291,592,097)	(148,447,442)
Amortization of debt related items and cost of issuance	10,302,560	3,995,230	8,684,285	(14,937,182)	2,055,724
Legacy pension expense	(20,143,505)	16,778,381	(24,922,162)	(7,021,006)	-
WRAP (Water Residential Assistance Program)	(3,315,117)	(2,024,119)	(3,755,534)	(2,127,333)	-
Other	2,552,295	419,859	(1,254,350)	661,734	-
Sewer lookback - MOU adjustment	-	(6,527,200)	-	-	-
Gain (loss) on disposal of capital assets	(1,316,886)	81,284	2,463,478	(250,826)	275,693
Loss on impairment of capital assets	(1,432,027)	(1,025,341)	(654,451)	(31,499)	-
Total Nonoperating Expenses	(234,448,946)	(216,603,735)	(269,581,735)	(268,922,991)	(123,572,127)
Income (loss) before contributions and special item	(26,712,882)	(22,069,857)	(75,919,771)	5,818,443	(16,683,880)
Capital Contributions	5,960,000	-	-	320,707	2,000,000
Special Item - memorandum of understanding with DWSD	-	-	-	(94,290,263)	-
Change in net position	(20,752,882)	(22,069,857)	(75,919,771)	(88,151,113)	(14,683,880)
NET POSITION (DEFICIT), Beginning of Year	(200,824,621)	(178,754,764)	(102,834,993)	(14,683,880)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (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

	2020	2019	2018	2017	2016*
Operating Revenues					
Wholesale customer charges	\$ 312,701,777	\$ 311,399,136	\$ 323,117,344	\$ 331,115,131	\$ 160,777,169
Local system charges	21,295,500	20,181,400	15,130,600	15,490,300	6,833,500
Bad debt recovery	-	-	-	5,107,125	-
Other revenues	256,300	21,340	64,200	37,388	54,863
Total Operating Revenues	334,253,577	331,601,876	338,312,144	351,749,944	167,665,532
Operating Expenses					
Personnel	43,946,225	42,085,546	41,845,295	38,261,393	8,301,022
Contractual services	46,097,405	43,083,078	35,794,549	34,257,419	3,304,113
Utilities	27,719,754	26,247,858	26,871,081	28,469,603	12,368,557
Chemicals	5,569,437	5,088,827	4,804,768	5,340,753	2,444,543
Supplies and other expenses	12,034,192	11,797,279	9,543,615	7,982,562	1,440,644
Capital adjustment	26,780	-	-	-	-
Capital program allocation	(2,164,003)	(2,054,913)	(713,779)	(977,762)	-
Shared services allocation	(696,952)	(6,425,729)	(9,615,146)	(11,603,019)	-
Centralized services	-	-	-	-	18,494,851
Administrative services	-	-	-	-	3,191,929
Depreciation	127,183,228	140,571,120	143,991,815	144,137,912	71,295,545
Amortization of intangible asset - raw water rights	3,566,664	3,566,664	2,080,554	-	-
Total Operating Expenses	263,282,730	263,959,730	254,602,752	245,868,861	120,841,204
Operating Income	70,970,847	67,642,146	83,709,392	105,881,083	46,824,328
Nonoperating Revenues (Expenses)					
Earnings on investments	10,485,467	12,348,295	6,129,530	1,832,918	392,031
Net increase in fair value of investments	3,259,307	2,406,106	-	-	-
Interest on obligations receivable	22,945,866	22,921,380	23,351,220	25,269,750	12,231,250
Interest expense	(133,537,621)	(136,704,033)	(139,343,204)	(132,434,945)	(65,958,095)
Amortization of debt related items and cost of issuance	14,258,569	10,771,937	13,837,585	2,403,018	2,418,891
Legacy pension expense	(7,220,716)	6,014,441	(8,933,691)	(2,516,776)	-
WRAP (Water Residential Assistance Program)	(1,393,179)	(855,455)	(1,506,554)	(884,327)	-
Other	2,186,331	114,136	(544,813)	1,117,704	-
Gain (loss) on disposal of capital assets	(50,760)	(435,095)	(6,225)	(207,900)	-
Loss on impairment of capital assets	(1,432,027)	(670,137)	(654,451)	(31,499)	-
Total Nonoperating Expenses	(90,498,763)	(84,088,425)	(107,670,603)	(105,452,057)	(50,915,923)
Income (loss) before special item	(19,527,916)	(16,446,279)	(23,961,211)	429,026	(4,091,595)
Special Item - memorandum of understanding with DWSD	-	-	-	(32,811,581)	-
Change in net position	(19,527,916)	(16,446,279)	(23,961,211)	(32,382,555)	(4,091,595)
NET POSITION (DEFICIT), Beginning of Year	(76,881,640)	(60,435,361)	(36,474,150)	(4,091,595)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (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

	2020	2019	2018	2017	2016*
Operating Revenues					
Wholesale customer charges	\$ 266,003,286	\$ 272,772,460	\$ 268,978,831	\$ 263,311,745	\$ 121,106,353
Local system charges	185,807,300	181,159,300	178,969,200	187,304,100	95,826,900
Industrial waste charges	7,854,593	9,106,274	14,334,979	14,381,106	6,910,192
Pollutant surcharges	6,448,508	5,932,550	6,908,404	5,206,294	2,423,910
Bad debt recovery	-	-	-	35,065,030	-
Other revenues	521,957	506,323	4,391,145	538,807	4,197,614
Total Operating Revenues	466,635,644	469,476,907	473,582,559	505,807,082	230,464,969
Operating Expenses					
Personnel	60,320,195	56,503,053	53,680,162	47,894,911	13,289,741
Contractual services	63,350,953	58,660,680	64,082,761	55,878,440	13,875,756
Utilities	23,432,981	25,147,527	26,823,299	27,191,866	12,668,942
Chemicals	8,672,406	8,187,033	8,073,045	9,424,428	4,006,941
Supplies and other expenses	23,393,081	25,323,636	24,982,773	12,180,128	16,462,711
Capital adjustment	-	2,258,351	-	-	-
Capital program allocation	(1,183,398)	(1,325,842)	(969,671)	(1,150,316)	-
Shared services allocation	(1,036,758)	(713,633)	(292,965)	(101,191)	-
Centralized services	-	-	-	-	16,733,431
Administrative services	-	-	-	-	7,342,499
Depreciation	152,920,967	168,544,370	187,250,583	185,628,465	86,021,029
Total Operating Expenses	329,870,427	342,585,175	363,629,987	336,946,731	170,401,050
Operating Income	136,765,217	126,891,732	109,952,572	168,860,351	60,063,919
Nonoperating Revenues (Expenses)					
Earnings on investments	8,959,638	10,020,017	5,266,255	2,209,872	1,089,367
Net increase in fair value of investments	2,712,294	1,743,384	-	-	-
Interest on loan and obligations receivable	19,489,018	18,856,322	15,505,300	17,062,678	8,831,250
Interest expense	(155,410,235)	(159,893,300)	(161,052,102)	(159,157,152)	(82,489,347)
Amortization of debt related items and cost of issuance	(3,956,009)	(6,776,707)	(5,153,300)	(17,340,200)	(363,167)
Legacy pension expense	(12,922,789)	10,763,940	(15,988,471)	(4,504,230)	-
WRAP (Water Residential Assistance Program)	(1,921,938)	(1,168,664)	(2,248,980)	(1,243,006)	-
Other	365,964	305,723	(709,537)	(455,970)	-
Sewer lookback - MOU adjustment	-	(6,527,200)	-	-	-
Gain (loss) on disposal of capital assets	(1,266,126)	516,379	2,469,703	(42,926)	275,693
Loss on impairment of capital assets	-	(355,204)	-	-	-
Total Nonoperating Expenses	(143,950,183)	(132,515,310)	(161,911,132)	(163,470,934)	(72,656,204)
Income (loss) before contributions and special item	(7,184,966)	(5,623,578)	(51,958,560)	5,389,417	(12,592,285)
Capital Contributions	5,960,000	-	-	320,707	2,000,000
Special Item - memorandum of understanding with DWSD	-	-	-	(61,478,682)	-
Change in net position	(1,224,966)	(5,623,578)	(51,958,560)	(55,768,558)	(10,592,285)
NET POSITION (DEFICIT), Beginning of Year	(123,942,981)	(118,319,403)	(66,360,843)	(10,592,285)	-
NET POSITION (DEFICIT), END OF YEAR	\$ (125,167,947)	\$ (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

	2021	2020	2019	2018	2017	2016 [5]
Water Fund						
Budgeted revenue requirement [1]	\$341,642,000	\$339,664,200	\$331,400,500	\$328,119,300	\$331,213,200	\$318,474,200
Percent change in budgeted revenue requirement	0.6%	2.5%	1.0%	-0.9%	4.0%	4.0%
Average annual charge adjustment [2]						
Total regional system	3.2%	0.6%	1.8%	1.8%	4.5%	n/a [6]
Wholesale customers	3.1%	0.3%	0.2%	2.0%	3.4%	11.3%
Local system charge [3]	3.0%	2.7%	14.1%	-1.0%	11.6%	n/a [6]
Number of wholesale customers [4]	87	87	87	87	88	85
Sewage Disposal Fund						
Budgeted revenue requirement [1]	\$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%	2.2%	1.0%	0.3%	4.0%	4.0%
Average annual charge adjustment [2]						
Total regional system	2.0%	0.8%	0.1%	-0.7%	8.3%	n/a [6]
Wholesale customers	1.7%	-0.1%	1.3%	1.8%	4.9%	-1.1%
Local system charge [3]	2.3%	2.5%	1.2%	-4.2%	13.9%	n/a [6]
Number of wholesale customers [4]	18	18	18	18	18	21

[1] This is the revenue requirement in the original adopted budget for the fiscal year which is used in the calculation of charges.

[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 \$5.516 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.

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

GREAT LAKES WATER AUTHORITY

Schedule 4a

WATER FUND OPERATING REVENUES/ LARGEST WATER CUSTOMERS

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016*</u>
Operating Revenues					
Wholesale customer charges [1]	\$ 312,701,777	\$ 311,399,136	\$ 323,117,344	\$ 331,115,131	\$ 160,777,169
Local system charges	21,295,500	20,181,400	15,130,600	15,490,300	6,833,500
Bad debt recovery	-	-	-	5,107,125	-
Other revenue	<u>256,300</u>	<u>21,340</u>	<u>64,200</u>	<u>37,388</u>	<u>54,863</u>
Total Operating Revenues	\$ 334,253,577	\$ 331,601,876	\$ 338,312,144	\$ 351,749,944	\$ 167,665,532
Wholesale customer charges % of total operating revenue	93.55%	93.91%	95.51%	94.13%	95.89%
Local system charges % of total operating revenue	6.37%	6.09%	4.47%	4.40%	4.08%
Ten Largest Wholesale Customers					
Southeast Oakland County Water Authority	\$ 23,089,967	\$ 23,311,743	\$ 23,118,160	\$ 22,434,129	\$ 11,160,701
North Oakland County Water Authority	22,293,795	23,464,096	23,365,866	22,913,261	11,105,152
Sterling Heights	15,242,912	14,644,368	15,571,146	15,480,008	7,155,303
Shelby Township	14,482,451	13,719,053	13,554,398	13,462,808	6,114,243
Troy	13,607,770	13,700,093	13,842,135	13,939,815	6,058,667
Macomb Township	12,870,377	11,063,225	11,167,739	10,945,117	-
Livonia	11,553,730	14,001,058	13,669,376	13,483,657	6,223,290
Flint [2]	11,052,425	11,604,504	12,235,483	13,256,330	6,738,009
Canton Township	10,491,407	-	13,334,615	13,872,584	6,032,404
Ypsilanti Community Utilities Authority	10,450,861	-	11,038,134	-	-
Genesee County Drain Commission [3]	-	-	-	18,493,530	8,593,304
West Bloomfield Township	-	10,733,617	-	-	-
Warren	-	10,648,162	-	-	-
Novi	-	-	-	-	5,595,031
Total Revenue Ten Largest Wholesale Customers	\$ 145,135,695	\$ 146,889,919	\$ 150,897,052	\$ 158,281,239	\$ 74,776,104
Ten largest wholesale customers % of total operating revenues	43.42%	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

* 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 4b

SEWAGE DISPOSAL FUND OPERATING REVENUES/ LARGEST SEWER CUSTOMERS

	2020	2019	2018	2017	2016*
Operating Revenues					
Wholesale customer charges [1]	\$ 266,003,286	\$ 272,772,460	\$ 268,978,831	\$ 263,311,745	\$ 121,106,353
Local system charges	185,807,300	181,159,300	178,969,200	187,304,100	95,826,900
Industrial waste and surcharges	14,303,101	15,038,824	21,243,383	19,587,400	9,334,102
Bad debt recovery	-	-	-	35,065,030	-
Other revenue	521,957	506,323	4,391,145	538,807	4,197,614
Total Operating Revenues	\$ 466,635,644	\$ 469,476,907	\$ 473,582,559	\$ 505,807,082	\$ 230,464,969
Wholesale customer charges % of total operating revenue	57.00%	58.10%	56.80%	52.06%	52.55%
Local system charges % of total operating revenue	39.82%	38.59%	37.79%	37.03%	41.58%
Ten Largest Wholesale Customers					
Oakland Macomb Interceptor Drainage District	\$ 69,046,600	\$ 77,533,200	\$ 72,816,000	\$ 69,627,600	\$ 34,541,400
Wayne County - Rouge Valley	54,162,000	53,761,200	55,022,400	55,486,800	25,901,400
Oakland County-George W Kuhn Drainage District	45,264,000	44,972,400	45,751,200	45,682,800	21,410,400
Evergreen Farmington	34,839,600	34,578,000	33,733,200	32,179,200	15,094,200
NE Wayne County	24,837,600	24,672,000	24,637,200	24,120,000	11,501,400
Dearborn	19,502,400	19,372,800	19,628,400	19,603,200	8,049,000
Highland Park	5,670,000	5,614,800	5,642,400	5,818,800	2,808,600
Hamtramck	3,994,800	3,962,400	3,958,800	4,086,000	1,966,800
Grosse Pointe Farms	2,750,400	2,727,600	2,696,400	2,667,600	1,243,800
Grosse Pointe Park	1,812,000	1,801,200	1,740,000	1,626,000	746,400
Total Revenue Ten Largest Wholesale Customers	\$ 261,879,400	\$ 268,995,600	\$ 265,626,000	\$ 260,898,000	\$ 123,263,400
Ten largest wholesale customers % of total operating revenues	56.12%	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 WHOLESAL WATER CHARGES*
AND TOTAL REVENUE REQUIREMENT FOR THE DETROIT RETAIL CLASS

Community Name	Fixed Monthly \$/mo	Commodity \$/Mcf	Community Name	Fixed Monthly \$/mo	Commodity \$/Mcf
Allen Park	\$ 120,800	\$ 7.39	Mayfield Township	\$ 2,400	\$ 22.89
Almont, Village of	11,700	10.40	Melvindale	32,900	5.97
Ash Township	41,200	8.03	New Haven, Village of	20,300	6.35
Belleville	15,300	9.70	North Oakland County Water Authority	1,128,100	9.68
Berlin Township	37,200	10.67	Northville, City	44,900	11.32
Brownstown Township	184,900	10.25	Northville Township	286,900	16.00
Bruce Township	15,200	75.53	Novi	460,100	12.12
Canton Township	520,900	11.52	Oak Park	70,100	5.79
Center Line	23,400	5.97	Oakland County Drain Commission	4,000	3.39
Chesterfield Township	211,900	9.98	Plymouth, City	54,100	9.88
Clinton Township	384,000	7.41	Plymouth Township	228,900	10.56
Commerce Township	181,600	13.66	Redford Township	163,700	7.57
Dearborn	532,000	6.87	River Rouge	35,000	6.93
Dearborn Heights	185,900	7.34	Riverview	43,100	7.75
Eastpointe	79,400	5.84	Rockwood	14,100	11.07
Ecorse	75,300	4.28	Romeo	12,600	17.68
Farmington	51,900	8.67	Romulus	207,600	8.13
Farmington Hills	455,300	9.64	Roseville	135,200	5.70
Ferndale	51,300	5.92	Royal Oak Township	10,400	6.74
Flat Rock	70,600	8.49	Shelby Township	716,800	14.29
Flint (1)	568,500	8.21	Southeastern Oakland County Water Authority	1,177,300	7.18
Fraser	62,400	8.05	South Rockwood	5,900	9.44
Garden City	86,500	7.89	Southgate	112,800	7.51
Gibraltar	17,200	7.79	St. Clair County-Burtchville Township	16,400	17.97
Grosse Ile Township	56,100	11.17	St. Clair County-Greenwood	22,600	13.01
Grosse Pointe Park	76,500	10.28	St. Clair Shores	154,400	6.44
Grosse Pointe Shores	33,600	12.79	Sterling Heights	776,000	10.38
Grosse Pointe Woods	71,700	8.84	Sumpter Township	33,600	9.31
Hamtramck	39,300	5.31	Sylvan Lake	11,900	14.39
Harper Woods	43,000	6.15	Taylor	238,200	6.86
Harrison Township	77,600	6.52	Trenton	85,300	7.71
Hazel Park	37,000	5.83	Troy	697,500	11.34
Highland Park	58,900	4.44	Utica	29,300	8.90
Huron Township	74,900	9.57	Van Buren Township	172,300	10.79
Imlay City	70,900	13.54	Walled Lake	40,700	10.25
Imlay Township	800	36.47	Warren	513,600	6.71
Inkster	61,100	5.40	Washington Township	115,100	11.87
Keego Harbor	15,100	11.93	Wayne	152,100	13.34
Lapeer	78,800	11.31	West Bloomfield Township	532,200	15.37
Lenox Township	14,800	8.02	Westland	315,600	7.45
Lincoln Park	111,200	6.05	Wixom	126,000	12.99
Livonia	587,600	9.38	Woodhaven	85,400	11.31
Macomb Township	645,400	15.14	Ypsilanti Community Utilities Authority	532,400	8.33
Madison Heights	99,200	6.34			

Annual Detroit Wholesale Revenue Requirement \$21,295,500 - Effective July 1, 2019

* Wholesale charges went into effect July 1, 2019

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

GREAT LAKES WATER AUTHORITY

SCHEDULE OF WHOLESALE SEWER MONTHLY CHARGES* AND TOTAL REVENUE REQUIREMENT FOR THE DETROIT RETAIL CLASS

	Total
Oakland Macomb Interceptor District (OMID)	\$ 6,313,200
Rouge Valley	4,513,500
Oakland County - George W. Kuhn (GWK)	3,772,000
Evergreen Farmington	2,903,300
SE Macomb Sanitary District	2,069,800
Dearborn	1,625,200
Grosse Pointe Farms	229,200
Grosse Pointe Park	151,000
Melvindale	127,800
Farmington	95,900
Center Line	86,100
Allen Park	71,200
Highland Park	472,500
Hamtramck	332,900
Grosse Pointe	74,500
Harper Woods	18,300
Redford Township	21,900
Wayne County #3	4,200

Annual Detroit Wholesale Revenue Requirement \$185,807,300 - Effective July 1, 2019

* Wholesale charges went into effect July 1, 2019

GREAT LAKES WATER AUTHORITY

INDUSTRIAL WASTE CONTROL CHARGES AND POLLUTANT SURCHARGES

	<u>Charge per Month</u>
Industrial Waste Control Charges	
Meter size - inches:	
5/8	\$ 3.38
3/4	5.07
1	8.45
1 1/2	18.59
2	27.04
3	49.01
4	67.60
6	101.40
8	169.00
10	236.60
12	270.40
14	338.00
16	405.60
18	473.20
20	540.80
24	608.40
30	676.00
36	743.60
48	811.20
	<u>Charge per Pound</u>
Pollutant Surcharges	
Biochemical Oxygen Demand (BOD) for concentrations > 275 mg/l	\$ 0.491
Total Suspended Solids (TSS) for concentrations > 350 mg/l	\$ 0.499
Phosphorus (P) for concentrations > 12 mg/l	\$ 7.354
Fats, Oil and Grease (FOG) for concentrations > 100 mg/l	\$ 0.473
Septage Disposal Fee \$ per 500 gallons of disposal	\$ 48.00

Charges went into effect July 1, 2019

GREAT LAKES WATER AUTHORITY

RATIOS OF OUTSTANDING DEBT BY TYPE

	2020	2019	2018	2017	2016*
Water Fund					
Revenue bonds [1]	\$ 2,453,471,088	\$ 2,466,561,092	\$ 2,540,663,196	\$ 2,612,607,101	\$ 2,507,091,038
State revolving loans	<u>39,318,264</u>	<u>29,860,802</u>	<u>25,435,902</u>	<u>17,252,235</u>	<u>17,383,761</u>
Total Water Fund	<u>2,492,789,352</u>	<u>2,496,421,894</u>	<u>2,566,099,098</u>	<u>2,629,859,336</u>	<u>2,524,474,799</u>
Sewage Disposal Fund					
Revenue bonds [1]	2,643,788,368	2,764,196,915	2,739,090,653	2,797,168,264	2,922,089,599
Capital appreciation bonds [1]	10,667,560	13,377,972	14,984,042	19,501,737	19,668,138
State revolving loans	<u>449,666,531</u>	<u>474,177,128</u>	<u>475,677,540</u>	<u>485,267,036</u>	<u>506,435,742</u>
Total Sewage Disposal Fund	<u>3,104,122,459</u>	<u>3,251,752,015</u>	<u>3,229,752,235</u>	<u>3,301,937,037</u>	<u>3,448,193,479</u>
Business-type Activities					
Revenue bonds [1]	5,097,259,456	5,230,758,007	5,279,753,849	5,409,775,365	5,429,180,637
Capital appreciation bonds [1]	10,667,560	13,377,972	14,984,042	19,501,737	19,668,138
State revolving loans	<u>488,984,795</u>	<u>504,037,930</u>	<u>501,113,442</u>	<u>502,519,271</u>	<u>523,819,503</u>
Total Business-type Activities Debt	<u>\$ 5,596,911,811</u>	<u>\$ 5,748,173,909</u>	<u>\$ 5,795,851,333</u>	<u>\$ 5,931,796,373</u>	<u>\$ 5,972,668,278</u>
Total taxable value **	n/a	n/a	n/a	n/a	n/a
Total population served [2]:					
Water	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
Total debt per capita:					
Water	\$ 656	\$ 657	\$ 675	\$ 692	\$ 664
Sewage disposal	\$ 1,109	\$ 1,161	\$ 1,153	\$ 1,179	\$ 1,231
Per capital income [3]	\$ 56,043	\$ 53,748	\$ 51,493	\$ 50,863	\$ 48,692
Total debt as a percentage of income:					
Water	1.17%	1.22%	1.31%	1.36%	1.36%
Sewage disposal	1.98%	2.16%	2.24%	2.32%	2.53%

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

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

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

* 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.

** GLWA does not levy property taxes; therefore, presentation of taxable values and the ratio of total debt to taxable value is not applicable.

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

GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2020Continued on
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	<u>Original Principal Amount [1]</u>	<u>Outstanding as of June 30, 2020</u>	<u>Total Future Debt [2]</u>
Water Supply System Revenue Bonds			
Senior Lien Bonds			
Water Supply System Revenue Senior Lien Bonds, Series 2003A	\$ 234,805,000	\$ 100,000	\$ 100,000
Water Supply System Revenue Senior Lien Bonds, Series 2005B	194,900,000	100,000	100,000
Water Supply System Revenue Senior Lien Bonds, Series 2006A	280,000,000	100,000	100,000
Water Supply System Revenue Senior Lien Bonds, Series 2011A	379,590,000	2,955,000	2,955,000
Water Supply System Revenue Senior Lien Bonds, Series 2011B	17,195,000	1,130,000	1,130,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2011C	103,890,000	1,020,000	1,020,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-1	206,540,000	152,710,000	152,710,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-2	188,455,000	188,455,000	188,455,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2014D-4	307,645,000	209,360,000	209,360,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2015D-1	89,430,000	82,320,000	82,320,000
Water Supply System Revenue Senior Lien Bonds, Series 2016A	88,000,000	88,000,000	88,000,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2016C	443,930,000	443,930,000	443,930,000
Water Supply System Revenue Senior Lien Bonds, Series 2020A	42,445,000	42,445,000	42,445,000
Water Supply System Revenue Refunding Senior Lien Bonds, Series 2020C	<u>377,515,000</u>	<u>377,515,000</u>	<u>377,515,000</u>
	<u>2,954,340,000</u>	<u>1,590,140,000</u>	<u>1,590,140,000</u>
Second Lien Bonds			
Water Supply System Revenue Second Lien Bonds, Series 2003B	172,945,000	100,000	100,000
Water Supply System Revenue Second Lien Bonds, Series 2006B	120,000,000	100,000	100,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2014D-6	65,425,000	57,925,000	57,925,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2015D-2	37,235,000	37,235,000	37,235,000
Water Supply System Revenue Second Lien Bonds, Series 2016B	163,830,000	163,830,000	163,830,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2016D	222,045,000	222,045,000	222,045,000
Water Supply System Revenue Refunding Second Lien Bonds, Series 2018A	155,595,000	147,425,000	147,425,000
Water Supply System Revenue Second Lien Bonds, Series 2020B	<u>43,135,000</u>	<u>43,135,000</u>	<u>43,135,000</u>
	<u>980,210,000</u>	<u>671,795,000</u>	<u>671,795,000</u>
SRF Junior Lien Bonds			
Water Supply System Revenue Bonds, Series 2005 SRF-1	13,805,164	5,320,164	5,320,164
Water Supply System Revenue Bonds, Series 2005 SRF-2	8,891,730	3,356,730	3,356,730
Water Supply System Revenue Bonds, Series 2006 SRF-1	5,180,926	1,980,926	1,980,926
Water Supply System Revenue Bonds, Series 2008 SRF-1	2,590,941	940,941	940,941
Water Supply System Revenue Bonds, Series 2016 SRF-1	8,273,168	7,858,168	7,858,168
Water Supply System Revenue Bonds, Series 2016 SRF-2	3,393,543	3,218,543	3,218,543
Water Supply System Revenue Bonds, Series 2017 SRF-1	5,807,931	5,657,931	5,657,931
Water Supply System Revenue Bonds, Series 2019 SRF-1	8,330,000	4,778,636	8,330,000
Water Supply System Revenue Bonds, Series 2019 SRF-2	29,950,000	4,514,115	29,950,000
Water Supply System Revenue Bonds, Series 2019 SRF-3	<u>11,788,056</u>	<u>1,692,110</u>	<u>11,788,056</u>
	<u>98,011,459</u>	<u>39,318,264</u>	<u>78,401,459</u>
TOTAL WATER SUPPLY SYSTEM REVENUE BONDS	<u>\$ 4,032,561,459</u>	<u>\$ 2,301,253,264</u>	<u>\$ 2,340,336,459</u>

GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2020Continued on
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	Original Principal Amount [1]	Outstanding as of June 30, 2020	Total Future Debt [2]
Sewage Disposal System Revenue Bonds			
Senior Lien Bonds (Revenue and SRF)			
Sewage Disposal System Revenue Bonds (Senior), Series 1999 SRF-2	\$ 46,000,000	\$ 8,445,000	\$ 8,445,000
Sewage Disposal System Revenue Bonds (Senior), Series 1999 SRF-3	31,030,000	1,950,000	1,950,000
Sewage Disposal System Revenue Bonds (Senior), Series 1999 SRF-4	40,655,000	2,550,000	2,550,000
Sewage Disposal System Revenue Bonds (Senior), Series 1999A	35,510,118	11,335,000	11,335,000
Sewage Disposal System Senior Lien Revenue Bonds, Series 2003B	150,000,000	100,000	100,000
Sewage Disposal System Senior Lien Revenue Refunding Bonds, Series 2004A	101,435,000	26,130,000	26,130,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2006D	370,000,000	239,475,000	239,475,000
Sewage Disposal System Revenue & Revenue Refunding Senior Lien Bonds, Series 2012A	659,780,000	55,435,000	55,435,000
Sewage Disposal System Revenue Senior Lien Bonds, Series 2014C-1	123,220,000	10,000	10,000
Sewage Disposal System Revenue Senior Lien Bonds, Series 2014C-2	27,470,000	10,000	10,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2014C-3	446,170,000	446,170,000	446,170,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2014C-6	143,880,000	88,900,000	88,900,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2016B	126,105,000	126,105,000	126,105,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018A	81,595,000	81,595,000	81,595,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018B	131,690,000	131,690,000	131,690,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2018C	44,180,000	44,180,000	44,180,000
Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2020A	594,930,000	594,930,000	594,930,000
	<u>3,153,650,118</u>	<u>1,859,010,000</u>	<u>1,859,010,000</u>
Second Lien Bonds			
Sewage Disposal System Second Lien Revenue Bonds, Series 2001B	110,550,000	78,895,000	78,895,000
Sewage Disposal System Revenue Second Lien Bonds, Series 2005A	273,355,000	100,000	100,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2005B	40,215,000	17,115,000	17,115,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2005C	63,160,000	100,000	100,000
Sewage Disposal System Revenue Second Lien Bonds, Series 2006B	250,000,000	100,000	100,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2014C-7	76,715,000	62,305,000	62,305,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2015C	197,660,000	197,160,000	197,160,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2016C	295,190,000	295,190,000	295,190,000
Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2020B	92,525,000	92,525,000	92,525,000
	<u>1,399,370,000</u>	<u>743,490,000</u>	<u>743,490,000</u>

GREAT LAKES WATER AUTHORITY

DEBT BY LIEN
As of June 30, 2020Continued From
Previous Page

	Original Principal Amount [1]	Outstanding as of June 30, 2020	Total Future Debt [2]
Sewage Disposal System Revenue Bonds (concluded)			
Junior Lien Bonds (SRF)			
Sewage Disposal System Revenue Bonds, Series 2000 SRF-1	\$ 44,197,995	\$ 7,647,995	\$ 7,647,995
Sewage Disposal System Revenue Bonds, Series 2000 SRF-2	64,401,066	11,766,066	11,766,066
Sewage Disposal System Revenue Bonds, Series 2001 SRF-1	82,200,000	24,545,000	24,545,000
Sewage Disposal System Revenue Bonds, Series 2001 SRF-2	59,850,000	17,875,000	17,875,000
Sewage Disposal System Revenue Bonds, Series 2002 SRF-1	18,985,000	3,480,000	3,480,000
Sewage Disposal System Revenue Bonds, Series 2002 SRF-2	1,545,369	285,369	285,369
Sewage Disposal System Revenue Bonds, Series 2002 SRF-3	31,549,466	8,679,466	8,679,466
Sewage Disposal System Revenue Bonds, Series 2003 SRF-1	48,520,000	17,175,000	17,175,000
Sewage Disposal System Revenue Bonds, Series 2003 SRF-2	25,055,370	7,430,370	7,430,370
Sewage Disposal System Revenue Bonds, Series 2004 SRF-1	2,910,000	845,000	845,000
Sewage Disposal System Revenue Bonds, Series 2004 SRF-2	18,353,459	5,318,459	5,318,459
Sewage Disposal System Revenue Bonds, Series 2004 SRF-3	12,722,575	3,677,575	3,677,575
Sewage Disposal System Revenue Bonds, Series 2007 SRF-1	167,540,598	90,525,598	90,525,598
Sewage Disposal System Revenue Bonds, Series 2009 SRF-1	13,970,062	7,595,062	7,595,062
Sewage Disposal System Revenue Bonds, Series 2010 SRF-1	4,214,763	2,530,763	2,530,763
Sewage Disposal System Revenue Bonds, Series 2012 SRF-1	14,950,000	11,875,000	11,875,000
Sewage Disposal System Revenue Bonds, Series 2015A SRF	79,500,000	66,580,000	66,580,000
Sewage Disposal System Revenue Bonds, Series 2015B SRF	27,175,304	22,340,304	22,340,304
Sewage Disposal System Revenue Bonds, Series 2015D SRF	15,321,478	12,356,478	12,356,478
Sewage Disposal System Revenue Bonds, Series 2016 SAW-1	10,000,000	9,610,000	9,610,000
Sewage Disposal System Revenue Bonds, Series 2016 SRF-1	15,463,628	13,933,628	13,933,628
Sewage Disposal System Revenue Bonds, Series 2016 SRF-2	51,310,000	44,445,670	49,300,000
Sewage Disposal System Revenue Bonds, Series 2017 SRF-1	38,450,000	32,816,682	37,700,000
Sewage Disposal System Revenue Bonds, Series 2018 SRF-2	17,510,000	13,387,046	17,510,000
Sewage Disposal System Revenue Bonds, Series 2020 SRF-1	28,350,000	-	28,350,000
	<u>894,046,133</u>	<u>436,721,531</u>	<u>478,932,133</u>
TOTAL SEWAGE DISPOSAL SYSTEM REVENUE BONDS	<u>\$ 5,447,066,251</u>	<u>\$ 3,039,221,531</u>	<u>\$ 3,081,432,133</u>

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

[2] Includes the full purchase contract amounts not drawn by June 30, 2020 from state revolving funds. Final amounts will be determined after project close-out.

GREAT LAKES WATER AUTHORITY

SCHEDULE OF DEBT SERVICE REQUIREMENTS
As of June 30, 2020

Fiscal Year Ending [1]	Senior Lien Bonds (in \$1,000s)			Second Lien Bonds (in \$1,000s)		
	Principal	Interest	Total Debt Service	Principal	Interest	Total Debt Service
Water Fund						
2021 [2]	\$ 3,510	\$ 51,923	\$ 55,433	\$ 12,180	\$ 29,433	\$ 41,613
2022	48,980	71,644	120,624	19,145	31,814	50,959
2023	53,890	69,103	122,993	15,505	30,948	46,453
2024	60,290	66,341	126,631	16,640	30,144	46,784
2025	64,210	63,477	127,687	18,380	29,269	47,649
2026	67,040	60,553	127,593	19,300	28,327	47,627
2027	70,060	57,313	127,373	20,265	27,337	47,602
2028	73,525	53,954	127,479	21,280	26,299	47,579
2029	76,770	50,472	127,242	22,345	25,208	47,553
2030	80,490	46,668	127,158	23,460	24,063	47,523
2031	84,380	42,659	127,039	27,440	22,791	50,231
2032	88,510	38,439	126,949	28,810	21,384	50,194
2033	92,825	34,004	126,829	30,255	20,051	50,306
2034	86,695	29,565	116,260	42,150	18,585	60,735
2035	94,960	25,043	120,003	39,930	16,735	56,665
2036	107,100	20,010	127,110	2,650	15,671	18,321
2037	15,790	17,046	32,836	120,120	12,601	132,721
2038	55,135	15,607	70,742	1,600	9,557	11,157
2039	61,740	13,368	75,108	1,675	9,475	11,150
2040	63,910	11,160	75,070	1,760	9,389	11,149
2041	66,160	8,874	75,034	1,845	9,299	11,144
2042	67,190	6,530	73,720	1,940	9,205	11,145
2043	17,905	4,901	22,806	31,660	8,365	40,025
2044	18,805	3,984	22,789	33,245	6,742	39,987
2045	19,740	3,020	22,760	34,910	5,038	39,948
2046	20,725	2,008	22,733	36,650	3,249	39,899
2047	21,765	946	22,711	38,485	1,371	39,856
2048	2,550	338	2,888	2,590	344	2,934
2049	2,680	208	2,888	2,725	211	2,936
2050	2,810	70	2,880	2,855	71	2,926
2051	-	-	-	-	-	-
Total	\$ 1,590,140	\$ 869,230	\$ 2,459,370	\$ 671,795	\$ 482,974	\$ 1,154,769

Junior Lien Bonds (in \$1,000s)			Total (in \$1,000s)		
Principal	Interest	Total Debt Service	Total Debt Service as of June 30, 2020	Additional Future Junior Lien Debt Service on undrawn SRF Loans	Total Future Debt Service including undrawn SRF Loans
\$ 1,955	\$ 862	\$ 2,817	\$ 99,864	\$ 789	\$ 100,653
2,628	820	3,448	175,031	782	175,813
3,915	762	4,677	174,123	782	174,905
3,990	678	4,668	178,083	782	178,865
4,080	594	4,674	180,010	782	180,792
3,604	507	4,111	179,330	1,343	180,673
2,782	430	3,212	178,188	2,235	180,423
1,000	389	1,389	176,446	2,423	178,869
1,026	365	1,391	176,187	2,429	178,616
920	343	1,263	175,944	2,425	178,369
945	322	1,267	178,536	2,424	180,960
960	300	1,260	178,404	2,428	180,832
990	278	1,268	178,403	2,432	180,835
754	258	1,012	178,007	2,678	180,685
590	242	832	177,500	2,862	180,362
595	227	822	146,253	2,864	149,117
610	212	822	166,379	2,855	169,234
625	197	822	82,720	2,860	85,580
635	181	816	87,074	2,860	89,934
655	165	820	87,040	2,858	89,898
665	149	814	86,992	2,860	89,852
685	132	817	85,682	2,351	88,033
700	115	815	63,646	522	64,168
720	97	817	63,593	523	64,116
730	79	809	63,517	524	64,041
755	61	816	63,448	524	63,972
770	42	812	63,379	525	63,904
787	23	810	6,632	520	7,152
248	3	251	6,074	520	6,594
-	-	-	5,807	520	6,327
-	-	-	-	520	520
<u>\$ 39,318</u>	<u>\$ 8,835</u>	<u>\$ 48,153</u>	<u>\$ 3,662,291</u>	<u>\$ 51,802</u>	<u>\$ 3,714,093</u>

GREAT LAKES WATER AUTHORITY

SCHEDULE OF DEBT SERVICE REQUIREMENTS

As of June 30, 2020

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Fiscal Year Ending [1]	Senior Lien Bonds (in \$1,000s)			Second Lien Bonds (in \$1,000s)		
	Principal	Interest	Total Debt Service	Principal	Interest	Total Debt Service
Sewage Disposal Fund						
2021 [2]	\$ 43,140	\$ 46,350	\$ 89,490	\$ -	\$ 27,628	\$ 27,628
2022	50,125	65,057	115,182	22,440	34,737	57,177
2023	65,060	62,484	127,544	17,655	33,881	51,536
2024	80,260	59,156	139,416	3,215	33,438	36,653
2025	82,615	55,535	138,150	16,035	32,924	48,959
2026	84,900	51,778	136,678	16,995	32,040	49,035
2027	90,905	48,405	139,310	21,040	31,028	52,068
2028	95,135	45,465	140,600	25,795	29,793	55,588
2029	102,270	42,101	144,371	26,640	28,415	55,055
2030	114,250	38,308	152,558	19,860	27,183	47,043
2031	108,915	34,873	143,788	32,550	25,836	58,386
2032	112,765	31,905	144,670	34,175	24,168	58,343
2033	130,570	28,220	158,790	21,910	22,766	44,676
2034	132,420	22,774	155,194	25,915	21,594	47,509
2035	53,595	18,318	71,913	112,440	18,464	130,904
2036	11,445	16,909	28,354	162,055	12,296	174,351
2037	11,745	16,544	28,289	169,445	4,593	174,038
2038	110,565	14,637	125,202	1,690	522	2,212
2039	114,005	11,146	125,151	1,745	460	2,205
2040	117,550	7,545	125,095	1,810	396	2,206
2041	23,745	5,275	29,020	1,875	330	2,205
2042	24,635	4,374	29,009	1,945	261	2,206
2043	25,545	3,438	28,983	2,015	189	2,204
2044	26,500	2,468	28,968	2,085	115	2,200
2045	27,275	1,463	28,738	2,160	39	2,199
2046	4,425	843	5,268	-	-	-
2047	4,645	616	5,261	-	-	-
2048	4,880	378	5,258	-	-	-
2049	5,125	128	5,253	-	-	-
Total	\$ 1,859,010	\$ 736,493	\$ 2,595,503	\$ 743,490	\$ 443,096	\$ 1,186,586

[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 accounts five business days prior to the due date of the bond principal and interest payments. Therefore, the payments for the principal and interest due on July 1, 2020, are not included in the debt service requirement amounts above as they were paid June 24, 2020.

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Junior Lien Bonds (in \$1,000s)			Total (in \$1,000s)		
Principal	Interest	Total Debt Service	Total Debt Service as of June 30, 2020	Additional	Total Future
				Future Junior Lien Debt Service on undrawn SRF Loans	Debt Service including undrawn SRF Loans
\$ 42,915	\$ 9,662	\$ 52,577	\$ 169,695	\$ 902	\$ 170,597
44,120	8,661	52,781	225,140	893	226,033
45,084	7,632	52,716	231,796	893	232,689
38,725	6,658	45,383	221,452	2,046	223,498
39,591	5,771	45,362	232,471	2,048	234,519
25,785	5,003	30,788	216,501	2,049	218,550
23,265	4,477	27,742	219,120	2,044	221,164
23,725	3,978	27,703	223,891	2,044	225,935
24,215	3,468	27,683	227,109	2,044	229,153
24,761	2,947	27,708	227,309	2,048	229,357
14,541	2,494	17,035	219,209	2,046	221,255
14,615	2,133	16,748	219,761	2,044	221,805
15,010	1,770	16,780	220,246	2,046	222,292
15,470	1,396	16,866	219,569	2,048	221,617
15,930	1,012	16,942	219,759	2,045	221,804
15,327	628	15,955	218,660	2,045	220,705
7,952	281	8,233	210,560	2,068	212,628
4,134	116	4,250	131,664	6,059	137,723
1,557	17	1,574	128,930	7,624	136,554
-	-	-	127,301	2,778	130,079
-	-	-	31,225	2,781	34,006
-	-	-	31,215	2,782	33,997
-	-	-	31,187	2,782	33,969
-	-	-	31,168	-	31,168
-	-	-	30,937	-	30,937
-	-	-	5,268	-	5,268
-	-	-	5,261	-	5,261
-	-	-	5,258	-	5,258
-	-	-	5,253	-	5,253
<u>\$ 436,722</u>	<u>\$ 68,104</u>	<u>\$ 504,826</u>	<u>\$ 4,286,915</u>	<u>\$ 56,159</u>	<u>\$ 4,343,074</u>

GREAT LAKES WATER AUTHORITY

CURRENT DEBT RATINGS

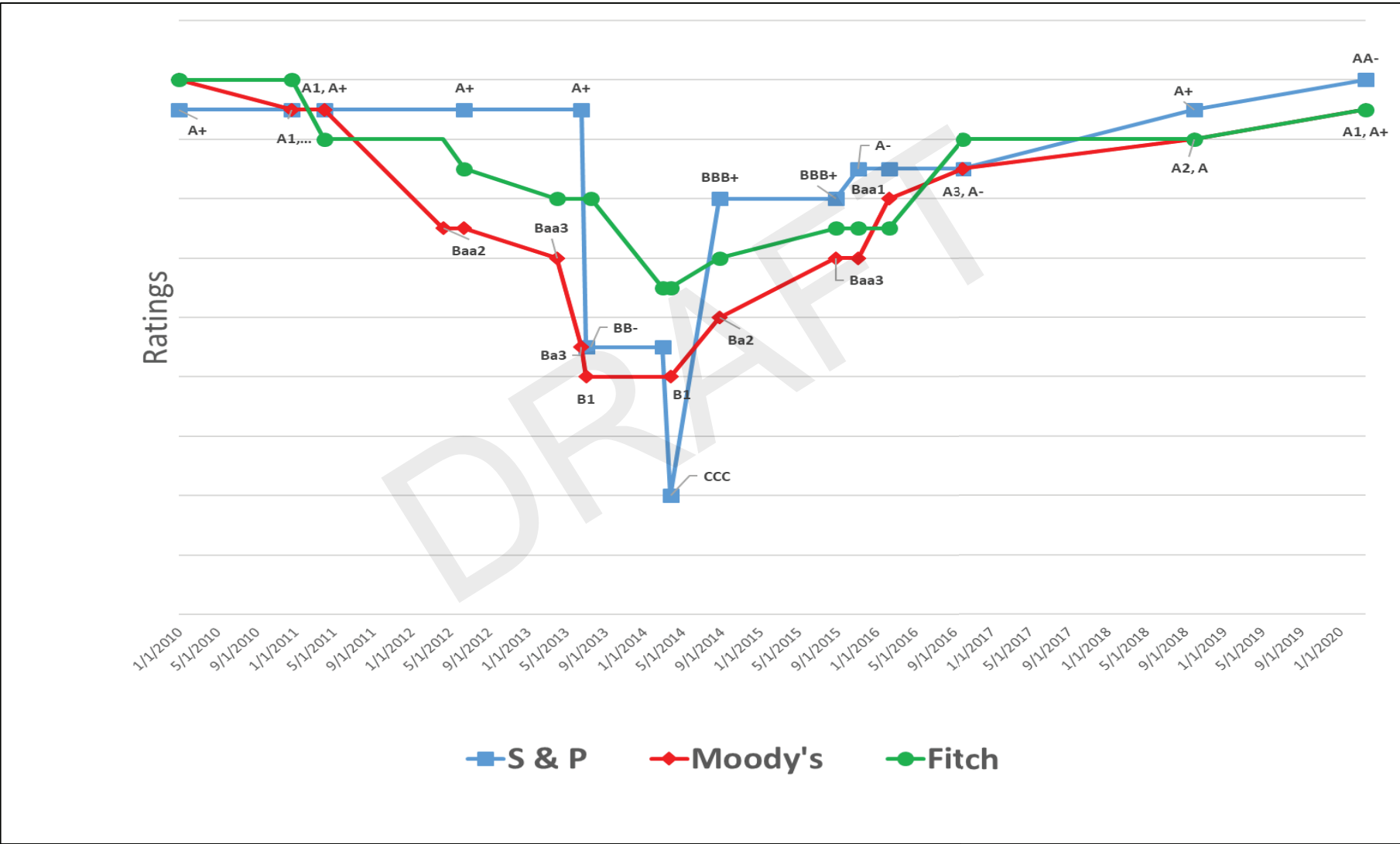
As of June 30, 2020

Debt Type	Standard & Poor's	Rating Agency Moody's	Fitch
Water Supply System Revenue			
Senior lien	AA-	A1	A+
Second lien	A+	A2	A
Junior lien	A+	N/A	N/A
Sewage Disposal System Revenue			
Senior lien	AA-	A1	A+
Second lien	A	A2	A
Junior lien	A	N/A	N/A

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GREAT LAKES WATER AUTHORITY

Water and Sewer Senior Lien - Debt Ratings History
As of June 30, 2020



GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - OVERVIEW

As of June 30, 2020

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. Net Revenues are defined as all Revenues except for those transferred to the Operations and Maintenance Fund. Revenues are defined in the Master Bond Ordinance 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. The MBO establishes minimum debt coverage levels at 1.20 for senior lien bonds, 1.10 for second lien bonds and 1.00 for any junior lien bonds, other than second lien bonds. Debt service coverage ratios are inclusive of all debt held on behalf of both GLWA and DWSD.

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.

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GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - GAAP BASIS - WATER FUND

As of June 30, 2020

	Water Fund			
	Adopted Budget	Amended Budget	Actual	Variance
Operating Revenue				
Suburban Wholesale Customers [1]	\$ 309,284,500	\$ 304,634,200	\$ 306,049,429	\$ 1,415,229
Detroit Customers				
Wholesale Service Charge Revenue [1]	21,295,500	21,295,500	21,295,500	-
Local Service Revenues [2]	75,007,000	75,007,000	76,791,900	1,784,900
Subtotal - Detroit Customers	96,302,500	96,302,500	98,087,400	1,784,900
Other Operating Revenue-GLWA	-	2,400	256,300	253,900
Other Operating Revenue-DWSD	2,200,000	2,200,000	3,163,744	963,744
Other Nonoperating Revenue-GLWA	-	-	1,656,336	1,656,336
Earnings on investments less WRAP and construction fund investment earnings	9,084,200	8,084,200	9,115,115	1,030,915
Total Revenue	416,871,200	411,223,300	418,328,324	7,105,024
Operating Expenses				
Operations and Maintenance Regional System	131,490,500	126,840,200	131,840,040	4,999,840
Operations and Maintenance transfer to Local System	34,662,400	34,662,400	34,662,400	-
Legacy Pension Obligations Regional System [3]	6,048,000	6,048,000	6,048,000	-
Legacy Pension Obligations Local System [3]	4,272,000	4,272,000	4,272,000	-
Total Operating Expenses	176,472,900	171,822,600	176,822,440	4,999,840
Pledged revenues for the year ending June 30, 2020	\$ 240,398,300	\$ 239,400,700	\$ 241,505,884	\$ 2,105,184
Principal and interest funding requirement for the year ending June 30, 2020 [4]:				
Senior Lien Bonds	\$ 123,909,900	\$ 122,318,900	\$ 122,318,928	\$ 28
Second Lien Bonds	47,849,300	47,849,400	44,163,725	(3,685,675)
Total Senior and Second Lien Bonds	171,759,200	170,168,300	166,482,653	(3,685,647)
Junior Lien Bonds	2,909,100	2,701,200	2,700,808	(392)
Total All Bonds	\$ 174,668,300	\$ 172,869,500	\$ 169,183,461	\$ (3,686,039)
GAAP Basis Debt Service Coverage				
Senior Lien Bonds	1.94	1.96	1.97	0.01
Senior and Second Lien Bonds	1.40	1.41	1.45	0.04
All Bonds, Including SRF Junior Lien	1.38	1.38	1.43	0.05

[1] Total GLWA Regional System Wholesale Revenue reported net of bad debt allowance and \$6,652,348 for the KWA debt service credits

[2] Local Service Revenue reported net of bad debt allowance.

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

[4] Computed consistent with rate covenant basis for rate determination purposes.

GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - GAAP BASIS - SEWAGE DISPOSAL FUND
As of June 30, 2020

	Sewage Disposal Fund			
	Adopted Budget	Amended Budget	Actual	Variance
Operating Revenue				
Suburban Wholesale Customers [1]	\$ 266,363,600	\$ 266,363,600	\$ 266,003,286	\$ (360,314)
Industrial waste charges	13,743,600	7,833,600	7,854,593	20,993
Pollutant surcharges	-	5,910,000	6,448,508	538,508
Subtotal - Regional System Suburban Wholesale Customers	<u>280,107,200</u>	<u>280,107,200</u>	<u>280,306,387</u>	<u>199,187</u>
Detroit Customers				
Wholesale Service Charge Revenue [1]	185,807,300	185,807,300	185,807,300	-
Local Service Revenues [2]	<u>101,867,700</u>	<u>101,867,700</u>	<u>80,935,263</u>	<u>(20,932,437)</u>
Subtotal - Detroit Customers	287,675,000	287,675,000	266,742,563	(20,932,437)
Other Operating Revenue-GLWA	-	400,000	521,957	121,957
Other Operating Revenue-DWSD	500,000	500,000	857,826	357,826
Other Nonoperating Revenue-GLWA	5,960,000	5,960,000	5,969,660	9,660
Earnings on investments less WRAP and construction fund investment earnings	<u>8,730,800</u>	<u>7,730,800</u>	<u>7,775,080</u>	<u>44,280</u>
Total Revenue	<u>582,973,000</u>	<u>582,373,000</u>	<u>562,173,473</u>	<u>(20,199,527)</u>
Operating Expenses				
Operations and Maintenance Regional System	187,057,200	181,925,800	174,514,562	(7,411,238)
Operations and Maintenance transfer to Local System	69,343,500	69,343,500	55,243,500	(14,100,000)
Legacy Pension Obligations Regional System [3]	10,824,000	10,824,000	10,824,000	-
Legacy Pension Obligations Local System [3]	<u>2,856,000</u>	<u>2,856,000</u>	<u>2,856,000</u>	<u>-</u>
Total Operating Expenses	<u>270,080,700</u>	<u>264,949,300</u>	<u>243,438,062</u>	<u>(21,511,238)</u>
Pledged revenues for the year ending June 30, 2020	<u>\$ 312,892,300</u>	<u>\$ 317,423,700</u>	<u>\$ 318,735,411</u>	<u>\$ 1,311,711</u>
Principal and interest funding requirement for the year ending June 30, 2020 [4]:				
Senior Lien Bonds	\$ 148,568,300	\$ 147,533,800	\$ 147,310,565	\$ (223,235)
Second Lien Bonds	<u>45,878,900</u>	<u>45,878,900</u>	<u>45,878,850</u>	<u>(50)</u>
Total Senior and Second Lien Bonds	194,447,200	193,412,700	193,189,415	(223,285)
Junior Lien Bonds	<u>52,941,400</u>	<u>52,659,300</u>	<u>52,593,843</u>	<u>(65,457)</u>
Total All Bonds	<u>\$ 247,388,600</u>	<u>\$ 246,072,000</u>	<u>\$ 245,783,258</u>	<u>\$ (288,742)</u>
GAAP Basis Debt Service Coverage				
Senior Lien Bonds	2.11	2.15	2.16	0.01
Senior and Second Lien Bonds	1.61	1.64	1.65	0.01
All Bonds, Including SRF Junior Lien	1.26	1.29	1.30	0.01

[1] Total GLWA Regional System Wholesale Revenue reported net of bad debt allowance.

[2] Local Service Revenue reported net of bad debt allowance.

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

[4] Computed consistent with rate covenant basis for rate determination purposes.

GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - RATE COVENANT BASIS - WATER FUND

As of June 30, 2020

	Water Fund			
	Adopted Budget	Amended Budget	Actual	Variance
Operating Revenue				
Suburban Wholesale Customers	\$ 309,284,500	\$ 304,636,600	\$ 303,568,071	\$ (1,068,529)
Detroit Customers				
Wholesale Service Charge Revenue	21,295,500	21,295,500	21,295,500	-
Local Service Revenues	77,207,000	77,207,000	75,590,223	(1,616,777)
Subtotal - Detroit Customers	98,502,500	98,502,500	96,885,723	(1,616,777)
Earnings on investments less WRAP and construction fund investment earnings	9,084,200	8,084,200	7,742,625	(341,575)
Total Revenue	416,871,200	411,223,300	408,196,419	(3,026,881)
Operating Expenses				
Operations and Maintenance Regional System	131,490,500	126,840,200	126,188,192	(652,008)
Operations and Maintenance transfer to Local System	34,662,400	34,662,400	34,662,400	-
Legacy Pension Obligations Regional System	6,048,000	6,048,000	6,048,000	-
Legacy Pension Obligations Local System	4,272,000	4,272,000	4,272,000	-
Total Operating Expenses	176,472,900	171,822,600	171,170,592	(652,008)
Pledged revenues for the year ending June 30, 2020	\$ 240,398,300	\$ 239,400,700	\$ 237,025,827	\$ (2,374,873)
Principal and interest funding requirement for the year ending June 30, 2020 [1]:				
Senior Lien Bonds	\$ 123,909,900	\$ 122,318,900	\$ 122,318,928	\$ 28
Second Lien Bonds	47,849,300	47,849,400	44,163,725	(3,685,675)
Total Senior and Second Lien Bonds	171,759,200	170,168,300	166,482,653	(3,685,647)
Junior Lien Bonds	2,909,100	2,701,200	2,700,808	(392)
Total All Bonds	\$ 174,668,300	\$ 172,869,500	\$ 169,183,461	\$ (3,686,039)
Rate Covenant Debt Service Coverage				
Senior Lien Bonds	1.94	1.96	1.94	(0.02)
Senior and Second Lien Bonds	1.40	1.41	1.42	0.01
All Bonds, Including SRF Junior Lien	1.38	1.38	1.40	0.02

[1] Computed consistent with rate covenant basis for rate determination purposes.

GREAT LAKES WATER AUTHORITY

CALCULATION OF DEBT SERVICE COVERAGE - RATE COVENANT BASIS - SEWAGE DISPOSAL FUND
As of June 30, 2020

	Sewage Disposal Fund			
	Adopted Budget	Amended Budget	Actual	Variance
Operating Revenue				
Suburban Wholesale Customers	\$ 286,067,200	\$ 286,467,200	\$ 291,884,274	\$ 5,417,074
Detroit Customers				
Wholesale Service Charge Revenue	185,807,300	185,807,300	185,807,300	-
Local Service Revenues	102,367,700	102,367,700	78,882,259	(23,485,441)
Subtotal - Detroit Customers	288,175,000	288,175,000	264,689,559	(23,485,441)
Earnings on investments less WRAP and construction fund investment earnings	8,730,800	7,730,800	5,372,063	(2,358,737)
Total Revenue	582,973,000	582,373,000	561,945,896	(20,427,104)
Operating Expenses				
Operations and Maintenance Regional System	187,057,200	181,925,800	176,416,149	(5,509,651)
Operations and Maintenance transfer to Local System	69,343,500	69,343,500	55,243,500	(14,100,000)
Legacy Pension Obligations Regional System	10,824,000	10,824,000	10,824,000	-
Legacy Pension Obligations Local System	2,856,000	2,856,000	2,856,000	-
Total Operating Expenses	270,080,700	264,949,300	245,339,649	(19,609,651)
Pledged revenues for the year ending June 30, 2020	\$ 312,892,300	\$ 317,423,700	\$ 316,606,247	\$ (817,453)
Principal and interest funding requirement for the year ending June 30, 2020 [1]:				
Senior Lien Bonds	\$ 148,568,300	\$ 147,533,800	\$ 147,310,565	\$ (223,235)
Second Lien Bonds	45,878,900	45,878,900	45,878,850	(50)
Total Senior and Second Lien Bonds	194,447,200	193,412,700	193,189,415	(223,285)
Junior Lien Bonds	52,941,400	52,659,300	52,593,843	(65,457)
Total All Bonds	\$ 247,388,600	\$ 246,072,000	\$ 245,783,258	\$ (288,742)
Rate Covenant Debt Service Coverage				
Senior Lien Bonds	2.11	2.15	2.15	-
Senior and Second Lien Bonds	1.61	1.64	1.64	-
All Bonds, Including SRF Junior Lien	1.26	1.29	1.29	-

[1] Computed consistent with rate covenant basis for rate determination purposes.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE HISTORY - WATER FUND

As of June 30, 2020

	2020	2019 [3]	2018 [3]	2017 [3]	2016 [1] & [3]
GAAP Basis					
Pledged revenue	\$ 241,505,884	\$ 243,712,390	\$ 271,314,197	\$ 282,545,208	\$ 276,399,904
Principal and interest funding requirement [2]:					
Senior and second lien bonds					
Senior lien bonds	\$ 122,318,928	\$ 119,230,820	\$ 127,687,420	\$ 134,234,660	\$ 128,177,999
Second lien bonds	44,163,725	46,214,385	42,852,813	38,990,023	41,178,843
Total senior and second lien bonds	166,482,653	165,445,205	170,540,233	173,224,683	169,356,842
Junior lien bonds	2,700,808	2,521,249	2,009,658	1,785,328	1,781,683
Total all bonds	\$ 169,183,461	\$ 167,966,454	\$ 172,549,891	\$ 175,010,011	\$ 171,138,525
GAAP basis debt service coverage					
Senior lien bonds	1.97	2.04	2.12	2.10	2.16
Senior and second lien bonds	1.45	1.47	1.59	1.63	1.63
All bonds, including SRF junior lien	1.43	1.45	1.57	1.61	1.62
Rate Covenant Basis [4]					
Pledged revenue	\$ 237,025,827	\$ 254,119,800	\$ 264,608,700	\$ 272,268,900	
Principal and interest funding requirement [2]:					
Senior and second lien bonds					
Senior lien bonds	\$ 122,318,928	\$ 119,230,820	\$ 127,687,420	\$ 134,234,660	
Second lien bonds	44,163,725	46,214,385	42,852,813	38,990,023	
Total senior and second lien bonds	166,482,653	165,445,205	170,540,233	173,224,683	
Junior lien bonds	2,700,808	2,521,249	2,009,658	1,785,328	
Total all bonds	\$ 169,183,461	\$ 167,966,454	\$ 172,549,891	\$ 175,010,011	
Rate covenant debt service coverage					
Senior lien bonds	1.94	2.13	2.07	2.03	
Senior and second lien bonds	1.42	1.54	1.55	1.57	
All bonds, including SRF junior lien	1.40	1.51	1.53	1.56	

[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] Computed consistent with rate covenant basis for rate determination purposes.

[3] Prior years restated for consistency with current year calculation. Debt Service Coverage amounts presented may differ slightly from last year's Comprehensive Annual Financial Report.

[4] GLWA introduced the rate covenant basis for debt service coverage in the 2020 Water and Sewer Official Statements. Historic calculations were computed as part of that official statement development and carried forward here.

GREAT LAKES WATER AUTHORITY

DEBT SERVICE COVERAGE HISTORY - SEWAGE DISPOSAL FUND

As of June 30, 2020

	2020	2019 [3]	2018 [3]	2017 [3]	2016 [1] & [3]
GAAP Basis					
Pledged revenue	\$ 318,735,411	\$ 306,491,042	\$ 311,232,453	\$ 350,855,928	\$ 328,801,416
Principal and interest funding requirement [2]:					
Senior and second lien bonds					
Senior lien bonds	\$ 147,310,565	\$ 145,795,507	\$ 141,718,836	\$ 140,854,010	\$ 140,191,016
Second lien bonds	45,878,850	43,922,600	43,990,100	47,918,639	48,944,924
Total senior and second lien bonds	193,189,415	189,718,107	185,708,936	188,772,649	189,135,940
Junior lien bonds	52,593,843	49,454,156	46,571,896	45,782,165	39,434,631
Total all bonds	\$ 245,783,258	\$ 239,172,263	\$ 232,280,832	\$ 234,554,814	\$ 228,570,571
GAAP basis debt service coverage					
Senior lien bonds	2.16	2.10	2.20	2.49	2.35
Senior and second lien bonds	1.65	1.62	1.68	1.86	1.74
All bonds, including SRF junior lien	1.30	1.28	1.34	1.50	1.44
Rate Covenant Basis [4]					
Pledged revenue	\$ 316,606,247	\$ 307,746,262	\$ 289,772,284	\$ 284,557,882	
Principal and interest funding requirement [2]:					
Senior and second lien bonds					
Senior lien bonds	\$ 147,310,565	\$ 145,795,507	\$ 141,718,836	\$ 140,854,010	
Second lien bonds	45,878,850	43,922,600	43,990,100	47,918,639	
Total senior and second lien bonds	193,189,415	189,718,107	185,708,936	188,772,649	
Junior lien bonds	52,593,843	49,454,156	46,571,896	45,782,165	
Total all bonds	\$ 245,783,258	\$ 239,172,263	\$ 232,280,832	\$ 234,554,814	
Rate covenant debt service coverage					
Senior lien bonds	2.15	2.11	2.04	2.02	
Senior and second lien bonds	1.64	1.62	1.56	1.51	
All bonds, including SRF junior lien	1.29	1.29	1.25	1.21	

[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] Computed consistent with rate covenant basis for rate determination purposes.

[3] Prior years restated for consistency with current year calculation. Debt Service Coverage amounts presented may differ slightly from last year's Comprehensive Annual Financial Report.

[4] GLWA introduced the rate covenant basis for debt service coverage in the 2020 Water and Sewer Official Statements. Historic calculations were computed as part of that official statement development and carried forward here.

GREAT LAKES WATER AUTHORITY

SERVICE AREA DEMOGRAPHICS
Last Ten Years

Year	Total Population (1)	Unemployment (2)	Per Capita Income (3)	Total Debt Service (5)	Debt Per Capita	Debt Service as a Percentage of Income
Water Fund						
2020	3,800,000	17.8%	\$ 56,043 (4)	\$ 169,059,344	\$ 44.49	0.08%
2019	3,800,000	4.5%	53,748 (4)	162,377,261	42.73	0.08%
2018	3,800,000	4.3%	51,493	172,549,890	45.41	0.09%
2017	3,800,000	4.6%	50,863	175,010,012	46.06	0.09%
2016 *	3,800,000	5.3%	48,692	171,138,525	45.04	0.09%
2015 *	3,800,000	5.9%	46,894	178,923,900	47.09	0.10%
2014 *	3,800,000	8.1%	44,718	182,464,900	48.02	0.11%
2013 *	3,800,000	9.7%	42,555	172,458,800	45.38	0.11%
2012 *	3,800,000	10.1%	42,168	153,524,200	40.40	0.10%
2011 *	3,800,000	11.4%	40,607	164,435,900	43.27	0.11%
Sewage Disposal Fund						
2020	2,800,000	17.8%	\$ 56,043 (4)	\$ 245,641,464	\$ 87.73	0.16%
2019	2,800,000	4.5%	53,748 (4)	235,381,235	84.06	0.16%
2018	2,800,000	4.3%	51,493	232,491,813	83.03	0.16%
2017	2,800,000	4.6%	50,863	234,554,814	83.77	0.16%
2016 *	2,800,000	5.3%	48,692	228,570,571	81.63	0.17%
2015 *	2,807,000	5.9%	46,894	232,612,800	82.87	0.18%
2014 *	2,807,000	8.1%	44,718	229,611,100	81.80	0.18%
2013 *	2,807,000	9.7%	42,555	225,222,900	80.24	0.19%
2012 *	2,807,000	10.1%	42,168	203,092,300	72.35	0.17%
2011 *	2,807,000	11.4%	40,607	209,063,900	74.48	0.18%

(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 2020 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

(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 2011-2015 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 5 Years Ago

Employer	Type of Business	Fiscal Year 2020		Fiscal Year 2015	
		Full-time Employees	Rank	Full-time Employees	Rank
Ford Motor Co.	Automobile Manufacturer	46,000	1	44,598	1
University of Michigan	Public University and Health System	36,323	2	30,852	4
FCA US LLC/Chrysler Group LLC	Automobile Manufacturer	34,833	3	33,657	2
General Motors Co.	Automobile Manufacturer	32,320	4	32,353	3
Beaumont Health	Health Care System	27,128	5	27,387	5
Henry Ford Health System	Health Care System	26,929	6	17,332	7
U.S. Government	Federal Government	18,893	7	18,701	6
Rock Ventures	Umbrella Entity managing a portfolio of companies in investment and real estate	18,096	8	13,445	10
Trinity Health	Health Care System	14,575	9	14,231	9
Ascension Michigan	Health Care System	12,830	10	n/a	n/a
Illitch Companies	Food, Sports, and Entertainment	n/a	n/a	16,567	8

Source: Crain's Detroit Business, Largest Southeast Michigan Employers - Ranked by full-time employees as of January 2020 and July 2015.

GREAT LAKES WATER AUTHORITY

PRODUCED AND BILLED WATER VOLUMES Last Ten Years

Fiscal Year	Estimated Total Water Produced (Mcf) [1]	Reported Water Sales			Estimated Non-Revenue Water (Mcf)	Estimated Non-Revenue % of Production [3]
		Wholesale Customer Billed (Mcf)	Local System Billed (Mcf)	Total Water Billed (Mcf) [2]		
2020	19,989,460	13,578,706	2,622,321	16,201,027	3,788,433	19.0%
2019	20,968,100	13,708,571	2,806,192	16,514,763	4,453,337	21.2%
2018	23,228,600	14,391,768	2,876,255	17,268,023	5,960,577	25.7%
2017	23,915,600	14,824,000	2,912,030	17,736,030	6,179,570	25.8%
2016 *	23,580,700	14,730,400	3,086,400	17,816,800	5,763,900	24.4%
2015 *	23,238,000	13,547,000	3,173,700	16,720,700	6,517,300	28.0%
2014 *	26,088,800	14,778,500	3,410,600	18,189,100	7,899,700	30.3%
2013 *	26,832,800	15,687,900	3,660,300	19,348,200	7,484,600	27.9%
2012 *	27,219,500	16,280,300	3,903,100	20,183,400	7,036,100	25.8%
2011 *	26,513,000	16,094,700	4,176,600	20,271,300	6,241,700	23.5%

[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 wholesale amounts for all customers other than Detroit, Dearborn, and Highland Park. Water sales to those customers reflect, in part, estimated retail water sales during this period. GLWA is modifying this approach, which will result in larger reported water sales figures in future years.

[3] As noted in [1] and [2], these values are likely overestimated. GLWA expects flow measuring methods to result in lower values in future years.

* GLWA assumed operations on January 1, 2016. The information in this table from 2011-2015 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

TREATED AND BILLED WASTEWATER VOLUMES Last Ten Years

Fiscal Year	Total Wastewater Treated (mg)	Customer Wastewater Volume (mg)		
		Wholesale Customers [1]	Local System [2]	Total
2020	213,700	117,200	18,500	135,700
2019	249,500	124,800	19,600	144,400
2018	235,600	119,400	19,500	138,900
2017	254,400	105,500	19,200	124,700
2016 *	209,200	96,800	20,600	117,400
2015 *	222,700	103,700	20,100	123,800
2014 *	233,200	107,200	22,100	129,300
2013 *	220,600	99,400	23,100	122,500
2012 *	255,500	112,600	24,900	137,500
2011 *	253,500	112,700	28,000	140,700

[1] Primarily metered wastewater volumes, but also includes water sales volumes for some customers whose wastewater is not metered. A fixed charge billing methodology was implemented in 2015. Volumes reflect measured and monitored wastewater flow.

[2] Reported water usage billed to retail customers

* GLWA assumed operations on January 1, 2016. The information in this table from 2011-2015 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

ADDITIONAL SUMMARY STATISTICS
Last Five Years

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

* 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.

DRAFT



Water Works Park
Water Treatment Facility



GLWA

Great Lakes Water Authority

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Detroit, Michigan 48226
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