

Louisville and Jefferson County
Metropolitan Sewer District

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Fiscal Year Ended June 30, 2023



A Component Unit of Louisville
Jefferson County Metro Government
Commonwealth of Kentucky



ANNUAL COMPREHENSIVE FINANCIAL REPORT

**Louisville/Jefferson County Metropolitan Sewer District
Louisville, Kentucky**

**A Component Unit of Louisville/Jefferson County Metro Government
Commonwealth of Kentucky**

**Fiscal Years Ended June 30, 2023
With Comparative Information for Fiscal Year Ended June 30, 2022**

**Prepared by the Department of Finance
Brad Good, Chief Financial Officer**

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**INTRODUCTORY SECTION
(Unaudited)**



MSD's Cedar Creek Water Quality Treatment Center



700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

October 31, 2023

Letter of Transmittal

To the customers and investors of Louisville and Jefferson County Metropolitan Sewer District,

I am pleased to present the Annual Comprehensive Financial Report for the fiscal year ended June 30, 2023. MSD's financial statements have been prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP). In accordance with Kentucky Revised Statute 65A.030, MSD is required to undergo an annual independent audit of its financial statements.

Responsibility for the accuracy, completeness and fairness of the data presented herein, including all disclosures, rests with MSD. To provide a reasonable basis for making these representations, the management of MSD has established a comprehensive internal control framework that is designed to both protect its assets from loss, theft, or misuse and to compile sufficient reliable information for the preparation of MSD's financial statements in conformity with GAAP. MSD's internal control framework has been designed to provide reasonable, rather than absolute assurance, that the financial statements as of June 30, 2023 and 2022 are free from material misstatement. Reasonable assurance recognizes that (1) the cost of a control should not exceed the benefits derived and (2) the valuation of costs and benefits requires the use of estimates and judgements by management. To the best of my knowledge and belief, the accompanying data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of the operations of MSD. All disclosures necessary to enable the reader to understand MSD's financial activities have been included.

GAAP requires that management provide a narrative to accompany the basic financial statements in the form of Management's Discussion and Analysis which is found beginning on page 3. This letter of transmittal is intended to be read in conjunction with that analysis.

Crowe LLP has been retained by MSD to serve as its independent auditors and has issued an unmodified opinion on MSD's financial statements for the years ended June 30, 2023. The independent auditor's report can be found at the beginning of the financial section of this report.

As a recipient of federal funding, MSD is required to undergo a Single Audit in conformity with the Single Audit Act of 1984 and the Single Audit Act Amendments of 1996 and U.S. Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards 2CFR200 (Uniform Guidance). Information related to the Single Audit, including the Schedule of Expenditures of Federal Awards, findings and recommendations and the auditor's reports on internal controls is provided in a separate report.

Profile:

MSD was created in 1946 as a public body corporate and subdivision of the Commonwealth of Kentucky. MSD has complete control, possession and supervision of the sewer, drainage and flood protection systems within the majority of Louisville Metro, which comprises all of Jefferson County, Kentucky. In addition, MSD has control, possession and supervision of the sewer system in portions of Oldham County and Bullitt County, Kentucky. Chapter 76 of the Kentucky Revised Statutes authorizes MSD to construct additions, betterments, and extensions within its service area and to recover the cost of its services in accordance with rate schedules adopted by its Board.

MSD is a component unit of the Louisville/Jefferson County Metro Government. The Louisville Metro Mayor appoints, with the approval of the Louisville Metro Council, the members to MSD's governing Board, its Executive Director, Chief Engineer and Secretary/Treasurer. The Board, which has statutory authority to enter into contracts and agreements for the management, regulation and financing of MSD, manages its business and activities. The Board has full statutory responsibility for approving and revising MSD's annual budgets, for financing deficits and for disposition of surplus funds. MSD has no special financial relationship with the Louisville Metro Government; however, effective July 1, 2006, MSD began providing free

wastewater and drainage services to Louisville Metro Government. The value of these services in fiscal year 2023 was \$7,958,608.

Customer Base:

MSD's revenue is derived from wastewater and drainage service charges collected from residential, commercial, and industrial customers. Wastewater service charges are distributed to respective customer classes on the basis of actual costs incurred to collect and treat wastewater. For fiscal year 2023, 59% of MSD's wastewater service charge revenue came from residential customers, 32% came from commercial customers and 9% from industrial customers. The top 10 wastewater customers provided \$16.0 million, or 5.5%, of MSD's total wastewater revenue in fiscal year 2023 compared to \$16.9 million, or 5.7%, in fiscal year 2022. Drainage service charges are assessed based on the equivalent service units (ESU) for each parcel of property. An ESU is defined by MSD as 2,500 square feet of impervious area. For fiscal year 2023, 38% of MSD's drainage service charge revenue came from residential customers, 56% came from commercial customers and 6% from industrial customers. The top 10 drainage customers provided \$6.8 million, or 7.2%, of MSD's total drainage revenue in fiscal year 2023 compared to \$6.2 million, or 6.6%, in fiscal year 2022.

Local Economy:

Louisville is the largest city in the Commonwealth of Kentucky and home to the Kentucky Derby and a bourbon-centric tourism industry. The U.S. Census Bureau estimated that there were 773 thousand residents in Louisville as of July 1, 2022. This is a decrease of 1.2% from the population estimate base reported on April 1, 2020. The Louisville metropolitan area has a population of over 1.2 million residents.

According to the Bureau of Labor Statistics, Louisville employment was at 690 thousand jobs in June of 2023 compared to 679 thousand jobs in June 2022, an increase of 1.6%. MSD's employment base has grown 3.2% over the last fiscal year with 696 full time employees at June 30, 2023 compared to 674 full time employees at June 30, 2022. Major employers in the Louisville metropolitan area include United Parcel Service, Jefferson County Public Schools, Norton Healthcare, Ford Motor Company, and UofL Health.

The United States Department of Labor's Bureau of Labor Statistics listed the unemployment rate for Jefferson County, Kentucky, as 3.8% in June 2023 compared to 3.7% in June of 2022. Additional information on demographic and economic conditions for Louisville can be found in the Statistical Section of this report.

Financial Planning:

MSD is focused on continuously strengthening its financial position through planning and analysis to meet its short-term and long-term operational and infrastructure plans.

MSD's short-term plan looks forward five years at a time. Formalized budgets are developed and approved annually by the Board for operating and capital spending. Budgets are developed with an eye toward maintaining operational efficiency and achieving incremental improvement of MSD's critical debt service coverage and debt to operating ratios.

MSD's long-term financial planning window is twenty years and is supported by the Critical Repair and Reinvestment Program and a twenty year comprehensive financial model. The financial model enables MSD to analyze alternative scenarios in order to optimize resources in the face of competing priorities. Rate adjustments are carefully considered in conjunction with bond issues and other low-cost financing options to maintain affordability for MSD customers. Key long-term considerations are debt service coverage, maintaining level debt service payments, and maintaining adequate cash reserves.

Major Initiatives:

- *Blueprint 2025:* MSD remains committed to our Integrated Strategic Business Plan, Blueprint 2025, adopted in fiscal year 2019. Blueprint 2025 is our action plan to transform MSD into a Utility of the Future by the year 2025. The strategic purpose behind Blueprint 2025 is to deliver MSD's three core business functions (wastewater treatment, drainage and flood protection) in a collaborative, efficient, innovative manner to meet regulatory requirements and community level of service through a sustainable, purpose-driven and skilled workforce.
- *Infrastructure Repair and Replacement:* MSD has been focused on controlling sewer overflows since consent decree work began in 2006. However, infrastructure needs in the wastewater, drainage and flood protection systems MSD maintains and operates go beyond the work

encompassed in the consent decree. Sustaining reliable treatment capability and capacity at the Morris Forman Water Quality Treatment Center is important to ensure proper wastewater treatment into the future. Replacing and repairing portions of the Ohio River flood protection system is necessary to protect local communities from flooding as we experience more frequent and more intense storms. Addressing sewers that are failing due to age is critical to keeping local homes and businesses safe. During fiscal year 2023, MSD declared nine new emergency projects where critical infrastructure failed. The cost to complete these unbudgeted, emergency projects is more the \$6.5 million. In recent years, MSD has aggressively pursued federal and state assistance to fund infrastructure reinvestment at the local level. This assistance has come in the form of low-interest loans (over \$167 million since 2020) and state and federal grants (over \$30 million in fiscal year 2023 alone). However, with a five-year capital improvement plan that totals over \$1 billion, MSD will need to continue to issue revenue bond debt to fund system improvements. The MSD Board adjusts service rates to fund this critical work in an efficient and fiscally responsible manner. On August 1, 2022, rates for wastewater and drainage service charges in Jefferson County increased by 5.0%. The average monthly residential wastewater bill (based on 4,000 gallons of water consumed per month) increased by \$2.76 from \$54.99 to \$57.75. The monthly residential drainage service charge increased by \$0.59 from \$11.88 to \$12.47.

- *Credit Rating:* MSD strives continuously to maintain strong financial performance and bond ratings. The credit ratings on our senior lien bonds remained at Aa3, AA, and AA- by Moody's Investors Service, Standard and Poor's Ratings Services, and Fitch, respectively, during fiscal year 2023. Strong credit ratings enable MSD is issue debt at lower borrowing costs which reduces ratepayer costs over the long term.

Awards

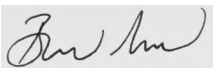
Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MSD for its annual comprehensive financial report for the fiscal year ended June 30, 2022. This was the 31st consecutive year that MSD has achieved this prestigious award. In order to be awarded a Certificate of Achievement, MSD must publish an easily readable and efficiently organized annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our 2023 Annual Comprehensive Financial Report continues to meet the Certificate of Achievement Program's requirements and we will submit it to GFOA to determine its eligibility for another certificate.

Acknowledgements

The Finance division of MSD has worked hard to make possible timely publication of the fiscal year 2023 Annual Comprehensive Financial Report and I would like to thank them for their individual contributions. I would also like to take this opportunity to thank the MSD Board of Directors and the Executive Leadership Team for their continued support.

Respectfully Submitted,



Brad Good
Chief Financial Officer



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Louisville and Jefferson County
Metropolitan Sewer District
Kentucky**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2022

Christopher P. Morill

Executive Director/CEO

OUR VISION

The Innovative, regional utility for safe, clean waterways.

OUR MISSION

Provide quality wastewater, stormwater and flood protection services to protect public health and safety through sustainable solutions, fiscal stewardship, and strategic partnerships.

CRITICAL SUCCESS FACTORS

Sustain Quality and Compliant Wastewater, Stormwater, and Flood Protection Services:

Champion the protection of public health and safety and the environment through sustainable solutions, sound management practices, and effective operational processes and support systems.

Earn the Community's Trust Daily as the Leading Provider of Quality Wastewater, Stormwater, and Flood Protection Services:

Earn community trust through consistent delivery of quality services and respectful interactions with our customers.

Transform into an Employer of Purpose

Where Employees are Provided the Opportunity to Thrive:

Attract, equip and retain an effective workforce, reflective and supportive of our community, which consistently delivers high-quality service to customers internally and externally.

Ensure Financial Stewardship and Sustainability of Community Resources:

Meet today's operating and capital investment needs while managing risk and long-term affordability for the future.

Realize Operational Efficiencies and Revenue Generation through Strategic Partnerships and Innovation:

Implement innovative ideas and partnerships that drive organizational resiliency and sustainability.



MSD's Central Maintenance Facility

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

Officials
June 30, 2023

Board of Directors

Marita Willis, Chair

Keith Jackson, Vice Chair

Rebecca Cox

Gerald Joiner

Ricky Mason

Carmen Moreno-Rivera

Jeff Mosley

John Selent

Executive Staff

James A. Parrott, Executive Director, Secretary/ Treasurer

Angela Akridge, Chief Strategy Officer for Business Transformation and Regulatory Compliance

Paul Bagley, Chief Information Officer

Brian Bingham, Chief Operations Officer

Lynne Fleming, Chief Human Resources Officer

Brad Good, Chief Financial Officer

Lopez High, Chief of Facilities, Safety and Security

Sharise Horne, Chief of Equity Community Partnerships

David Johnson, Chief Engineer

Rene Lindsay, Chief Procurement Officer

Kim Reed, Chief Innovation Officer

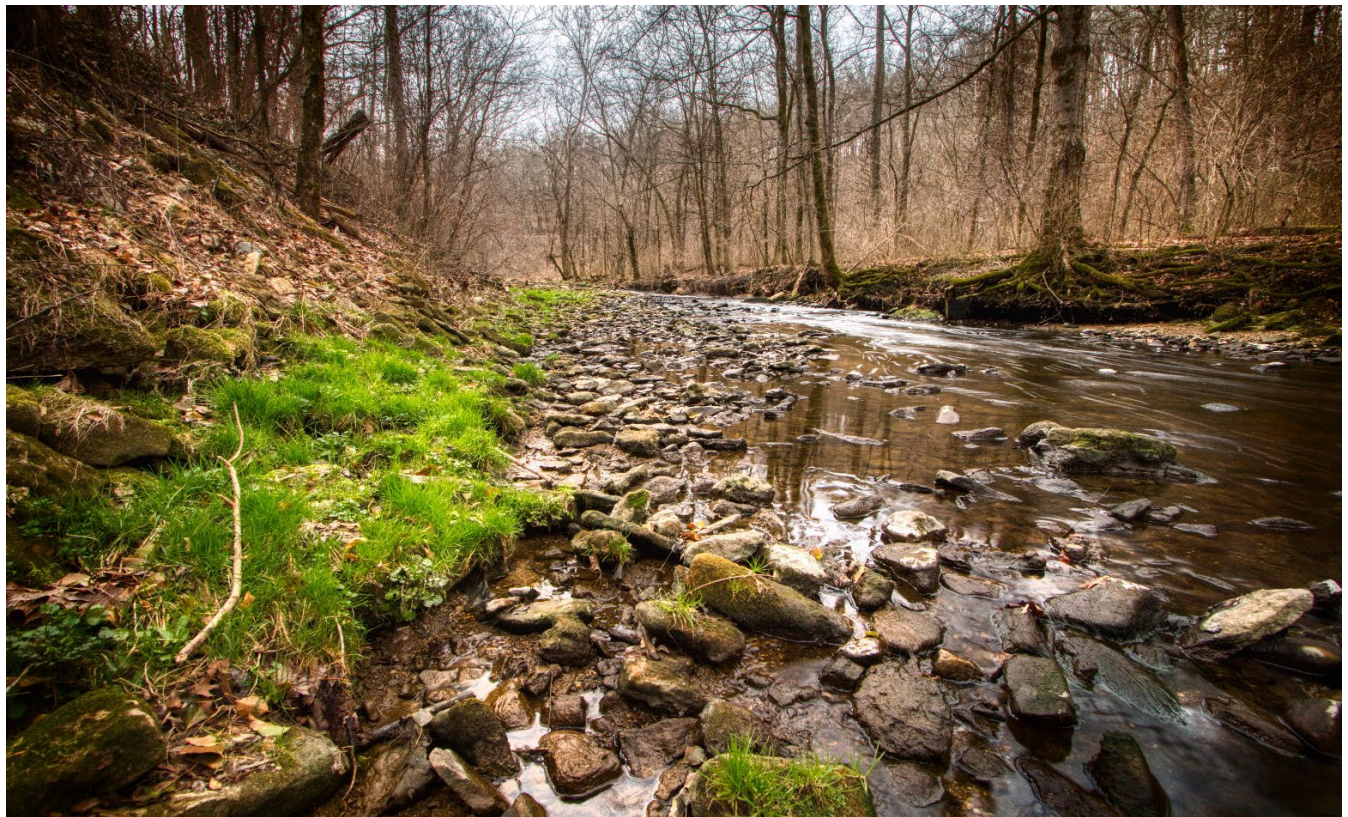
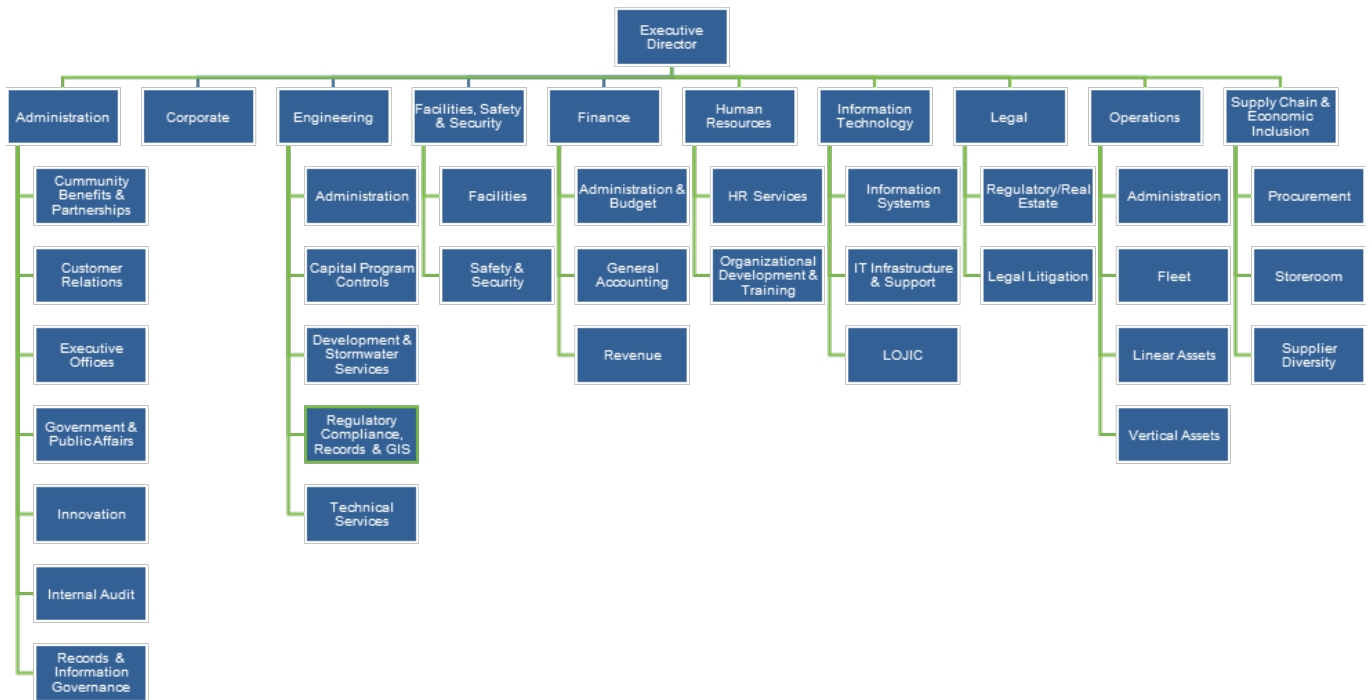
Wes Sydnor, Chief of Government and Public Affairs

Kellie Watson, General Counsel and Legal Director

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

Organizational Chart

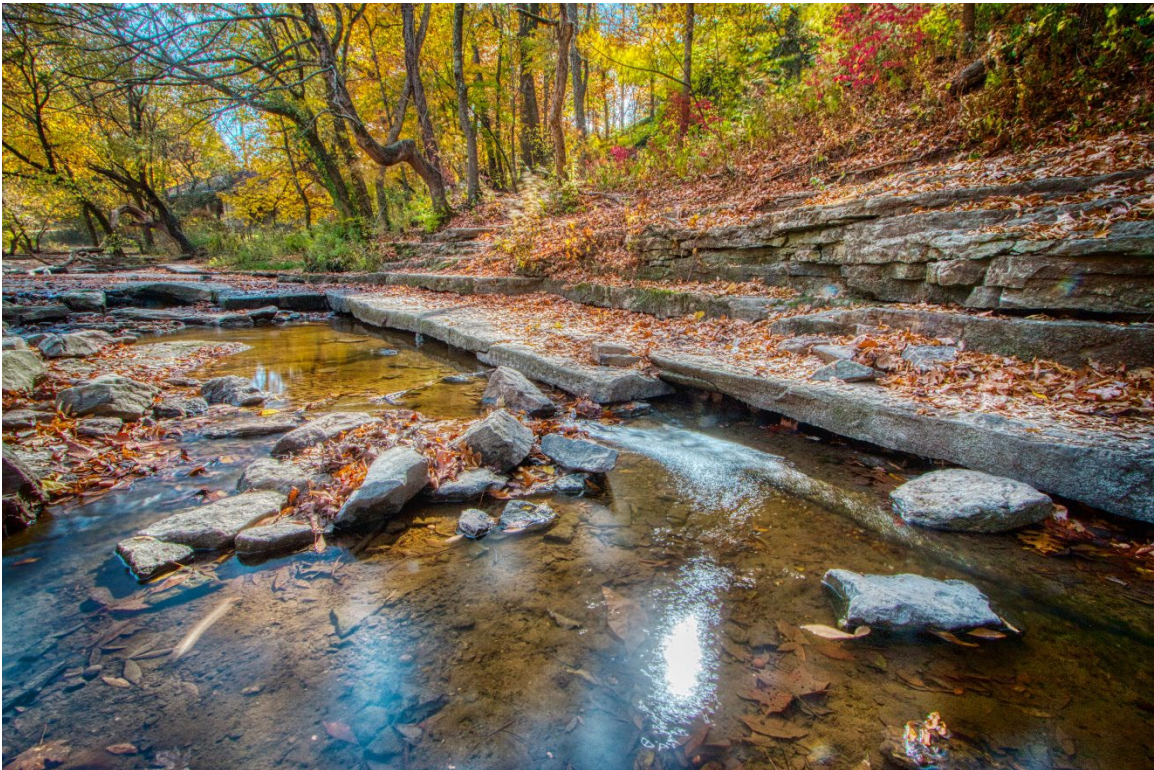
June 30, 2023



Hite Creek in Jefferson County



FINANCIAL SECTION



Middle Fork Beargrass Creek in Louisville's Cherokee Park

INDEPENDENT AUDITOR'S REPORT

Board of Directors
Louisville and Jefferson County Metropolitan Sewer District
Louisville, Kentucky

Report on the Audit of the Financial Statements***Opinion***

We have audited the financial statements of the Louisville and Jefferson County Metropolitan Sewer District, a component unit of the Louisville-Jefferson County Metro Government, as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the Louisville and Jefferson County Metropolitan Sewer District's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Louisville and Jefferson County Metropolitan Sewer District, as of June 30, 2023, and the changes in financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards (Government Auditing Standards)*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Louisville and Jefferson County Metropolitan Sewer District, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

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

Auditor's Responsibilities for the Audit of the Financial Statements

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

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we

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

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

Report on Summarized Comparative Information

We have previously audited Louisville and Jefferson County Metropolitan Sewer District's 2022 financial statements, and we expressed an unmodified audit opinion on the financial statements of Louisville and Jefferson County Metropolitan Sewer District in our report dated October 24, 2022. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2022 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 11 through 23, the Schedule of Proportionate Share of the Net Pension Liability on page 68, the Schedule of Employer Contributions – Pension on page 70, the Schedule of Proportionate Share of the Net OPEB Liability on page 71, and the Schedule of Employer Contributions – OPEB on page 73 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Louisville and Jefferson County Metropolitan Sewer District'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 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 introductory and statistical sections are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated October 31, 2023 on our consideration of the Louisville and Jefferson County Metropolitan Sewer District'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 Louisville and Jefferson County Metropolitan Sewer District'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 Louisville and Jefferson County Metropolitan Sewer District's internal control over financial reporting and compliance.

Crowe LLP

Crowe LLP

Louisville, Kentucky
October 31, 2023

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)

The management of Louisville and Jefferson County Metropolitan Sewer District (MSD) present this Management's Discussion and Analysis (MD&A) for the fiscal year ended June 30, 2023 and 2022. This narrative provides the reader with condensed comparative financial data, an analysis of the results of our operations, a description of capital asset and long term debt activity, and a discussion of future economic factors that will impact our operations. This MD&A is intended to be read in conjunction with the financial statements immediately following this section.

FINANCIAL HIGHLIGHTS

Fiscal Year 2023:

- Total net position increased from fiscal 2022 to fiscal 2023 by \$81.2 million, or 8.8%.
- Total assets and deferred outflows of resources increased \$125.5 million, or 3.2%, from fiscal 2022 to fiscal 2023.
- Operating revenues increased \$26.6 million, or 7.3%, from fiscal 2022 to fiscal 2023.
- Service and administrative costs increased \$5.6 million, or 4.8%, from fiscal 2022 to fiscal 2023.
- MSD maintained unrestricted cash and investments totaling \$135.7 million as of June 30, 2023, compared to \$118.6 million as of June 30, 2022.
- MSD had 299 days cash on hand at June 30, 2023, compared to 269 days cash on hand at June 30, 2022.
- Senior debt coverage was 2.08x for fiscal 2023 compared to 1.95x for fiscal 2022.

Fiscal Year 2022:

- Total net position increased from fiscal 2021 to fiscal 2022 by \$75.2 million, or 8.9%.
- Total assets and deferred outflows of resources increased \$128.2 million, or 3.4%, from fiscal 2021 to fiscal 2022.
- Operating revenues increased \$35.9 million, or 10.9%, from fiscal 2021 to fiscal 2022.
- Service and administrative costs increased \$9.2 million, or 8.4%, from fiscal 2021 to fiscal 2022.
- MSD maintained unrestricted cash and investments totaling \$118.6 million as of June 30, 2022 compared to \$107.4 million as of June 30, 2021.
- MSD had 269 days cash on hand at June 30, 2022 compared to 259 days cash on hand at June 30, 2021.
- Senior debt coverage was 1.95x for fiscal 2022 compared to 1.86x for fiscal 2021.

OVERVIEW OF THE FINANCIAL STATEMENTS

MSD uses the accrual basis of accounting to prepare its financial statements wherein revenues are recorded when earned and expenses are recorded at the time a liability is incurred. MD&A serves as a narrative introduction to the financial statements which consist of the following parts:

- *Statements of Net Position:* This statement includes all of MSD's assets, liabilities and deferred outflow and inflow of resources. It provides information about the nature and amounts of investments in assets and the obligations to creditors. In addition, it provides the basis for computing rate of return, evaluating the capital structure of MSD and assessing the liquidity and financial flexibility of the organization.
- *Statements of Revenues, Expenses and Changes in Net Position:* This statement identifies the revenues generated and expenses incurred during the fiscal year and helps the user to assess the financial efficiency of MSD during the time period for which the statement relates.
- *Statements of Cash Flows:* This statement provides information related to MSD's cash receipts and cash expenditures during the fiscal year. It reports cash receipts, cash payments, and net changes in cash resulting from operations, investing, and financing activities.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

- *Notes to the Financial Statements:* The notes contain descriptions of the policies underlying the amounts displayed in the financial statements along with other information that is essential to a full understanding of the data provided in the financial statements.
- *Required Supplementary Information:* Information is presented related to MSD's pension and Other Post-Employment Benefits (OPEB) including annual contributions made to the plans and annual investment returns.

Other supplemental information is presented for comparative analysis and is not part of the basic financial statements. Other supplemental information consists of:

- *Statistical Section:* Ten years of financial statement information, operating indicators, and demographic information is presented for comparative analysis.

STATEMENTS OF NET POSITION

MSD's total net position at June 30, 2023 was \$1.0 billion, an increase of \$81.2 million, or 8.8%, from June 30, 2022 (see Figure 1). Total assets and deferred outflows increased \$125.5 million, or 3.2%, to \$4.0 billion. Total liabilities and deferred inflows increased \$44.2 million, or 1.5%, to \$3.0 billion.

MSD's total net position at June 30, 2022 was \$923.0 million, an increase of \$75.2 million, or 8.9%, from June 30, 2021 (see Figure 1). Total assets and deferred outflows increased \$128.2 million, or 3.4%, to \$3.9 billion. Total liabilities and deferred inflows increased \$52.9 million, or 1.8%, to \$3.0 billion.

(amounts in thousands)	FY 2023	FY 2022	FY 2021	2023-2022		2022-2021	
				Increase (Decrease)	% Change	Increase (Decrease)	% Change
Unrestricted current assets	\$ 171,322	\$ 153,423	\$ 143,541	\$ 17,899	11.7%	\$ 9,882	6.9%
Restricted current assets	22,414	33,735	21,181	(11,321)	(33.6%)	12,554	59.3%
Capital assets	3,433,261	3,293,005	3,168,614	140,256	4.3%	124,391	3.9%
Unrestricted non-current assets	5,271	7,138	10,478	(1,867)	(26.2%)	(3,340)	(31.9%)
Restricted non-current assets	77,898	80,331	82,930	(2,433)	(3.0%)	(2,599)	(3.1%)
Other non-current assets	297,999	302,370	306,175	(4,371)	(1.4%)	(3,805)	(1.2%)
Total assets	4,008,165	3,870,002	3,732,919	138,163	3.6%	137,083	3.7%
Deferred outflows of resources	59,456	72,110	80,984	(12,654)	(17.5%)	(8,874)	(11.0%)
Total assets and deferred outflows	4,067,621	3,942,112	3,813,903	125,509	3.2%	128,209	3.4%
Current liabilities	17,940	20,395	29,099	(2,455)	(12.0%)	(8,704)	(29.9%)
Current liabilities from restricted assets	129,974	103,924	118,469	26,050	25.1%	(14,545)	(12.3%)
Non-current liabilities	2,874,580	2,846,272	2,808,293	28,308	1.0%	37,979	1.4%
Total liabilities	3,022,494	2,970,591	2,955,861	51,903	1.7%	14,730	0.5%
Deferred inflows of resources	40,848	48,489	10,277	(7,641)	(15.8%)	38,212	371.8%
Total liabilities and deferred inflows	3,063,342	3,019,080	2,966,138	44,262	1.5%	52,942	1.8%
Net investment in capital assets	955,494	891,231	834,820	64,263	7.2%	56,411	6.8%
Restricted, net	82,418	84,607	84,429	(2,189)	(2.6%)	178	0.2%
Unrestricted	(33,633)	(52,806)	(71,484)	19,173	(36.3%)	18,678	(26.1%)
Total net position	1,004,279	923,032	847,765	81,247	8.8%	75,267	8.9%
Total liabilities, deferred inflows & net position	\$ 4,067,621	\$ 3,942,112	\$ 3,813,903	\$ 125,509	3.2%	\$ 128,209	3.4%

Following is a discussion of significant changes in assets, liabilities, and net position between fiscal years 2023 and 2022, and between fiscal years 2022 and 2021, respectively.

Fiscal Year 2023:

The largest portion of MSD's net position is its net investment in capital assets. Net investment in capital assets increased \$64.2 million, or 7.2%, in fiscal 2023. Capital asset construction and acquisitions were

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT’S DISCUSSION AND ANALYSIS (unaudited)**

funded in fiscal 2023 by \$115 million of commercial paper notes¹, draws on State Revolving Fund loans², cash generated from operations and contributions in aid of construction from developers.

Funds restricted for a specific purpose by the 1993 Sewer and Drainage System Revenue Bond Resolution (the General Bond Resolution) are classified as restricted net position. MSD is required by the resolution to make monthly transfers to its debt service accounts sufficient to meet the semi-annual debt service payments on outstanding bonds. The General Bond Resolution sets a debt service reserve requirement equal to at least 10% of the face amount of all bonds issued under the resolution, 100% of the maximum aggregate net debt service in the current or any future fiscal year or 125% of the average aggregate net debt service in the current or any future fiscal year. MSD funds the reserve at 100% of maximum aggregate net debt service with a combination of cash, investments and a \$75 million debt service reserve surety policy³. Restricted net position decreased \$2.1 million from fiscal 2022 to fiscal 2023 due a release of debt service reserves in conjunction with the 2023A and 2023B refunding revenue bond issues.

The remaining balance of MSD’s net position is unrestricted and may be used for any allowable purpose. Unrestricted net position increased \$19.1 million from fiscal 2022 to fiscal 2023 primarily as the result of a reduction in other long-term liabilities.

Fiscal Year 2022:

The largest portion of MSD’s net position is its net investment in capital assets. Net investment in capital assets increased \$56.4 million, or 6.8%, in fiscal 2022. Capital asset construction and acquisitions were funded in fiscal 2022 by \$135 million of commercial paper notes⁴, draws on State Revolving Fund loans⁵, cash generated from operations and contributions in aid of construction from developers.

Funds restricted for a specific purpose by the 1993 Sewer and Drainage System Revenue Bond Resolution (the General Bond Resolution) are classified as restricted net position. MSD is required by the resolution to make monthly transfers to its debt service accounts sufficient to meet the semi-annual debt service payments on outstanding bonds. The General Bond Resolution sets a debt service reserve requirement equal to at least 10% of the face amount of all bonds issued under the resolution, 100% of the maximum aggregate net debt service in the current or any future fiscal year or 125% of the average aggregate net debt service in the current or any future fiscal year. MSD funds the reserve at 100% of maximum aggregate net debt service with a combination of cash, investments, and a \$75 million debt service reserve surety policy⁶. Restricted net position increased \$178 thousand from fiscal 2021 to fiscal 2022 due to higher cash and investment balances on hand for debt service, debt reserves and construction.

The remaining balance of MSD’s net position is unrestricted and may be used for any allowable purpose. Unrestricted net position increased \$18.6 million from fiscal 2021 to fiscal 2022 primarily as the result of a reduction in other long-term liabilities.

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

The increase in net position at June 30, 2023 was \$5.9 million, or 7.9%, as compared with June 30, 2022 (see Figure 2). MSD’s total operating revenues increased by 7.3% to \$392.0 million and total operating expenses increased by 4.2% to \$241.3 million.

The increase in net position at June 30, 2022 was \$24.2 million, or 47.5%, as compared with June 30, 2021 (see Figure 2). MSD’s total operating revenues increase by 10.9% to \$365.3 million and total operating expenses increased by 2.4% to \$231.6 million.

¹ See Note 7 – Long-Term Debt

² See Note 7 – Long-Term Debt

³ See Note 2 – Cash and Investments

⁴ See Note 7 – Long-Term Debt

⁵ See Note 7 – Long-Term Debt

⁶ See Note 2 – Cash and Investments

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

(amounts in thousands)	2023-2022				2022-2021		
	FY 2023	FY 2022	FY 2021	Increase (Decrease)	% Change	Increase (Decrease)	% Change
Operating revenues							
Service charges	\$ 385,163	\$ 356,870	\$ 325,717	\$ 28,293	7.9%	\$ 31,153	9.6%
Other operating income	6,863	8,497	3,701	(1,634)	(19.2%)	4,796	129.6%
Total operating revenues	392,026	365,367	329,418	26,659	7.3%	35,949	10.9%
Non-operating revenues	4,283	9,001	12,154	(4,718)	(52.4%)	(3,153)	(25.9%)
Total revenues	396,309	374,368	341,572	21,941	5.9%	32,796	9.6%
Operating expenses							
Service and administrative costs	124,641	118,978	109,741	5,663	4.8%	9,237	8.4%
GASB 68/75 pension expense	2,132	8,725	18,547	(6,593)	(75.6%)	(9,822)	(53.0%)
Depreciation & amortization expense	114,562	103,964	97,874	10,598	10.2%	6,090	6.2%
Total operating expenses	241,335	231,667	226,162	9,668	4.2%	5,505	2.4%
Non-operating expenses							
Interest expense	104,100	101,703	103,915	2,397	2.4%	(2,212)	(2.1%)
Amortization of debt discount/premium	(9,558)	(13,404)	(14,322)	3,846	(28.7%)	918	(6.4%)
Change in fair value - swaps	(7,614)	(11,293)	(8,796)	3,679	(32.6%)	(2,497)	28.4%
Total non-operating expenses	86,928	77,006	80,797	9,922	12.9%	(3,791)	(4.7%)
Total expenses	328,263	308,673	306,959	19,590	6.3%	1,714	0.6%
Income before capital contributions	68,046	65,695	34,613	2,351	3.6%	31,082	89.8%
Capital contributions	13,201	9,572	16,422	3,629	37.9%	(6,850)	(41.7%)
Increase (decrease) in net position	81,247	75,267	51,035	5,980	7.9%	24,232	47.5%
Net position - Beginning	923,032	847,765	796,730	75,267	8.9%	51,035	6.4%
Net position - Ending	<u>\$ 1,004,279</u>	<u>\$ 923,032</u>	<u>\$ 847,765</u>	<u>\$ 81,247</u>	<u>8.8%</u>	<u>\$ 75,267</u>	<u>8.9%</u>

Following is a discussion of the primary reasons for changes in MSD's revenues and expenses between fiscal years 2023 and 2022, and between fiscal years 2022 and 2021, respectively.

Fiscal Year 2023:

Operating revenues increased by \$26.6 million, or 7.3%, to \$392.0 million primarily due to a 5.0% rate increase effective August 1, 2022, to wastewater and drainage service charges in the Jefferson County service area. Wastewater rates in the Bullitt County service area increased 12.0% on January 1, 2023.

Operating expenses increased by \$9.6 million, or 4.2%, to \$241.3 million primarily due to higher depreciation and amortization expense. The increase was partially offset by a reduction in GASB 68 and GASB 75 pension expense.

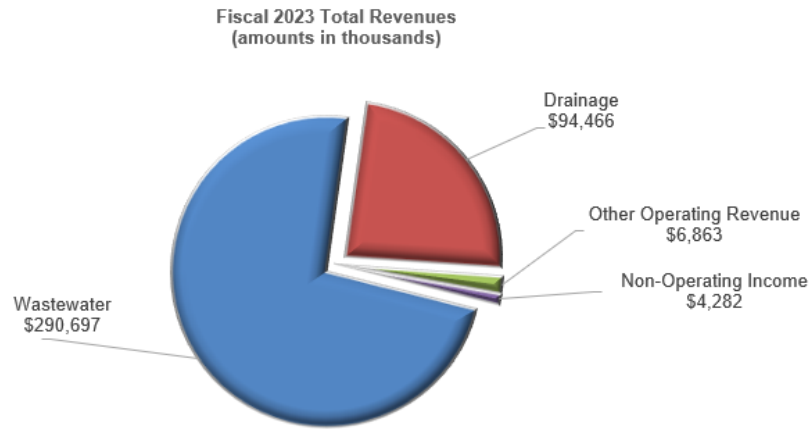
Fiscal Year 2022:

Operating revenues increased by \$35.9 million, or 10.9%, to \$365.3 million primarily due to a 6.9% rate increase effective August 1, 2021, to wastewater and drainage service charges and the acquisition of the Bullitt County Sanitation system on November 30, 2021, which added \$2.2 million in operating revenue to fiscal 2022.

Operating expenses increased by \$5.5 million, or 2.4%, to \$231.6 million primarily due to higher insurance premiums, chemical cost and depreciation and amortization expense. These expenses were partially offset by a reduction in GASB 68 and GASB 75 pension expense.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

Fiscal 2023 Total Revenues:



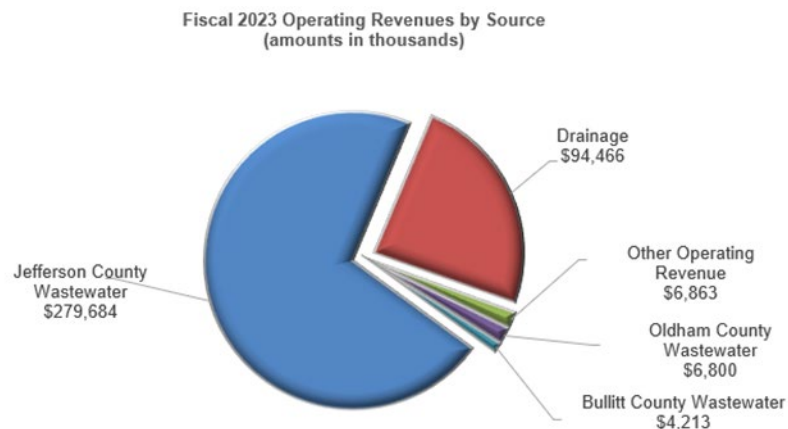
Wastewater service charges totaled \$290.6 million which is an increase of \$20.6 million, or 7.6%, from fiscal 2022. Wastewater service charge rates in Jefferson County increased 5.0% on August 1, 2022.

Drainage service charges totaled \$94.4 million which is an increase of \$7.6 million, or 8.8%, from fiscal 2022. Drainage service charge rates in Jefferson County increased 5.0% on August 1, 2022.

Other operating income totaled \$6.8 million, which is a decrease of \$1.6 million, or 19.2%, from fiscal 2022. This decrease was driven by lower capacity fees and inflow and infiltration fees in fiscal 2023.

Non-operating revenues, which represent gain or loss on disposal of assets, interest income earned on investments, the federal interest subsidy on MSD's Build America Bonds totaled \$4.2 million, which is a decrease of \$4.7 million, or 52.4%, from fiscal 2022. This reduction was driven primarily by a loss on disposal of land. In fiscal year 2023, MSD transferred land with a book value of \$13.3 million to Louisville Metro Government for the development of parklands.

Fiscal 2023 Operating Revenues by Source:



Wastewater service charges totaled \$290.6 million and consisted of \$279.6 million for MSD's Jefferson County service area, \$6.8 million for MSD's Oldham County service area and \$4.2 million for MSD's Bullitt

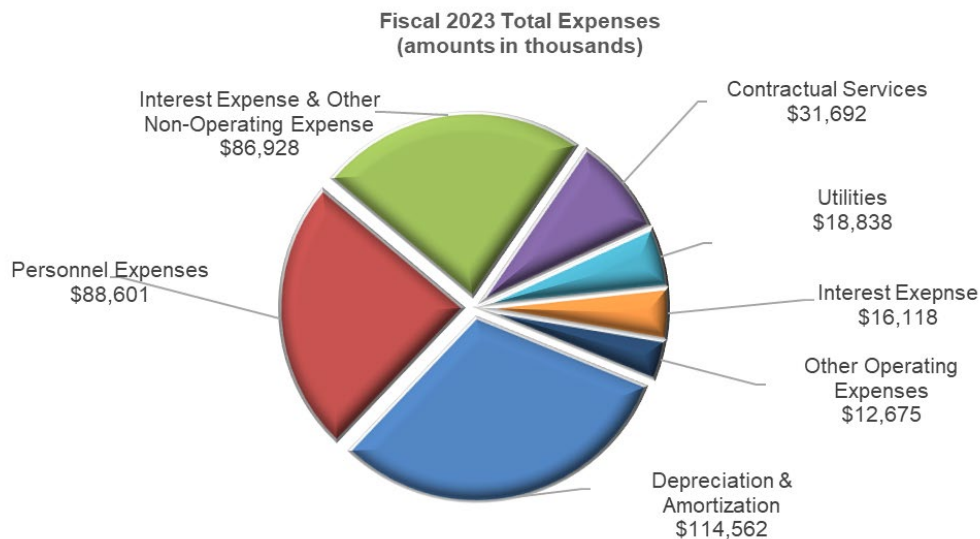
**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT’S DISCUSSION AND ANALYSIS (unaudited)**

County service area. Wastewater service charges were 58.9% Residential, 32.5% Commercial and 8.6% Industrial.

Drainage service charges totaled \$94.4 million and consisted of MSD’s Jefferson County drainage service area. Drainage service charges were 37.8% Residential, 55.6% Commercial and 6.6% Industrial.

Other operating revenue totaled \$6.8 million and consisted of \$6.3 million for Jefferson County, \$243 thousand for Oldham County and \$211 thousand for Bullitt County.

Fiscal 2023 Total Operating Expenses:



Personnel expenses decreased \$1.6 million, or 1.9%, to \$98.6 million due to lower GASB 68 pension and GASB 75 OPEB expenses because of better investment performance compared to fiscal 2022⁷.

Contractual services increased slightly by \$404 thousand, or 1.3% to \$31.6 million.

Utility expenses increased \$2.2 million, or 13.5%, to \$18.8 million due to increases in electric and natural gas rates and increased water usage.

Interest expense and other non-operating expenses increased by \$9.9 million, or 12.9% to \$86.9 million primarily due to the issuance of the 2022A revenue bonds⁸.

Depreciation and amortization increased by \$10.5 million, or 10.2%, to \$114.5 million as \$359 million in new assets were placed into service during fiscal year 2023⁹ and as MSD implemented GASB 96¹⁰.

Total expenses in fiscal 2023 increased \$18.5 million, or 5.3%, to \$369.4 million before capitalization. Capitalized overhead totaled \$41.1 million bringing net total expenses to \$328.2 million.

⁷ See Note 14 – Defined Benefit Pension and Other Postemployment Benefits Plan - Cost Sharing - CERS

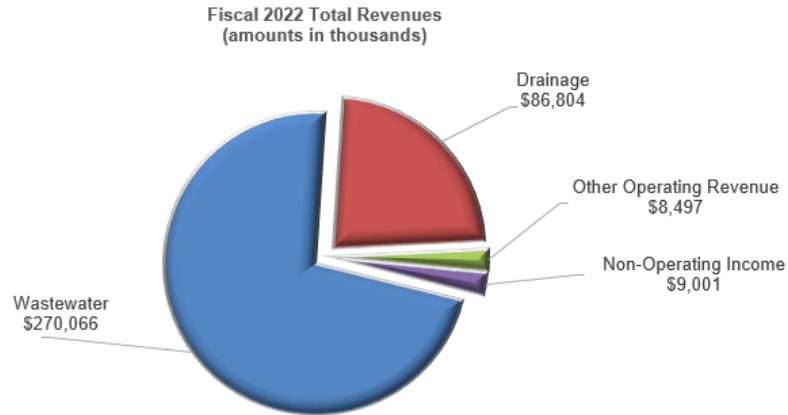
⁸ See Note 7 – Long Term Debt

⁹ See note 4 – Capital Assets, Plant, Lines and Other Facilities

¹⁰ See Note 6 – Subscription-Based Information Technology Agreements

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

Fiscal 2022 Total Revenues:



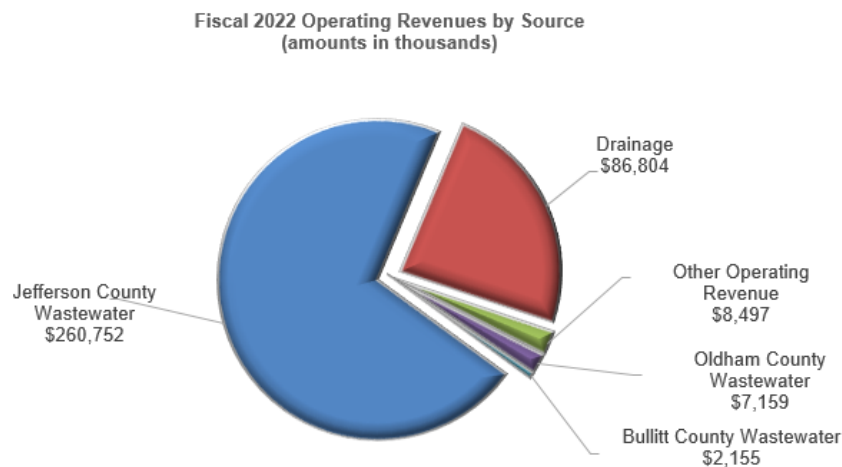
Wastewater service charges totaled \$270.0 million which is an increase of \$24.2 million, or 9.8%, from fiscal 2021. Wastewater service charge rates in Jefferson County increased 6.9% on August 1, 2021.

Drainage service charges totaled \$86.8 million which is an increase of \$6.8 million, or 8.6%, from fiscal 2021. Drainage service charge rates in Jefferson County increased 6.9% on August 1, 2021.

Other operating income totaled \$8.4 million, which is an increase of \$4.7 million, or 129.5%, from fiscal 2021. This increase was driven by higher capacity fees and inflow and infiltration fees in fiscal 2022.

Non-operating revenues, which represent gain or loss on disposal of assets, interest income earned on investments, the federal interest subsidy on MSD's Build America Bonds totaled \$9.0 million, which is a decrease of \$3.1 million, or 25.9%, from fiscal 2021. This reduction was driven primarily by a decrease in the market value of MSD's investment portfolio.

Fiscal 2022 Operating Revenues by Source:



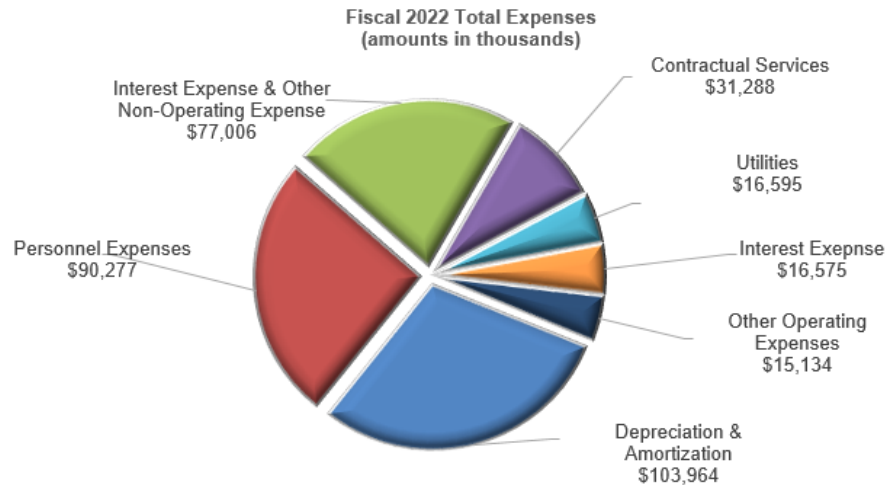
Wastewater service charges totaled \$270.0 million and consisted of \$260.8 million for MSD's Jefferson County service area, \$7.1 million for MSD's Oldham County service area and \$2.1 million for MSD's Bullitt County service area. Wastewater service charges were 59.5% Residential, 31.8% Commercial and 8.7% Industrial:

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT’S DISCUSSION AND ANALYSIS (unaudited)**

Drainage service charges totaled \$86.8 million and consisted of MSD’s Jefferson County drainage service area. Drainage service charges were 37.6% Residential, 55.9% Commercial and 6.5% Industrial.

Other operating revenue totaled \$8.4 million and consisted of \$8.1 million for Jefferson County, \$190 thousand for Oldham County and \$134 thousand for Bullitt County.

Fiscal 2022 Total Operating Expenses:



Personnel expenses decreased \$6.0 million, or 6.3%, to \$90.2 million due to lower GASB 68 pension and GASB 75 OPEB expenses because of better investment performance compared to fiscal 2021¹¹.

Contractual services decreased \$2.7 million, or 8.2% to \$31.2 million primarily due to lower legal fees.

Utility expenses increased slightly by \$330 thousand, or 2.0%, to \$16.5 million due to increases in natural gas and water costs.

Interest expense and other non-operating expenses decreased by \$3.7 million, or 1.4% to \$77.0 million primarily due to the refunding of the Series 2011A revenue bonds¹².

Depreciation and amortization increased by \$6.0 million, or 6.2%, to \$103.9 million as \$428 million in new assets were placed into service¹³.

Total expenses in fiscal 2022 increased \$2.0 million, or 0.6%, to \$350.8 million before capitalization. Capitalized overhead totaled \$42.1 million bringing net total expenses to \$308.7 million.

¹¹ See Note 14 – Defined Benefit Pension and Other Postemployment Benefits Plan - Cost Sharing - CERS

¹² See Note 7 – Long Term Debt

¹³ See note 4 – Capital Assets, Plant, Lines and Other Facilities

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

Capital Contributions:

Capital contributions increased \$3.6 million, or 37.9%, to \$13.2 million in fiscal 2023 (see Figure 3). This increase is primarily attributable to an increase in drainage infrastructure contributions from developers.

Capital contributions decreased \$6.8 million, or 41.7%, to \$9.5 million in fiscal 2022 (see Figure 3). This decrease is primarily attributable to a reduction in wastewater infrastructure contributions from developers.

FIGURE 3 - CAPITAL CONTRIBUTIONS							
<i>(amounts in thousands)</i>	FY 2023	FY 2022	FY 2021	2023-2022		2022-2021	
				Increase (Decrease)	%	Increase (Decrease)	%
Cash flows from:							
Developer's capital - wastewater	\$ 3,649	\$ 3,068	\$ 9,810	\$ 581	18.9%	\$ (6,742)	(68.7%)
Developer's capital - drainage	8,294	3,841	4,646	4,453	100.0%	(805)	0.0%
Federal grants	1,436	2,611	963	(1,175)	(45.0%)	1,648	171.1%
Capital recovery	(178)	52	1,003	(230)	100.0%	(951)	0.0%
Total capital contributions	<u>\$ 13,201</u>	<u>\$ 9,572</u>	<u>\$ 16,422</u>	<u>\$ 3,629</u>	<u>37.9%</u>	<u>\$ (6,850)</u>	<u>(41.7%)</u>

CAPITAL ASSETS

Total capital assets net of depreciation increased \$134.1 million, or 4.1%, to \$3.4 billion in fiscal 2023 (see Figure 4)¹⁴. Construction in progress was the driver for the growth in capital assets.

Total capital assets net of depreciation increased \$124.3 million, or 3.9%, to \$3.2 billion in fiscal 2022 (see Figure 4)¹⁵. Construction in progress was the driver for the growth in capital assets.

FIGURE 4 - CAPITAL ASSETS NET OF DEPRECIATION							
<i>(amounts in thousands)</i>	FY 2023	FY 2022	FY 2021	Increase (Decrease)	%	Increase (Decrease)	%
				2023-2022	Change	2022-2021	Change
Sewer lines	\$ 1,712,607	\$ 1,638,136	\$ 1,355,258	\$ 74,471	4.5%	\$ 282,878	20.9%
Wastewater treatment facilities	277,003	242,875	208,553	34,128	14.1%	34,322	16.5%
Drainage facilities	900,625	787,664	794,261	112,961	14.3%	(6,597)	-0.8%
Pumping and lift stations	157,877	160,774	147,917	(2,897)	-1.8%	12,857	8.7%
Administrative facilities	8,833	9,273	10,279	(440)	-4.7%	(1,006)	-9.8%
Maintenance facilities	12,429	6,851	6,941	5,578	81.4%	(90)	-1.3%
Machinery and equipment	23,927	23,625	18,490	302	1.3%	5,135	27.8%
Miscellaneous	24,495	3,607	1,801	20,888	579.1%	1,806	100.3%
Construction in progress	309,372	420,200	625,113	(110,828)	-26.4%	(204,913)	-32.8%
Total	<u>\$ 3,427,168</u>	<u>\$ 3,293,005</u>	<u>\$ 3,168,613</u>	<u>\$ 134,163</u>	<u>4.1%</u>	<u>\$ 124,392</u>	<u>3.9%</u>

DEBT ADMINISTRATION

MSD ended fiscal 2023 with \$2.6 billion in outstanding long-term debt, an increase of \$36.7 million compared to the end of fiscal 2022¹⁶ (see Figure 5). This is primarily due to the issuance of additional commercial paper to finance construction in progress. Short term debt outstanding, payable from restricted assets, totaled \$55.4 million at the end of fiscal 2023 compared to \$54.9 million at the end of fiscal 2022.

¹⁴ See Note 5 – Capital Assets – Plant, Lines and Other Facilities

¹⁵ See Note 5 – Capital Assets – Plant, Lines and Other Facilities

¹⁶ See Note 7 – Long-Term Debt

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

MSD ended fiscal 2022 with \$2.6 billion in outstanding long-term debt compared to \$2.5 billion in outstanding long-term debt at the end of fiscal 2021¹⁷ (see Figure 5). This is primarily due to the issuance of additional commercial paper to finance construction in progress. Short term debt outstanding, payable from restricted assets, totaled \$54.9 million at the end of fiscal 2022 compared to \$49.3 million at the end of fiscal 2021.

FIGURE 5 - SCHEDULE OF BONDS AND OTHER FINANCING

<i>(amounts in thousands)</i>	FY 2023	FY 2022	FY 2021	Increase (Decrease) 2023-2022	Increase (Decrease) 2022-2021
Senior Revenue Bonds					
Series 2009C	\$ 180,000	\$ 180,000	\$ 180,000	\$ -	\$ -
Series 2010A	330,000	330,000	330,000	-	-
Series 2011A	-	-	243,910	-	(243,910)
Series 2013A	-	115,790	115,790	(115,790)	-
Series 2013B	107,515	109,280	110,970	(1,765)	(1,690)
Series 2013C	-	125	250	(125)	(125)
Series 2014A	79,600	79,650	79,700	(50)	(50)
Series 2015A	170,845	171,395	172,175	(550)	(780)
Series 2015B	62,995	65,975	68,815	(2,980)	(2,840)
Series 2016A	146,540	147,500	148,415	(960)	(915)
Series 2016B	17,830	19,910	21,960	(2,080)	(2,050)
Series 2016C	-	12,995	32,305	(12,995)	(19,310)
Series 2017A	143,280	149,390	155,790	(6,110)	(6,400)
Series 2017B	30,245	31,210	32,055	(965)	(845)
Series 2018A	60,380	60,380	60,380	-	-
Series 2019A	-	8,845	17,065	(8,845)	(8,220)
Series 2020A	223,000	224,000	224,750	(1,000)	(750)
Series 2020C	108,415	109,605	110,790	(1,190)	(1,185)
Series 2021A	227,720	240,485	-	(12,765)	240,485
Series 2022A	224,250	224,750	-	(500)	224,750
Series 2023A	49,745	-	-	49,745	-
Series 2023B	41,950	-	-	41,950	-
Bond Anticipation Notes					
Series 2020A	-	-	226,340	-	(226,340)
Series 2021A	-	226,340	-	(226,340)	226,340
Series 2022A	226,340	-	-	226,340	-
Other Subordinate Debt					
General Obligation Bonds	9,894	10,774	11,629	(880)	(855)
Commercial Paper Notes	165,000	50,000	150,000	115,000	(100,000)
SRF Loans	39,797	39,998	32,462	(201)	7,536
KACO Lease	1,700	1,870	2,030	(170)	(160)
	<u>\$ 2,647,041</u>	<u>\$ 2,610,267</u>	<u>\$ 2,527,581</u>	<u>\$ 36,774</u>	<u>\$ 82,686</u>

Excludes bond premiums/discounts

¹⁷ See Note 7 – Long-Term Debt

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

Debt Service Ratio:

Although net operating income is the most significant component of determining MSD's debt service coverage ratio, other sources, including investment income and current period payments of property owner assessments, are also included in available revenues and net revenues for purposes of demonstrating MSD's compliance with the debt service ratio tests in the General Bond Resolution.

The General Bond Resolution and its supplements require MSD to provide available revenues for each fiscal year sufficient to pay the sum of 110% of each year's aggregate net debt service on revenue bonds, the amount, if any, required to be paid into the reserve account, all operating expenses as estimated in the annual budget, debt service on senior subordinated debt and any other subordinate debt and amounts necessary to pay and discharge all charges or liens payable out of available revenues. Available revenues, as used for purposes of the resolution, means all revenues and other amounts received by MSD and pledged as security for payment of bonds issued pursuant to the resolution, but excludes interest income which is capitalized in accordance with generally accepted accounting principles.

Net operating expenses include all reasonable, ordinary, usual or necessary current expenses of maintenance, repair, and operation determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. Operating expenses do not include reserves for extraordinary maintenance and repair or administrative and engineering expenses of MSD which are necessary or incidental to capital improvements for which debt has been issued and which may be paid from proceeds of such debt.

Aggregate net debt service is debt service on all bonds issued pursuant to the resolution including principal payments, excluding (i) interest expense which, in accordance with generally accepted accounting principles, is capitalized and which may be paid from the proceeds of debt and (ii) other amounts, if any, available or expected to be available in the ordinary course of business for payment of debt service.

MSD's debt service coverage ratio¹⁸, calculated on the foregoing basis, was 208% in 2023, 195% in 2022 and 186% in 2021 (see Figure 6).

FIGURE 6- DEBT SERVICE COVERAGE					
<i>(amounts in thousands)</i>	FY 2023	FY 2022	FY 2021	Increase (Decrease) 2023-2022	Increase (Decrease) 2022-2021
Total available revenues	\$ 411,058	\$ 374,827	\$ 342,392	9.7%	9.5%
Total net operating expenses	<u>124,641</u>	<u>118,978</u>	<u>109,741</u>	<u>4.8%</u>	<u>8.4%</u>
Net revenue	286,417	255,849	232,651	11.9%	10.0%
Aggregate net debt service	\$ 137,613	\$ 130,925	\$ 124,819	5.1%	4.9%
Debt service coverage ratio	208%	195%	186%	6.5%	4.8%

¹⁸ Excludes depreciation, amortization, GASB 68 pension expense and GASB 75 OPEB expense

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT’S DISCUSSION AND ANALYSIS (unaudited)**

Credit Ratings:

See Figure 7 for MSD’s existing credit ratings.

FIGURE 7- BOND AND COMMERCIAL PAPER RATINGS			
	Revenue Bonds	Subordinate Bond Anticipation Notes	Subordinate Commercial Paper Notes
Fitch Ratings	AA-		
Moody's Investors Service, Inc.	Aa3	MIG 1	P-1
S&P Global Ratings	AA	SP-1+	A-1+

FUTURE ECONOMIC FACTORS

On July 24, 2023, the MSD Board approved a 6.9% rate increase for wastewater and drainage service charges for the Jefferson County service area effective August 1, 2023. Our five-year financial plan projects annual wastewater and drainage rate increases in Jefferson County to provide funding for ongoing work associated with MSD’s Consent Decree.

Pursuant to the terms of an Interlocal Cooperation Agreement, on July 24, 2023, the MSD Board approved a 5% increase in the wastewater volume charge for MSD’s Oldham County service area effective August 1, 2023. Rate increases for wastewater service in Oldham County will not exceed 5% annually until rates for MSD’s Oldham County service area equal its Jefferson County service area.

Pursuant to the terms of an Interlocal Cooperation Agreement, on December 19, 2022, the MSD Board approved a 12% rate increase for wastewater service charges in its Bullitt County service area effective January 1, 2023. Through December 31, 2026, rate increases for wastewater service will not exceed the increases authorized by Bullitt County Ordinance No. 17-2 adopted by Bullitt County Fiscal Court on February 7, 2017. Starting January 1, 2027, rate increases for wastewater service in Bullitt County will not exceed 3% annually until rates for MSD’s Bullitt County service area equal its Jefferson County service area.

CONSENT DECREE

In April 2009, MSD entered into an amended consent decree with the Commonwealth of Kentucky’s Environmental and Public Protection Cabinet (KEPPC) and the U.S. Environmental Protection Agency (EPA) that superseded the original consent decree entered on August 12, 2005. The amended consent decree focuses on eliminating sewer overflows in MSD’s service area through an Integrated Overflow Abatement Plan (IOAP). The IOAP was amended in 2014 to improve compliance and adjust capital project schedules.

On September 14, 2022, MSD entered into a second amended consent decree with the KEPPC and the EPA which superseded and replaced the 2009 amended consent decree and the 2014 IOAP. The second amended consent decree allows MSD to reprioritize capital dollars for the rehabilitation of MSD’s aging biosolids systems, failing sewer interceptors and flood protection system rehabilitation. MSD agreed to invest \$25 million annually through 2035 for asset management projects and to incorporate \$70 million for critical sewer rehabilitation in its 5-year capital improvement plan. The second amended consent decree grants a time extension for completing the remaining 2014 IOAP projects to 2035. To date, MSD has spent

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MANAGEMENT'S DISCUSSION AND ANALYSIS (unaudited)**

approximately \$1.2 billion developing and completing IOAP projects and compliance measures mandated by the consent decree.¹⁹

REQUESTS FOR ADDITIONAL INFORMATION

This report is intended to provide readers with a general overview of MSD's finances and to provide information regarding the receipts and uses of funds. If you need clarification regarding a statement(s) made in the report or need additional information, please contact the Louisville and Jefferson County Metropolitan Sewer District, 700 West Liberty Street, Louisville Kentucky 40203. You can also submit a request for additional information via MSD's website, www.msdlouky.org.

¹⁹ See Note 12 – Commitments and Contingencies

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
STATEMENTS OF NET POSITION
As of June 30, 2023
(With Summarized Financial Information as of June 30, 2022)
(amounts in thousands)

	2023	2022
Current Assets		
Unrestricted Current Assets		
Cash and cash equivalents	\$ 66,305	\$ 48,875
Investments	69,417	69,754
Accounts receivable, less allowance for doubtful accounts of \$2,095 (2023), \$4,721 (2022)	28,963	26,242
Inventories	5,811	5,262
Accrued interest receivable	588	341
Prepaid expenses and other current assets	238	2,949
Total unrestricted current assets	171,322	153,423
Restricted Current Assets		
Cash and cash equivalents	22,414	20,788
Investments	-	12,947
Total restricted current assets	22,414	33,735
Total Current Assets	193,736	187,158
Noncurrent Assets		
Unrestricted Noncurrent Assets		
Accounts receivable, non-current	5,271	7,138
Restricted Noncurrent Assets:		
Cash and cash equivalents	3,067	2,191
Investments	74,831	78,140
Total restricted non-current assets	77,898	80,331
Capital Assets		
Utility plant in service	4,625,654	4,291,770
Less allowance for depreciation	(1,507,858)	(1,418,965)
Net utility plant in service	3,117,796	2,872,805
Construction in progress	309,372	420,200
Subscription assets, net of amortization	6,093	-
Net capital assets	3,433,261	3,293,005
Other Noncurrent Assets		
Prepaid regulatory assets	443,393	436,432
Less allowance for amortization	(160,350)	(149,411)
Net prepaid regulatory assets	283,043	287,021
Unamortized bond issuance costs	14,221	14,585
Unamortized reserve fund insurance	735	764
Total other noncurrent assets	297,999	302,370
Total Non-current Assets	3,814,429	3,682,844
Total Assets	4,008,165	3,870,002
Deferred Outflow of Resources		
Deferred outflow - pension	20,102	21,836
Deferred outflow - OPEB	16,397	23,447
Unamortized loss on refunding	22,957	26,827
Total deferred outflow of resources	59,456	72,110
Total Assets and Deferred Outflow of Resources	\$ 4,067,621	\$ 3,942,112

See accompanying Notes to the Financial Statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
STATEMENTS OF NET POSITION
As of June 30, 2023
(With Summarized Financial Information as of June 30, 2022)
(amounts in thousands)

	2023	2022
Current Liabilities		
Current Liabilities To Be Paid From Unrestricted Assets		
Accounts payable	\$ 8,126	\$ 9,807
Accrued salaries and related benefits	9,814	10,588
Total unrestricted current liabilities	17,940	20,395
Current Liabilities To Be Paid From Restricted Assets		
Accounts payable and accrued expenses (capital), includes contractor retainage of \$6,272 (2023), \$4,697 (2022)	38,706	30,464
Accrued interest payable	17,895	16,622
Refundable deposits	2,142	1,920
Revenue bonds payable	52,375	52,880
Bond anticipation note	14,145	-
Other subordinate debt	3,095	2,038
Subscription asset liability	1,616	-
Total restricted current liabilities	129,974	103,924
Total Current Liabilities	147,914	124,319
Noncurrent Liabilities		
Revenue bonds payable, net	2,249,954	2,316,455
Bond anticipation note, net	212,195	226,340
Commercial paper notes	165,000	50,000
Other subordinate debt, net	48,296	50,604
Net pension liability	132,407	124,564
Net OPEB obligation	36,145	37,395
Investment derivative asset liability	27,247	40,914
Subscription asset liability, net	3,336	-
Total Noncurrent Liabilities	2,874,580	2,846,272
Total Liabilities	3,022,494	2,970,591
Deferred Inflow of Resources		
Deferred inflow - pension	6,605	17,811
Deferred inflow - OPEB	15,030	17,068
Deferred inflow - derivative instruments	17,277	11,224
Other deferred inflows	1,936	2,386
Total deferred inflow of resources	40,848	48,489
Total Liabilities and Deferred Inflow of Resources	\$ 3,063,342	\$ 3,019,080
Net Position		
Net investment in capital assets	\$ 955,494	\$ 891,231
Assets restricted for debt service	82,418	84,607
Unrestricted	(33,633)	(52,806)
Total net position	1,004,279	923,032
Total Liabilities, Deferred Inflow of Resources and Net Position	\$ 4,067,621	\$ 3,942,112

See accompanying Notes to the Financial Statements.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**

For the Fiscal Year Ended June 30, 2023

(With Summarized Financial Information as of June 30, 2022)

(amounts in thousands)

	2023	2022
Operating Revenues		
Service charges	\$ 385,163	\$ 356,870
Other operating income	6,863	8,497
Total operating revenues	392,026	365,367
Operating Expenses		
Service and administrative costs	124,641	118,978
GASB 68 pension/GASB 75 OPEB actuarial expense	2,132	8,725
Depreciation and amortization	114,562	103,964
Total operating expenses	241,335	231,667
Income from Operations	150,691	133,700
Non-operating Revenue (Expenses)		
Gain/Loss disposal of assets	-	124
Transfer of assets	(14,320)	-
Investment income	7,253	(1,467)
Build America bond refund	11,350	10,344
Interest expense - bonds	(91,736)	(86,792)
Interest expense - derivative instruments	(3,988)	(9,502)
Interest expense - other	(15,337)	(12,873)
Amortization of debt discount / premium	13,189	17,172
Amortization of loss on refunding	(3,631)	(3,768)
Capitalized interest	6,961	7,464
Change in fair value - swaps	7,614	11,293
Total non-operating revenue (expenses) - net	(82,645)	(68,005)
Income before capital contributions	68,046	65,695
Capital contributions	13,201	9,572
Increase in net position	81,247	75,267
Net position, beginning	923,032	847,765
Net position, ending	\$ 1,004,279	\$ 923,032

See accompanying Notes to the Financial Statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF CASH FLOWS
For the Fiscal Year Ended June 30, 2023
(With Summarized Financial Information as of June 30, 2022)
(amounts in thousands)

	<u>2023</u>	<u>2022</u>
Cash Flows from Operating Activities		
Cash received from customers	\$ 389,490	\$ 362,992
Cash paid to suppliers	(106,443)	(112,467)
Cash paid to employees	(59,643)	(54,351)
Net Cash Provided by Operating Activities	<u>223,404</u>	<u>196,174</u>
Cash Flows from Capital and Related Financing Activities		
Proceeds from issuance of revenue bonds	-	248,821
Proceeds from issuance of bond anticipation note	229,468	232,924
Proceeds from issuance of commercial paper	595,000	375,000
Proceeds from other subordinate debt	1,282	7,824
Payments for retirement of revenue bonds	(57,455)	(55,497)
Payments for retirement of bond anticipation note	(226,340)	(226,340)
Payments for retirement of commercial paper	(480,000)	(475,000)
Payments for retirement of other subordinated debt	(2,533)	(1,926)
Payments for interest expense	(105,800)	(103,136)
Payments for interest on derivative instruments	(3,988)	(9,502)
Build America bond interest subsidy	11,350	10,344
Proceeds from capital grants	1,436	2,610
Proceeds from sales of capital assets	-	124
Payments for capital assets	(190,945)	(182,495)
Proceeds from assessments	1,956	3,378
Net Cash Provided (Used) by Capital and Related Financing	<u>(226,569)</u>	<u>(172,871)</u>
Cash Flows from Investing Activities		
Purchase of investments	(142,894)	(127,427)
Maturity of investments	160,468	71,789
Investment income	5,523	2,203
Net Cash Provided (Used) by Investing Activities	<u>23,097</u>	<u>(53,435)</u>
Net Increase (Decrease) in Cash and Cash Equivalents	19,932	(30,132)
Cash and Cash Equivalents, Beginning of Year	<u>71,854</u>	<u>101,986</u>
Cash and Cash Equivalents, End of Year	<u><u>\$ 91,786</u></u>	<u><u>\$ 71,854</u></u>

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF CASH FLOWS
For the Fiscal Year Ended June 30, 2023
(With Summarized Financial Information as of June 30, 2022)
(amounts in thousands)

	<u>2023</u>	<u>2022</u>
Reconciliation of Operating Income to Net Cash provided by Operating Activities		
Income from operations	\$ 150,691	\$ 133,700
Adjustments to reconcile operating income to net cash provided by operating activities		
Capitalized overhead	(41,151)	(42,168)
Depreciation and amortization	114,562	103,964
Accounts receivable	(2,759)	(1,539)
Inventories	(549)	(176)
Prepaid expense	2,711	3,206
Accounts payable	(1,681)	(8,538)
Customer deposits	222	(834)
Accrued liabilities	(774)	(166)
Pension liability	(1,630)	7,071
OPEB liability	3,762	1,654
Net Cash Provided by Operating Activities	<u>\$ 223,404</u>	<u>\$ 196,174</u>
 Non-Cash Capital Financing and Investing Activities		
Contribution of plant, lines and other facilities by developers and property owners	\$ 11,943	\$ 6,909
Construction costs in accounts payable	38,706	30,464
Transfer of assets	14,320	-
Unrealized (gain)/loss on investments	(2,040)	3,587
Decrease in interest rate swap deferred revenue	474	497
Change in fair value - derivative instruments	7,614	11,293
Bonds issued for refunding of debt - Series 2013A	91,695	-
Bonds issued for refunding of debt - Series 2011A	-	246,555

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

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**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

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LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

NOTE 1 – SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Louisville and Jefferson County Metropolitan Sewer District (MSD), a discretely presented component unit of Louisville/Jefferson County Metro Government, are prepared in conformity with accounting principles generally accepted in the United States of America 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. MSD follows GASB Pronouncements as codified under GASB 62, including electing to report as a regulated operation. MSD uses proprietary fund accounting (enterprise fund). Due to the election as a regulated operation under GASB 62, to meet industry accounting standards and follow transactional intent, MSD uses, as applicable, ASC 980, Regulated Accounting. The basic financial statements include certain prior year summarized comparative information in total but not at the level of detail required for a presentation in accordance with generally accepted accounting principles. Accordingly, such information should be read in conjunction with MSD' financial statements for the year ended June 30, 2022, from which the summarized information was derived.

Reporting Entity:

MSD is a public body corporate, and political subdivision of the Commonwealth of Kentucky. MSD was created in 1946 pursuant to Chapter 76 of the Kentucky Revised Statutes, in the interest of the public health and for the purpose of providing adequate sewer and drainage facilities in the urbanized area of the Louisville Metropolitan Area. Pursuant to Chapter 76, MSD is governed by a Board which consists of eight members who are appointed by the Mayor of Louisville Metro Government, subject to approval of Louisville Metro Council. Not more than five Board members may be of the same political party. However, there is not a continuing supervisory relationship exercised by Louisville Metro Government over MSD with respect to MSD's statutory public functions.

Chapter 76 authorizes MSD to provide sewer and drainage facilities and services. MSD is further authorized by the statute to establish and collect service charges and to budget accordingly for operations and maintenance, capital outlays and debt service on obligations it is authorized by the statute to incur. No special financing relationship exists between Louisville Metro Government and MSD, nor is Louisville Metro Government empowered by law or custom to approve MSD's operating or capital budgets; nor are they responsible for financing deficits or disposing of surplus funds.

MSD has complete control, possession and supervision of the sewer and drainage system in large portions of Jefferson County, and has statutory authority to construct additions, betterments, and extensions within its service area. Additionally, MSD has statutory responsibility for approval of the design and proper construction of sewer and drainage facilities within the County's boundaries. There are cities within Jefferson County that, by statute, have the option of using MSD sewer services on a contractual basis. Third and fourth class cities also have the option of obtaining drainage services from MSD.

In 2018 the Kentucky General Assembly amended Kentucky Revised Statute Section 76.080 to allow MSD to enter into agreements with other entities to acquire by purchase, any real or personal property, or any interest, right, easement, or privilege therein, outside of its Jefferson County boundaries in connection with the acquisition, construction, operation, repair or maintenance of any sewage, wastewater, or drainage facility. MSD has subsequently extended its wastewater service area into portions of neighboring Bullitt and Oldham counties through interlocal agreements.

MSD's enterprise business activities are managed by its Board, which has statutory authority to elect officers, enact bylaws and enter into agreements and contracts for the management and regulation of MSD's affairs. MSD's revenue is derived from wastewater and drainage service charges which are collected from residential, commercial, and industrial customers. MSD controls the collection of all revenue, disbursement of payables and title to all sewer and drainage assets. Wastewater service charges are distributed among customer classes based on actual costs incurred to collect and treat wastewater. Drainage service charges are distributed among customer classes based on actual costs of drainage services per equivalent unit of impervious surface.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

Changes in MSD's service charges are implemented by MSD's Board. Kentucky statute provides that MSD's service charge revenues shall be sufficient to provide for the operation and maintenance of the system and for debt service. By ordinance, Louisville Metro Government has provided that MSD's Board may amend its service charge schedule to maintain a debt service ratio of 1.10 for MSD's sewer and drainage revenue bonds, and that such amendments will be effective within the metropolitan area when adopted by MSD's Board, so long as the amended rates do not generate additional revenue from service charges in excess of 7% during the twelve months succeeding the period in which the ratio deficiency was identified. Amendments that would generate additional revenues in excess of 7% require Louisville Metro Council approval.

Chapter 76 permits MSD to finance sewer and drainage system construction, acquisition, and other capital improvements through the issuance of its revenue bonds and with the proceeds of governmental grants, property owner contributions in aid of construction and bonds and loans for which pledge of repayment is subordinated to the pledge of all revenues given by MSD for the security of its revenue bond holders. MSD indebtedness does not constitute indebtedness of Louisville Metro Government or the Commonwealth, but Louisville Metro Government must authorize by ordinance the issuance by MSD of revenue bonds to finance projects within the service area.

Basis of Accounting:

The sewer and drainage system owned and operated by MSD is accounted for using a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operation of the system are included on the Statements of Net Position. Total net position is segregated into net investment in capital assets, restricted for payment of bond principal and interest and unrestricted. Operating statements present increases (e.g., revenues) and decreases (e.g., expenses) in net position. MSD utilizes the accrual basis of accounting wherein revenues are recorded when earned and expenses are recorded at the time the liability is incurred.

Cash and Cash Equivalents:

For purposes of the Statements of Cash Flows, MSD includes repurchase agreements and other investments with an original maturity of three months or less in cash and cash equivalents. Both restricted and unrestricted amounts are included on the Statements of Cash Flows.

Restricted and Unrestricted Funds:

Restricted funds are reserved for the purpose of bond debt service, funding of capital construction, cost of issuance, and debt service reserves. Unrestricted funds, generated from service fees and other operating income, are used to pay for operating expenses. When an expense or outlay is incurred for which both restricted and unrestricted net position is available, it is MSD's general practice is to use revenue from operations to finance construction, then to reimburse from restricted net position for construction as needed.

Investment Securities:

Kentucky Revised Statue Section 66.480 and MSD's investment policy authorize MSD to invest money subject to its control in obligations of the United States and of its agencies and instrumentalities. Other allowable investments include obligations backed by the full faith of the United States or its agencies, obligations of any corporation of the United States, certificates of deposit or other interest-bearing accounts of any bank or savings and loan institution which are insured by the Federal Deposit Insurance Corporation, securities issued by a state or local government, money market mutual funds investing in any of the securities described above, individual equity securities, and individual corporate bonds. Investments are made based upon prevailing market conditions at the time of the transaction with the intent to hold the instrument until maturity. With this strategy, investments would be expected to reach maturity with limited realized gains or losses. If the yield of the portfolio can be improved upon by the sale of an investment, prior to its maturity, with the reinvestment of the proceeds, then this provision is also allowed. Investments

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

are stated at fair value. Investment income consists of interest income and the change in fair value of investments¹. Investment income is reduced by any applicable estimated federal arbitrage liability.²

Revenues, Expenses and Receivables:

Operating revenues are those revenues that are generated directly from the primary activity of MSD. These revenues are wastewater and drainage service charges and other operating income. The Louisville Water Company and Oldham County Water are responsible for the billing and collection of these charges on behalf of MSD monthly. Operating expenses are expenses incurred through the activities of operating and maintaining MSD facilities.

Non-operating revenues and expenses are comprised of investment and financing earnings and costs, changes in the fair value of derivative instruments, as well as contributions from outside sources.

Accounts receivable are stated at the amount management expects to collect from outstanding customer accounts. Accounts are considered past due 30 days from the invoice date. Management provides an allowance for doubtful account that is based on historical collection experience and a review of the status of individual accounts. Accounts that remain outstanding after management has exerted reasonable collection efforts are written off through a charge to allowance for doubtful accounts and a credit to accounts receivable. The allowance for doubtful accounts totaled \$2,095,160 on June 30, 2023.

Assessment receivables represent amounts billed to residents to have sewer lines installed in their neighborhood. Assessment receivables are considered past due once the balance is 90 days in arrears. These receivables may be current or non-current assets.

Inventory:

Inventory is stated at cost. Inventory consists of supplies and parts used in the operation of MSD's treatment plants and for the maintenance of sewers, fleet vehicles and other related equipment. Inventory totaled \$5,811,597 on June 30, 2023.

Contributed Capital and Construction Grants:

MSD finances construction of sewer and drainage plant, lines, and other facilities, in part, through government grants and contributions from property owners and developers. Governmental grants in aid of construction represent the estimated portion of construction costs incurred for which grants are expected to be paid to MSD by the governmental grantor. These amounts are recorded as a receivable and revenues from contributions at the time the related expenditures are incurred. Revenues from contributions are part of the change in net position. Government grants in aid of construction and other recoveries at June 30, 2023 were \$1,258,483. Contributed capital in the form of sewer and drainage infrastructure constructed by developers at June 30, 2023 were \$11,942,837.

Capital Assets - Plant, Lines and Other Facilities:

Plant, lines, and other facilities are recorded at historical cost or, if contributed, at acquisition value as determined by engineering estimates on the date the contribution is received. It is MSD's policy to depreciate the costs of these assets over their estimated useful lives on a straight-line basis³.

Estimated useful lives on depreciable assets are as follows:

Building and other structures	30-50 years
Land improvements	10-30 years
Miscellaneous machinery	10-20 years
Vehicles	6-12 years
Equipment, heavy	15-30 years

¹ See Note 2 – Cash and Investments

² See Note 7 – Long-Term Debt

³ See Note 4 – Capital Assets – Plant, Lines, and Other Facilities

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

Equipment, light	5-15 years
Sewer lines and drainage channels	20-80 years

Costs incurred for capital construction and acquisition are carried in construction in progress until disposition or completion of the related projects. The major components of construction in progress are sewer lines, wastewater treatment and drainage facilities. Costs relating to projects not pursued are expensed, while costs relating to completed projects are capitalized as plant, lines, and other facilities.

Impairment of Capital Assets:

In accordance with GASB Statement No. 42, *Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries*, management evaluates prominent events or changes in circumstances affecting capital assets to determine whether impairment of a capital asset has occurred. Such events or changes in circumstances that may be indicative of impairment include evidence of physical damage, enactment or approval of laws or regulations, other changes in environmental factors, technology changes or evidence of obsolescence, changes in the manner of duration of use of a capital asset, and construction stoppage. A capital asset is generally considered impaired if both (a) the decline in service utility of the capital asset is large in magnitude and (b) the event or change in circumstance is outside the normal life cycle of the capital asset. No impairment losses were recognized in fiscal year 2023.

Subscription-Based Information Technology Agreements:

In accordance with GASB Statement No. 96, *Subscription-Based Information Technology Agreements*, subscription assets and liabilities are recognized at the commencement of the subscription term or the implementation date, whichever is earlier. The subscription asset is an intangible, right-to-use capital asset and includes the initial measurement of the subscription liability, capitalizable implementation costs, and payments associated with the contract made at the commencement of the subscription term. The subscription liability is the present value of subscription payments to be made during the subscription term and includes fixed payments, variable payments and any other incentive or payment associated with the contract that is reasonably certain. MSD expenses subscription-based information technology agreements with a total contract value of less than \$150,000.

Bonds Payable:

Bonds payable are recorded at the principal amount outstanding, net of any applicable premium or discount⁴.

Bonds outstanding, which have been refunded and economically defeased, are not included in long-term debt. The related assets are not included in investments. Any loss on refunding, which is the difference between the reacquisition price and the net carrying amount of the old debt, is deferred outflow of resources and amortized as a component of interest expense over the shorter of either 1) the original life of the refunded debt or 2) the life of the refunding debt.

MSD enters into interest rate swap agreements to modify interest rates on outstanding debt. MSD records the net interest expenditures resulting from these agreements and amortizes gains/losses resulting from the termination of these agreements until the original termination date of the agreement. The changes in fair value of derivative instruments that are classified as hedging derivative instruments are reported in the Statements of Net Position as deferred outflow of resources. Changes in fair value of investment derivative instruments are reported in non-operating revenue (expenses) on the Statements of Revenues, Expenses and Changes in Net Position⁵.

Bond issue costs are capitalized and amortized over the life of the respective bond issue using the straight-line method, which approximates the effective interest method, pursuant to the election of regulatory operation under GASB 62, as they are deemed recoverable through future rates.

⁴ See Note 7 – Long-Term Debt

⁵ See Note 9 – Derivative Instruments

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT NOTES TO THE FINANCIAL STATEMENTS

Original issue discounts and premiums on bonds are amortized as a component of interest expense using the straight-line method, which approximates the effective interest method, over the lives of the bonds to which they relate.

Compensated Absences:

Vacation and personal pay benefits are accrued as accumulated and vested by MSD employees.

Allocation of Overhead:

MSD allocates overhead costs to its core business processes: operations and maintenance; design, construction and acquisition of plant lines and other facilities; and subsidiary business enterprises.

Use of Estimates:

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

Income Tax Status:

MSD is exempt from federal income tax under the Internal Revenue Code as a political subdivision of the Commonwealth of Kentucky.

Adoption of New Accounting Pronouncements:

Effective July 1, 2022, MSD adopted the following GASB Statements:

- GASB Statement No. 91, "Conduit Debt Obligations." The objective of this Statement is to provide a single method of reporting conduit debt obligations and clarifies that these obligations are not government liabilities. The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends December 31, 2022.
- GASB Statement No. 94, "Public-Private and Public-Public Partnerships and Availability Payment Arrangements." The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2023.
- GASB Statement No. 96, "Subscription-Based Information Technology Arrangements (SBITAs)." The objective of this Statement is to establish standards of accounting and financial reporting for SBITAs by a government end user (a government). The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2023.
- GASB Statements No. 99, "Omnibus 2022". The objective of this Statement is to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing (1) practice issues that have been identified during implementation and application of certain GASB Statements and (2) accounting and financial reporting for financial guarantees. The requirements related to extension of the use of LIBOR, accounting for SNAP distributions, disclosures of nonmonetary transactions, pledges of future revenues by pledging governments, clarification of certain provisions in Statement 34, as amended, and terminology updates related to Statement 53 and Statement 63 are effective upon issuance. The requirements related to leases, PPPs, and SBITAs take effect for financial statements starting with the fiscal year that ends June 30, 2023. The requirements related to financial guarantees and the classification and reporting of derivative instruments within the scope of Statement 53 will take effect for financial statements starting with the fiscal year that ends June 30, 2024.

GASB Statements No. 91, No. 94, and No. 99 do not have a material impact on MSD's financial reporting. Information related to GASB Statement 96 can be found in footnote number 5, Subscription Assets.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

Recent Accounting Pronouncements:

GASB has issued additional guidance that is not yet effective. MSD is currently reviewing the provisions of the following GASB Statements to determine the impact of implementation in future periods.

- GASB Statement No. 100, “Accounting Changes and Error Corrections—an amendment of GASB Statement No. 62”. The objective of this Statement is to enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2024.
- GASB Statement No. 101, “Compensated Absences”. The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. That objective is achieved by aligning the recognition and measurement guidance under a unified model and by amending certain previously required disclosures. The requirements of this Statement will take effect for financial statements starting with the fiscal year that ends June 30, 2024.

Reclassifications:

Prior period financial statement amounts have been reclassified to conform to current period presentation. These reclassifications had no effect on the changes in net position or total net position.

NOTE 2 – CASH AND INVESTMENTS

The following table provides a reconciliation of cash, cash equivalents and investments as shown on the Comparative Statements of Net Position for MSD as of June 30, 2023.

(dollars in thousands)	June 30, 2023
Reported in Statements of Net Position:	
Cash and cash equivalents	
Unrestricted	\$ 66,305
Restricted - current	22,414
Restricted - noncurrent	3,067
Total cash and cash equivalents	91,786
Investments	
Unrestricted	69,417
Restricted - noncurrent	74,831
Total investments	144,248
Total Cash, Cash Equivalents and Investments	\$ 236,034

Deposits:

As of June 30, 2023, MSD’s unrestricted cash and cash equivalents are deposited in demand accounts at JP Morgan Chase and Fifth Third, MSD’s depository banks for its revenue fund.

Investments:

As of June 30, 2023, securities purchased by MSD are held in custody by Bank of New York Mellon and Fifth Third.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

The following table presents information related to MSD's investments at June 30, 2023.

June 30, 2023 (dollars in thousands)	Reported Value	Weighted Average Maturity in Years	Credit Rating
U.S. treasuries	30,699	0.16	Aaa
U.S. agency securities	78,573	0.44	Aaa
Municipal bonds	34,876	1.68	Aaa, Aa, A
Money market funds	45,291	0.06	Aaa
Repurchase agreement/cash	46,495	0.00	
Certificate of deposit	100	0.63	
Total cash, cash equivalents and investments	<u>\$ 236,034</u>	<u>2.97</u>	
Accrued interest	<u>\$ 588</u>		

Risks:

Interest Rate Risk: Interest rate risk is the risk that a change in market interest rates of fixed income securities will adversely affect the fair value of the investment. MSD minimizes interest rate risk by structuring the investment portfolio so that securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity. The weighted average maturity in years represents the interest rate risk for MSD. At June 30, 2023, the longest remaining maturity for any investment was approximately three years.

Credit Risk: Credit risk is the risk that an issuer of financial securities will not fulfill its obligations to the holder of the obligation. In accordance with Kentucky Revised Statutes and MSD's investment policy, MSD manages credit risk by limiting its investments in state and local governments rated in one of the three highest categories by a competent rating agency. As of June 30, 2023, the lowest rated municipal security held by MSD was AA2.

Concentration of Credit Risk: Concentration of credit risk for investments is the risk of loss attributable to the magnitude of an investment in a single issuer. MSD's investment policy requires that investments be diversified to eliminate the risk of loss from over-concentration of assets in a specific maturity, a specific issuer, or a specific class of securities. The policy limits the amount of money invested at any time in one or more categories of the investments authorized by Kentucky Revised Statute Section 66.480 1e, 1f, 1g, and 1i shall not exceed 20% of the total amount invested. MSD was in compliance with its investment policy at June 30, 2023.

Custodial Credit Risk: Custodial credit risk is the risk that, in the event of the failure of the counterparty, MSD would not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The collateral provided by financial institutions is considered adequate to cover all balances in excess of limits set forth by the Federal Deposit Insurance Corporation. All of MSD's investments are held by MSD or in the name of MSD by a Trustee.

Fair Value Measurement:

GASB 72 requires MSD to disclose how we measure the fair value of investments and the underlying valuation techniques. Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for these securities or repurchase agreements. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing approach. Matrix pricing is used to value securities based on the securities' relationship to the benchmark quoted prices.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

The following table summarizes MSD's investments subject to fair value measurements and valuation techniques as of June 30, 2023.

June 30, 2023 (dollars in thousands)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments by fair value level:				
U.S. treasuries	\$ -	\$ 30,699	\$ -	\$ 30,699
U.S. agencies	-	78,573	-	78,573
State and municipal obligations	-	34,876	-	34,876
Total investments by fair value level	<u>\$ -</u>	<u>\$ 144,148</u>	<u>\$ -</u>	<u>\$ 144,148</u>

Restricted Cash and Investments:

Cash and investments are restricted for various purposes as specified by MSD's General Bond Resolution. The following table summarizes restricted cash and investments by purpose at June 30, 2023.

(dollars in thousands)	June 30, 2023
Debt service reserve	\$ 77,898
Debt service	22,414
Total restricted cash & investments	<u>\$ 100,312</u>

The General Bond Resolution sets a debt service reserve requirement equal to at least 10% of the face amount of all bonds issued under the resolution, 100% of the maximum aggregate net debt service in the current or any future fiscal year or 125% of the average aggregate net debt service in the current or any future fiscal year (the three-prong test). The General Bond Resolution allows, in lieu of cash and investments in that amount, a letter of credit or policy of bond insurance payable in the required amount. On June 26, 2019, MSD purchased a debt service reserve surety policy (the Reserve Policy) from Build America Mutual Assurance Company with a maximum policy limit of \$75,000,000. The Reserve Policy terminates on May 15, 2048. Draws under the Reserve Policy may only be used to make payments of principal and interest on the bonds. Cash and investments in the debt service reserve funds shall be transferred to the debt service funds for payment of debt service on the bonds before any draw may be made on the Reserve Policy.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

The following table summarizes MSD's compliance with the debt service reserve requirement at June 30, 2023.

(dollars in thousands)	June 30, 2023
Debt service reserve	\$ 77,898
Reserve surety policy	75,000
	<u>152,898</u>
Debt service reserve requirement	\$ 152,483

NOTE 3 - SCHEDULE OF NET POSITION

The following table summarizes the Schedule of Net Position as of June 30, 2023.

(dollars in thousands)	June 30, 2023
Net investment in capital assets:	
Plant, lines and other facilities net of depreciation including capitalized interest	\$ 3,716,304
Outstanding debt that applies to plant, lines and other facilities	(2,745,061)
Accounts payable and accrued expenses (capital)	(38,706)
Deferred outflows and inflows of resources	<u>22,957</u>
Total	<u>955,494</u>
Restricted for:	
Assets restricted for debt service	100,312
Liabilities associated with restricted debt service	<u>(17,894)</u>
	82,418
Unrestricted net position	<u>(33,633)</u>
Total net position	<u>\$ 1,004,279</u>

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

NOTE 4 - CAPITAL ASSETS - PLANT, LINES AND OTHER FACILITIES

The following table summarizes MSD's plant, lines, and other facilities as of June 30, 2023.

June 30, 2023 (dollars in thousands)	Beginning Balance	Transfers In/ Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	\$ 2,070,341	\$ 102,190	\$ (118)	\$ 2,172,413
Wastewater treatment facilities	696,900	57,184	-	754,084
Drainage facilities	1,033,710	148,572	(14,345)	1,167,937
Pumping and lift stations	286,974	11,888	-	298,862
Administrative facilities	52,471	702	-	53,173
Maintenance facilities	14,577	5,995	-	20,572
Machinery and equipment	100,862	9,037	(10,747)	99,152
Miscellaneous	35,935	23,545	(19)	59,461
Total capital assets	4,291,770	359,113	(25,229)	4,625,654
Less accumulated depreciation and amortization:				
Sewer lines	(432,205)	(27,627)	26	(459,806)
Wastewater treatment facilities	(454,025)	(23,056)	-	(477,081)
Drainage facilities	(246,047)	(21,265)	-	(267,312)
Pumping and lift stations	(126,200)	(14,785)	-	(140,985)
Administrative facilities	(43,198)	(1,142)	-	(44,340)
Maintenance facilities	(7,726)	(417)	-	(8,143)
Machinery and equipment	(77,237)	(8,735)	10,747	(75,225)
Miscellaneous	(32,327)	(2,639)	-	(34,966)
Total accumulated depreciation/amortization	(1,418,965)	(99,666)	10,773	(1,507,858)
Net utility plant in service	2,872,805	259,447	(14,456)	3,117,796
Construction in progress	420,200	201,526	(312,354)	309,372
Net capital assets	\$ 3,293,005	\$ 460,973	\$ (326,810)	\$ 3,427,168

Capital assets include non-depreciable assets for land related to all facilities and pumping and lift stations. The carrying value was \$47,735,489 at June 30, 2023. See Note 5, Subscription Assets, for information on subscription-based information technology agreements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

NOTE 5 – SUBSCRIPTION ASSETS

MSD is a party to multiple subscription-based information technology agreements (SBITAs) which convey a right-to-use another party's software. MSD implemented GASB Statement 96 on July 1, 2022 which resulted in recognition of subscription assets and subscription liabilities of \$7,309,281 with no impact on opening net position. At July 1, 2022, MSD also reclassified expenses related to subscription assets totaling \$1,624,572 resulting in total subscription assets of \$8,933,853. The following table presents subscription assets and subscription liabilities at the implementation date and at June 30, 2023.

<i>(dollars in thousands)</i>	June 30, 2023	July 1, 2022
Total subscription assets	\$ 8,934	\$ 8,934
Accumulated amortization	2,841	-
Subscription assets, net	<u>\$ 6,093</u>	<u>\$ 8,934</u>
Current subscription liability	\$ 1,616	\$ 2,357
Long-term subscription liability	3,336	4,952
Total subscription liability	<u>\$ 4,952</u>	<u>\$ 7,309</u>

The following table presents SBITA principal and interest payments to maturity.

<i>(dollars in thousands)</i>	Subscription Assets		
	Principal	Interest	Total
Year Ending June 30,			
2024	\$ 1,549	\$ 138	\$ 1,687
2025	976	91	1,067
2026	916	60	976
2027	991	32	1,023
2028	520	5	525
	<u>\$ 4,952</u>	<u>\$ 326</u>	<u>\$ 5,278</u>

There are no outflows of resources in the reporting period for variable or other payments not included in the measurement of the subscription liability. There are no commitments under SBITAs before the commencement of the subscription terms. No impairment losses were recognized during fiscal year 2023. There were no SBITAs entered into during the year ended June 30, 2023.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

NOTE 6 – PREPAID REGULATORY ASSETS

In accordance with the provisions for regulated utility entities under GASB 62, MSD follows the practice of capitalizing the interest incurred as part of the cost of acquiring assets that are debt-financed for rate-making purposes. Capitalized interest is presented as a prepaid regulatory asset. MSD depreciates capitalized interest over forty years.

The following table summarizes capitalized interest and net interest expense reported in non-operating expenses at June 30, 2023.

<i>(dollars in thousands)</i>	June 30, 2023
Interest incurred	\$ 101,503
Less interest capitalization	<u>(6,961)</u>
Interest expense, net	<u>\$ 94,542</u>

The following table summarizes prepaid regulatory assets and amortization at June 30, 2023.

<i>(dollars in thousands)</i>	
Gross prepaid regulatory assets - beginning of year	\$ 436,432
Additions	<u>6,961</u>
Gross prepaid regulatory assets - end of year	443,393
Accumulated amortization - beginning of year	(149,411)
Amortization	<u>(10,939)</u>
Accumulated amortization - end of year	<u>(160,350)</u>
Net prepaid regulatory assets - end of year	<u>\$ 283,043</u>

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

NOTE 7 - LONG-TERM DEBT

The following table summarizes MSD's long-term debt outstanding at June 30, 2023.

June 30, 2023 (dollars in thousands)					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
Revenue bonds	\$ 2,281,285	\$ 91,695	\$ 168,670	\$ 2,204,310	\$ 52,375
Unamortized premium/discount	88,050	23,158	13,189	98,019	-
Commercial paper notes	50,000	595,000	480,000	165,000	-
Other subordinate debt:					
General obligation bonds	10,774	-	880	9,894	907
SRF loans	39,998	1,281	1,482	39,797	2,013
Financing note	1,870	-	170	1,700	175
Total	\$ 2,471,977	\$ 711,134	\$ 664,391	\$ 2,518,720	\$ 55,470

Revenue Bonds:

MSD's long-term revenue bonds are publicly issued under its General Bond Resolution adopted December 7, 1992, to pay at maturity program notes issued and outstanding as senior subordinated debt under a Program Note Resolution or to finance sewer and drainage projects. MSD has pledged all revenues to the payment of principal and interest on its outstanding revenue bonds. Pursuant to the General Bond Resolution, upon the occurrence of any event of default, a holder or holders of twenty percent in principal amount or more of the bonds then outstanding may apply to a Judge in the Circuit Court of Jefferson County to appoint a trustee to represent all Bondholders and the trustee may declare all bonds due and payable. MSD has remedies available under the Resolution to cure an event of default even after all bonds are declared due and payable.

Federal tax regulations generally require the periodic payment to the U.S. Treasury of investment earnings on the proceeds of an issue of tax-exempt municipal bonds to the extent those earnings exceed the yield on the bonds. Such payments, known as arbitrage rebate, are normally payable every fifth year following the issuance of a series of bonds and upon the retirement of the bond issue. MSD has arbitrage calculations performed as needed by an independent third party to comply with these regulations. As of June 30, 2022, MSD's accrued liability for arbitrage rebate was \$21,378, which was associated with the Series 2019A bonds. During fiscal year 2023, the final arbitrage rebate was calculated on the Series 2019A bonds and payment was remitted to the Internal Revenue Service. As of June 30, 2023, \$515,020 was accrued as arbitrage rebate associated with the Series 2021A bonds.

A debt service coverage ratio covenant has been established under the 1992 General Bond Resolution. MSD was in compliance with the ratio covenant as of June 30, 2023.

Significant Revenue Bond Transactions: On April 13, 2023, MSD sold \$49,745,000 of its tax-exempt sewer and drainage system revenue refunding bonds Series 2023A. The proceeds of the Series 2023A bonds will be used: (i) to advance refund and redeem on May 15, 2023, MSD's sewer and drainage system revenue refunding bonds, Series 2013A maturing on May 15, 2035, and (ii) to pay the costs of issuance of the Series 2023A bonds. The proceeds of the prior bonds were used to pay the costs of capital improvements and

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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additions to MSD's sewer and drainage system. The sale of the Series 2023A bonds closed on May 16, 2023. The refunding reduces debt service payments over the next twelve years by \$14,143,309 which is a net present value savings of \$8,265,698.

On April 13, 2023, MSD sold \$41,950,000 of its tax-exempt sewer and drainage system revenue refunding bonds Series 2023B. The proceeds of the Series 2023B bonds will be used: (i) to advance refund and redeem on May 15, 2023, MSD's sewer and drainage system revenue refunding bonds, Series 2013A maturing on May 15, 2036, and (ii) to pay the costs of issuance of the Series 2023B bonds. The proceeds of the prior bonds were used to pay the costs of capital improvements and additions to MSD's sewer and drainage system. The sale of the Series 2023B bonds closed on May 16, 2023. The refunding reduces debt service payments over the next thirteen years by \$10,527,526 which is a net present value savings of \$5,684,774.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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The following table summarizes revenue bonds payable at June 30, 2023.

<u>Revenue Bonds</u>	<u>Original Issue Amount</u>	<u>Interest Rates</u>	<u>Final Payment In</u>	<u>Outstanding as of June 30: 2023</u>
2009C series revenue bonds	\$ 180,000	5.98%	2040	\$ 180,000
2010A series revenue bonds	330,000	6.25%	2043	330,000
2013B series revenue bonds	119,515	4.00% - 5.00%	2038	107,515
2014A series revenue bonds	80,000	4.00% - 5.00%	2045	79,600
2015A series revenue bonds	175,000	3.125% - 5.00%	2046	170,845
2015B series revenue bonds	81,750	2.63% - 5.00%	2038	62,995
2016A series revenue bonds	150,000	3.00% - 5.00%	2047	146,540
2016B series revenue bonds	28,315	2.00% - 5.00%	2036	17,830
2017A series revenue bonds	175,000	3.00% - 5.00%	2048	143,280
2017B series revenue bonds	35,725	5.00%	2025	30,245
2018A series revenue bonds	60,380	4.00%	2038	60,380
2020A series revenue bonds	225,000	2.00% - 5.00%	2050	223,000
2020C series revenue bonds	112,065	0.29% - 2.65%	2044	108,415
2021A series revenue bonds	246,555	2.22%	2034	227,720
2022A series revenue bonds	225,000	2.63% - 5.00%	2052	224,250
2023A series revenue bonds	49,745	5.00%	2035	49,745
2023B series revenue bonds	41,950	5.00%	2036	41,950
Total revenue bonds				2,204,310
Add: unamortized premium/discount				98,019
Total bonds payable				2,302,329
Less: current maturities				(52,375)
Total bonds payable, long term portion				<u>\$ 2,249,954</u>

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS

The following table presents revenue bond debt service requirements after June 30, 2023.

<i>(dollars in thousands)</i>	Revenue Bonds		
	Principal	Interest	Total
Year Ending June 30,			
2024	\$ 52,375	\$ 89,447	\$ 141,822
2025	55,670	87,345	143,015
2026	56,180	85,059	141,239
2027	74,465	82,854	157,319
2028	73,225	79,229	152,454
2029-2033	242,860	365,947	608,807
2034-2038	506,275	309,845	816,120
2039-2043	634,580	186,319	820,899
2044-2048	478,030	45,323	523,353
2049-2053	30,650	1,586	32,236
	<u>\$ 2,204,310</u>	<u>\$ 1,332,954</u>	<u>\$ 3,537,264</u>

The following table provides a summary of current and long-term revenue bond activity at June 30, 2023.

<i>(dollars in thousands)</i>	June 30, 2023
Revenue bonds - beginning of year	\$ 2,281,285
Bonds issued	91,695
Principal paid on bonds	(52,880)
Bond refunding	(115,790)
Revenue bonds - end of year	<u>\$ 2,204,310</u>

General Obligation Bonds:

MSD merged with the OCEA on June 30, 2020. Oldham County previously issued its County of Oldham general obligation bonds Series 2014, and general obligation Series 2017 refunding bonds, the proceeds of which financed the costs of various improvements to the sanitary sewer system owned by OCEA. The balance of the bonds outstanding at June 30, 2023 was \$9,893,692. MSD agreed to support Oldham County's payment of debt service for the supported bonds subject to the terms of an Assistance Agreement dated June 30, 2020. Upon the occurrence of an uncured event of default under the Assistance Agreement, Oldham County is entitled to exercise all remedies available at law or in equity.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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The following table provides a summary of current and long-term general obligation bond activity as of June 30, 2023.

<i>(dollars in thousands)</i>				
General Obligation Bonds	Original Issue Amount	Interest Rates	Final Payment In	Outstanding as of June 30: 2023
2017 series general obligation bonds	\$ 3,750	2.08%	2030	\$ 3,329
2014 series general obligation bonds	9,790	3.00% - 3.20%	2035	6,565
Total general obligation bonds				9,894
Less: current maturities				(907)
Total bonds payable, long term portion				<u>\$ 8,987</u>

The following table presents general obligation bond debt service requirements after June 30, 2023.

<i>(dollars in thousands)</i>	General Obligation Bonds		
	Principal	Interest	Total
Year Ending June 30,			
2024	\$ 907	\$ 260	\$ 1,167
2025	930	237	1,167
2026	957	214	1,171
2027	983	189	1,172
2028	1,004	163	1,167
2029-2033	3,843	455	4,298
2034-2038	<u>1,270</u>	<u>40</u>	<u>1,310</u>
	<u>\$ 9,894</u>	<u>\$ 1,558</u>	<u>\$ 11,452</u>

Commercial Paper and Bank Notes:

2023 Program Note Resolution: On March 27, 2023, the MSD Board adopted a Program Note Resolution authorizing the issuance of one or more series of sewer and drainage system subordinated program notes in an aggregate principal amount not to exceed \$500,000,000 for the purpose of financing eligible sewer and drainage projects and to refund program notes or subordinate lien bond anticipation notes. Program notes issued under the Program Note Resolution are subordinate and junior in all respects to revenue bonds issued under the General Bond Resolution. Program notes are issued as senior subordinated debt secured on a parity with the bond anticipation notes⁶.

MSD has issued two subseries of commercial paper notes under the Program Note Resolution: Series 2023A-1 with a maximum outstanding of \$250,000,000 and Series 2023A-2 with a maximum outstanding of \$250,000,000. Commercial paper notes may be issued and sold, at public or private sale, as taxable or tax-exempt notes, maturing in 270 days or less (but in any event not later than June 18, 2026) as determined by MSD, and bearing interest at a rate not in excess of 12% per annum for taxable notes or 10% per annum for tax-exempt notes. Commercial paper notes are payable only from (i) proceeds of the sale of other commercial paper notes issued under the Program Note Resolution and used to refund outstanding commercial paper notes, (ii) the proceeds of direct purchase notes or other loans used to refund outstanding

⁶ See Note 8 – Bond Anticipation Notes

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commercial paper notes, and (iii) the proceeds of revenue bonds issued to pay outstanding commercial paper notes.

Liquidity support for commercial paper Series 2018A-1 is provided by Bank of America, N.A (BANA) pursuant to a Revolving Credit Agreement dated June 1, 2023. BANA has provided a commitment of \$250,000,000 for the payment of the principal of and interest on the Series 2023A-1 notes. MSD and BANA entered into a Note Purchase Agreement dated June 1, 2023, providing for the purchase of direct purchase notes by BANA up to the aggregate principal amount of \$250,000,000. The BANA Revolving Credit Agreement and the BANA Note Purchase Agreement limit the aggregate principal amount of commercial paper notes Series 2023A-1 and the BANA direct purchase notes to \$250,000,000. BofA Securities, Inc. is acting as the dealer for Series 2023A-1 notes.

Liquidity support for commercial paper Series 2023A-2 is provided by JPMorgan Chase Bank, National Association (JPMCB) pursuant to a revolving credit agreement dated June 1, 2023. JPMCB has provided a commitment of \$250,000,000 for the payment of the principal of and interest on the Series 2023A-2 notes. MSD and JPMCB entered into a Note Purchase Agreement dated June 1, 2023, providing for the purchase of direct purchase notes by JPMCB up to the aggregate principal amount of \$250,000,000. The JPMCB Revolving Credit Agreement and the JPMCB Note Purchase Agreement limit the aggregate principal amount of commercial paper notes Series 2023A-2 and the JPMCB direct purchase notes to \$250,000,000. J.P. Morgan Securities LLC is acting as the dealer for Series 2018A-2 notes.

Upon the occurrence of any special event of default under the Revolving Credit Agreements and Note Purchase Agreements, the commitment shall immediately terminate with respect to all commercial paper notes and the banks shall have no obligation to make any loan or to fund any outstanding commercial paper note. Upon the occurrence of an event of default that is not a special event of default, the banks may, by notice to MSD, terminate the commitment, if any (except as provided below), deliver a notice of no-issuance to MSD and to the Issuing and Paying Agent directing the Issuing and Paying Agent to cease issuing all commercial paper notes. The available commitment shall immediately be reduced to the then outstanding principal amount of commercial paper notes plus the amount of interest to accrue on such notes and the available commitment shall be further reduced in a similar manner when commercial paper notes mature provided the commitment does not terminate, and the right of the bank to accelerate the maturity of the note and the loans shall not affect the obligation of the bank to make loans in aggregate principal amount equal to the commitment to the extent necessary for MSD to make required payments of principal on the commercial paper notes issued and sold prior to the date upon which the notice of no-issuance is received by the Issuing and Paying Agent; provided further that if any loans are made that would not have been made but for the application of the preceding provision, such loans shall be immediately due and payable on the date such loans are made.

Moody's Investors Service and Standard and Poor's Ratings Services assigned ratings of P-1 and A-1+, respectively, to the commercial paper notes on June 5, 2023.

Commercial paper notes of \$165,000,000 were outstanding as of June 30, 2023, in accordance with the respective 2023 Revolving Credit Agreements. Interest rates on the notes outstanding range from 3.5% to 3.7% and maturities range from twelve to eighty-four days.

2018 Program Note Resolution: On June 25, 2018, the MSD Board adopted a Program Note Resolution authorizing the issuance of one or more series of sewer and drainage system subordinated program notes in an aggregate principal amount not to exceed \$500,000,000 for the purpose of financing eligible sewer and drainage projects and to refund program notes or subordinate lien bond anticipation notes. MSD issued two subseries of commercial paper notes under the Program Note Resolution: Series 2018A-1 with a maximum outstanding of \$250,000,000 and Series 2018A-2 with a maximum outstanding of \$250,000,000.

Liquidity support for commercial paper Series 2018A-1 was provided by Bank of America, N.A (BANA) pursuant to a Revolving Credit Agreement dated July 1, 2018, and amended December 22, 2020. MSD

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and BANA entered into a Note Purchase Agreement dated July 1, 2018, and amended December 22, 2020, providing for the purchase of direct purchase notes by BANA up to the aggregate principal amount of \$250,000,000. The BANA Revolving Credit Agreement and the BANA Note Purchase Agreement terminated on June 21, 2023.

Liquidity support for commercial paper Series 2018A-2 was provided by JPMorgan Chase Bank (JPMCB) pursuant to a revolving credit agreement dated July 1, 2018, and amended December 22, 2020. MSD and JPMCB entered into a Note Purchase Agreement dated July 1, 2018, and amended December 22, 2020, providing for the purchase of direct purchase notes by JPMCB up to the aggregate principal amount of \$250,000,000. The JPMCB Revolving Credit Agreement and the JPMCB Note Purchase Agreement terminated on June 21, 2023.

The following table summarizes the outstanding and available balance of the commercial paper program at June 30, 2023.

June 30, 2023 (dollars in thousands)			
Issue Description	Authorized Amount	Amount Outstanding	Unissued Portion
Series 2023A-1	\$ 250,000	\$ 80,000	\$ 170,000
Series 2023A-2	250,000	85,000	165,000
Total	\$ 500,000	\$ 165,000	\$ 335,000

MSD has classified all outstanding commercial paper notes as long-term debt in accordance with GASB 62 as it intends to redeem the notes with the proceeds of long-term revenue bonds.

The following table summarizes commercial paper program transactions for the year ended June 30, 2023.

June 30, 2023 (dollars in thousands)					
Issue Description	Outstanding Notes at Beginning of Year	Notes Issued	Notes Retired	Outstanding Notes at End of Year	Payable Within One Year
Series 2018A-1	\$ 20,000	\$ 220,000	\$ 240,000	\$ -	\$ -
Series 2018A-2	30,000	210,000	240,000	-	-
Series 2023A-1	-	80,000	-	80,000	-
Series 2023A-2	-	85,000	-	85,000	-
Total	\$ 50,000	\$ 595,000	\$ 480,000	\$ 165,000	\$ -

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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State Revolving Fund Loans:

MSD utilizes funding provided through the Kentucky Infrastructure Authority's (KIA) State Revolving Fund (SRF). The SRF financing program provides low interest loans for infrastructure projects that are considered a priority based on the water pollution control criteria outlined in the Clean Water Act. MSD's SRF loans are considered direct placement debt and carry interest rates ranging between 1.75% and 3.8%. Under the assistance agreements entered with the KIA, upon the occurrence and continuance of any event of default, the Authority may declare all payments due at a default rate of 8%. Additionally, when an event of default occurs and is continuing, the Authority can declare all payments due, exercise all rights and remedies, take legal action to enforce its rights under the agreement, and submit a formal referral to the appropriate federal agency.

Significant SRF Transactions: As of June 30, 2023, MSD has expended \$24,200,000 in eligible project costs for loan number A19-028. The full amount of the loan has been drawn and the project is complete.

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The following table shows outstanding SRF direct placement debt at June 30, 2023.

June 30, 2023 (dollars in thousands)					
Loan Number	Loan Amount	Drawn Amount	Interest Rate	Final Payment In	Outstanding at end of Year
A09-41	\$ 2,395	\$ 2,395	3.00%	2033	\$ 1,315
A10-04	2,843	2,843	2.00%	2033	1,563
A10-05	1,000	1,000	3.00%	2033	574
A10-06	121	121	2.00%	2033	64
A10-07	2,538	2,538	2.00%	2034	1,457
A11-15	671	671	2.00%	2033	369
A12-29	6,500	6,500	1.75%	2037	4,630
A17-028	7,400	2,084	1.75%	*	2,084
A18-010	1,116	1,116	1.75%	2040	996
A19-015	2,695	2,695	2.00%	2042	2,528
A19-028	24,200	24,200	2.00%	2042	23,705
B10-01	500	500	3.00%	2030	210
B10-04	500	500	3.00%	2031	236
B15-006	87	87	1.75%	2038	66
Total loans payable					39,797
Less: current maturities					<u>(2,013)</u>
Total loans payable, long term portion					<u>\$ 37,784</u>

* Loan is partially drawn. Final payment will be 20 years following project completion anticipated in December 2023.

KACO Financing Note:

Oldham County Fiscal Court, on behalf of OCEA, previously entered a note financing obligation with the Kentucky Association of Counties Trust in the amount of \$4,000,000 at an interest rate of 4.94% to finance various treatment facilities. MSD entered into an agreement with the County of Oldham Kentucky, as part of its merger with OCEA, on June 30, 2020, to make the remaining note payments when due. In the event of default, the Kentucky Association of Counties Trust may by written notice, take possession of the

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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treatment facilities, sell or lease the treatment facilities, or exercise any remedy available to it under applicable law. At June 30, 2023, the remaining principal balance is \$1,700,000. Final maturity is in 2031.

Line of Credit:

MSD secured an uncommitted, \$25,000,000 line of credit in October 2015. The line of credit was terminated in March 2023. There was no activity on the line of credit in fiscal year 2023.

NOTE 8 – BOND ANTICIPATION NOTES

MSD issues bond anticipation notes (BAN) under its Subordinated Bond Resolution adopted April 26, 2010. Bonds issued under the Subordinated Resolution are superior in priority to all revenue debt of MSD except bonds issued under the General Bond Resolution. Pursuant to the Subordinated Resolution, upon the occurrence and continuance of any event of default, the paying agent may or the holders of more than fifty percent in principal amount of outstanding notes may, by notice delivered to MSD, declare the principal and interest of all notes immediately due and payable. MSD has remedies under the resolution to cure the event of default and annul the declaration of acceleration.

MSD first publicly offered and issued a \$226,340,000 BAN to partially refund its then outstanding sewer and drainage system revenue bonds, Series 1999A and a portion of its Series 1997A and 1998A revenue bonds on August 19, 2009. The BAN has been reissued annually. Under GASB 62, the BAN is considered a non-current liability because MSD intends to replace the Series 2022 BAN with other long-term financing in October 2023. Total BAN outstanding at June 30, 2023 was \$226,340,000. MSD’s plan is to amortize the BAN principal over the same period as the amortization of the notional amount of the hedging derivative instruments⁷.

Significant BAN Transactions: On September 28, 2022, MSD sold \$226,340,000 of sewer and drainage system subordinated BAN, Series 2022 with a coupon rate of 4.00% and an effective interest rate of 2.57%. The proceeds of the notes were used to (i) refund the 2021 notes at maturity on October 14, 2022, and (ii) to pay the costs of issuance of the Series 2022 notes. The 2022 notes closed on October 5, 2022, and will mature on October 6, 2023.

The following table summarizes changes in the BAN during fiscal year 2023.

June 30, 2023 (dollars in thousands)					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
2021 Bond anticipation notes	\$ 226,340	\$ -	\$ 226,340	\$ -	\$ -
2022 Bond anticipation notes	-	226,340	-	226,340	14,145
Total	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 14,145</u>

⁷ See Note 9 – Derivative Instruments

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NOTE 9 – DERIVATIVE INSTRUMENTS

The following table presents MSD's interest rate derivatives outstanding at June 30, 2023.

<i>(dollars in thousands)</i>								
Derivative Instrument	Type	Objective	Counterparty	Original Notional	Notional Amount 6/30/2023	Effective Date	Termination Date	Terms
A	Pay-fixed interest rate swap	Hedge interest rate risk on Series 2022 BAN	Wells Fargo, N.A.	\$ 180,716	\$ 175,356	6/15/2013	5/15/2033	Pay 4.4125% Receive 67% USD-1M SOFR
B	Pay-fixed interest rate swap	Hedge interest rate risk on Series 2022 BAN	Bank of America, N.A.	56,433	43,839	11/16/2009	5/15/2033	Pay 4.4125% Receive 67% USD-1M SOFR
				<u>\$ 237,149</u>	<u>\$ 219,195</u>			

MSD originally entered interest rate swaps as a hedging derivative instrument in anticipation of refinancing the 1999 Series bonds at their call date. Two swaps remain in the portfolio to lower interest rate risk associated with the BAN⁸. The hedgeable item is interest rate risk associated with the expected future issuance of debt associated with refinancing the BAN. The swaps are structured so that the notional amounts of the swaps decrease over time corresponding with the amortization of the BAN principal.

Interest rate swaps are classified as hedging derivative instruments if they meet the criteria outlined in GASB 53 or as investment derivative instruments if they do not. MSD has designated its interest rate swaps as hedging derivatives under GASB 53 as of July 1, 2019. At June 30, 2023, MSD's interest rate derivatives are effective cash flow hedges and were classified as hedging derivatives in its financial statement. The fair value of the at-market portion, the hedging derivative, is reported as other assets and deferred inflows if positive and other liabilities and deferred outflows if negative on the Statements of Net Position. The difference between the fair value of the at-market hedging derivatives and the fair value of the interest rate swaps is reported as investment derivatives on the Statements of Net Position. All changes in fair value of the derivatives are recorded as a separate component of non-operating revenue (expense).

Both swaps have termination dates of May 15, 2033. Payments are due on the fifteenth of each month. MSD receipt terms are 67% of the 30-day London Inter-Bank Offered Rate (LIBOR) or the replacement rate. MSD adhered to the 2020 IBOR Fallbacks Protocol on January 17, 2023. LIBOR will be replaced with 30-day Secured Overnight Financing Rate (SOFR) in MSD's derivative contracts following the cessation of 30-day LIBOR. The following table presents a summary of the change in fair value of the derivative instruments for the year ended June 30, 2023.

<i>(dollars in thousands)</i>		June 30, 2023
Fair value - beginning of year		\$ (40,914)
Change in fair value		<u>13,667</u>
Fair value - end of year		<u>\$ (27,247)</u>

⁸ See Note 8 – Bond Anticipation Notes

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The following table presents fair values for the non-credit adjusted, at-market portion of the derivatives at June 30, 2023.

<i>(dollars in thousands)</i>	June 30, 2023	
Derivatives (at-market)	Clean	Accrued
1999-1 - \$180.7M 67% LIBOR fixed payer	\$ (13,820)	\$ (156)
1999-2 - \$56.4M 67% LIBOR fixed payer	<u>(3,457)</u>	<u>(39)</u>
Total	<u>\$ (17,277)</u>	<u>\$ (195)</u>

The following table provides classification of the at-market portion and investment portion of the derivatives at June 30, 2023.

<i>(dollars in thousands)</i>	Changes in Fair Value		Fair Value as of June 30, 2023		
Governmental Activities	Classification	Amount	Classification	Amount	Notional
Cash flow hedges:					
Pay-fixed interest rate swaps	Deferred inflows	\$ 6,052	Other liabilities	\$ (27,247)	\$ 219,195
			Accrued interest	<u>(92)</u>	
				<u>\$ (27,339)</u>	
Investment derivatives:					
Pay-fixed interest rate swaps	Non-operating expenses	<u>7,615</u>			
		<u>\$ 13,667</u>			

Valuation Techniques:

The fair values of the interest rate swaps were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swaps.

Non-performance risk was measured using credit spreads implied by the credit rating for debt issues by entities with similar credit characteristics. This is the best method available under current market conditions since MSD has no credit default swaps that actively trade in the marketplace. For a derivative asset, the adjustment for non-performance risk of counterparties is determined by analyzing counterparty-specific credit default swaps, if available. If not available, credit default swaps in the market for entities of similar type and rating are used with information found in various public and private information services. This analysis is used to construct a credit curve that is applied to the discount curve on the net settlement payments of the derivative. A level two (2) category hierarchy was employed for fair valuation measurement. The positive and negative fair values of the swap agreements were provided by a third-party financial advisor.

Risks:

Credit Risk: Credit risk is the risk that a swap counterparty will not fulfill its obligations to MSD. MSD has implemented steps to safeguard it against the risks associated with the swap transactions. If the swap counterparties do not maintain A1/A+ ratings from Moody's Investors Service and Standard and Poor's Rating Service, the swaps contain provisions that require them to be marked to market weekly with monthly statements sent to MSD and the value will be collateralized with U.S. Treasury and Agency securities with the securities held by a tri-party custodian approved by MSD. All costs of collateralization will be borne by

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the downgraded party who must post the collateral. In addition, the swaps were awarded to multiple firms to further mitigate the credit risk associated with the transactions.

The following table presents credit ratings of the counterparties to MSD's derivative instruments as of June 30, 2023.

	Moody's	Standard & Poor's
Bank of America, N.A.	P-1	A-1
Wells Fargo Bank, N.A.	P-1	A-1+

The agreements also provide for automatic termination if MSD's unenhanced bond rating is downgraded below BBB/Baa. MSD's obligations under its outstanding swap agreements are unsecured and subordinate to all bonds issued and outstanding.

The credit adjusted at-market portion, the accrued interest portion and off-market fair value of derivative instruments A and B are in liability positions of \$17,276,754, \$195,385 and \$9,970,278, respectively, at June 30, 2023. The aggregate fair value is negative \$27,339,463 (gross of implied note outstanding balance as of June 30, 2023). This represents the maximum loss that would be recognized at the reporting date if one or both swap counterparties failed to perform as contracted. There is no posted collateral to net against the fair value.

The contracts for derivative instruments A and B are held by Wells Fargo, N.A. and Bank of America, N.A., respectively, and comprise 100% of the net exposure to credit risk.

Termination Risk: Termination risk is generally referred to as the risk that a derivative instrument could be terminated causing MSD to owe a termination payment as a result of any of several events, which may include: a ratings downgrade of the swap counterparty; covenant violations by either party; bankruptcy of either party; a swap payment default of either party; and other default events as defined by the derivative instrument. Any such termination may require MSD to make significant termination payments in the future. The approximate amount of termination payment that MSD would have to pay if each of the derivative instruments were terminated on June 30, 2023, is approximately \$27,339,463. It should be noted that this is the non-credit adjusted (non GASB 72) mark-to-market valuation as of last business day of the fiscal year. The provisions of the agreements related to each derivative instrument allow for the offset of certain reimbursable costs related to the termination process.

To further mitigate the effect of termination risk relative to derivative instruments A and B, the agreements contain certain safeguards which include (i) collateral posting requirements as discussed in the preceding Credit Risk section and (ii) except for certain types of termination events there is no automatic early termination.

Derivative instruments A and B may be terminated, if the underlying rating of MSD's obligations that are subject to annual appropriation falls below "BBB" from Standard and Poor's Ratings Service or below "Baa2" from Moody's Investors Service.

While there is no optional termination language in the confirmations of derivative instruments A and B, Wells Fargo, N.A. and Bank of America, N.A., respectively, may accommodate MSD to terminate the derivative instruments early, subject to credit approval.

If, at the time of termination, a swap has a negative fair value, MSD could be liable to the counterparty for a payment equal to the derivative instrument's fair value. If any of the derivative instruments are terminated, either the associated variable rate bonds would no longer be hedged with a synthetic fixed interest rate or

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the nature of the basis risk associated with the derivative instrument may change. As of June 30, 2023, MSD is not aware of any pending event that would lead to a termination event with respect to any of its existing derivative instruments, which are in force and effect as of such date.

Basis Risk: Basis risk is the risk that arises when an interest rate hedge is imperfect. Each of the derivative instruments is associated with certain debt obligations. The debt associated with each of the derivative instruments pays interest at variable interest rates. MSD receives variable payments under the derivative instrument. To the extent these variable payments are not equal to the variable interest payments on the associated debt there may be either a net loss or net benefit to MSD. The net swap payments made by MSD in fiscal year 2023 were \$3,987,927.

Rollover Risk: Rollover risk occurs when the term of the derivative instrument is not coincident with the repayment term of the underlying debt obligation. Derivative instruments A and B have terms equal to the critical terms of the hedged interest rate exposure.

Interest Rate Risk: Interest rate risk is the risk that a change in interest rates will reduce the value of an investment or position. MSD is exposed to interest rate risk on its interest rate derivative instruments. There may be either a net loss or net benefit to MSD depending upon decreases or increases in the applicable yield curve.

Terminations:

Upon a termination of a swap, any termination receipt or payment is amortized into income or expense until the original expiration date of that swap. Any unamortized portion of the receipt or payment is recorded as a deferred debit or credit in long-term liabilities. MSD has swap agreement terminations with deferred inflow of resources balances accreting to non-operating revenue as follows:

- In April 2006, MSD entered into a swap agreement with Deutsche Bank AG for an initial notional amount of \$171,405,000 which provided that beginning May 15, 2006, a net payment will be made based on MSD paying 78.78% of the 3-month LIBOR index on the notional amount and receiving 73.45% of the 5-year LIBOR Index on the notional amount. On January 23, 2008, MSD terminated this swap agreement and received a termination payment of \$4,170,000 that will be amortized until December 2023, the original termination date of the agreement.
- On January 25, 2008, MSD terminated a twenty-seven-year floating to floating (basis) interest rate swap agreement with a notional amount of \$282,165,000. MSD entered into this agreement with Morgan Stanley in April 2006 and paid 67% of the 1-month LIBOR index and received 62.2% of the 5-year LIBOR index. The termination of this swap agreement resulted in the receipt of a payment in the amount of \$5,756,000. This payment will be amortized annually into income until April 2033, the original termination date of the agreement.

NOTE 10 - RISK MANAGEMENT

MSD is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; natural disasters; and injuries to MSD's employees. These risks are provided through the insurance programs described below.

Self-Insurance – Group Liability:

MSD participates in the Louisville Area Governmental Self-Insurance Trust (LAGIT). LAGIT, which is certified by the Kentucky Department of Insurance to practice as a group liability self-insurance trust, was created on January 1, 1987. LAGIT members currently include Louisville Metro Government, six smaller cities, and six government agencies. LAGIT was formed to provide better risk protection and lower cost liability insurance by sharing the risk with all its members. MSD's payments to LAGIT are reflected on the financial statements as an expense. LAGIT provides, after a \$300,000 deductible, various liability coverages up to \$5,000,000 per occurrence. The amount of coverage available to MSD could be limited by

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the total assets of LAGIT and/or claims of other members under the excess insurance policy. No claims were paid in fiscal year 2023 that exceeded the \$300,000 self-insured retention with LAGIT.

MSD maintained additional excess liability coverage for fiscal year 2023. Allied World National Assurance Company (A) provided \$5,000,000 of excess liability coverage beyond the \$5,000,000 provided through LAGIT. The Princeton Excess & Surplus Lines Insurance Company (A+) provided another \$5,000,000 of excess liability coverage beyond \$10,000,000. In total, MSD maintained liability coverage of \$15,000,000. No claims were made on either policy in fiscal year 2023.

Workers Compensation Insurance:

MSD has chosen to self-insure the basic worker's compensation insurance. Claims administration is handled by a third-party administrator and includes claims monitoring, check issuance, settlement negotiations, and loss control services. Liabilities are reported when it is probable that a loss has occurred, and the amount of the loss can be reasonably estimated. A separate insurance policy provides maximum coverage of \$1,000,000 per occurrence and aggregate. The liability for workers compensation claims is included with accrued salaries and related benefits on the Statements of Net Position. The following table summarizes workers compensation claim activity during fiscal year 2023.

<i>(dollars in thousands)</i>	June 30, 2023
Liability - beginning of year	\$ 1,797
Claims and changes in estimates	1,007
Payments	(902)
Liability - end of year	<u>\$ 1,902</u>

Self-Insurance – Property:

MSD joined the Louisville Area Governmental General Insurance Trust (LAGGIT) in September 2002. LAGGIT was created to provide lower cost to participants and broader coverage for property risks. MSD is responsible for covered property damage up to \$100,000 except for flood and vehicle collision coverage, which have separate deductibles. LAGGIT provides coverage for the next \$1,000,000 per occurrence, except for Flood Zone A locations. An excess insurance policy with a third-party carrier covers claims more than \$1,100,000. No claims were made under the LAGGIT policy in fiscal year 2023.

NOTE 11 - DEFERRED COMPENSATION

MSD offers its employees deferred compensation plans created in accordance with Internal Revenue Service Code Sections 401(k) and 457. These plans, available to all MSD employees, permit them to defer the payment of a portion of their salary until future years. Participation in these plans is voluntary and MSD makes no contributions to these plans on behalf of the employee. The deferred compensation is not available to employees until termination, retirement, death, or unforeseen emergency. All amounts of compensation deferred, including the investments and earnings thereon, vest with the employee and are not subject to the claims of MSD's general creditors.

NOTE 12 - COMMITMENTS AND CONTINGENCIES

Sale of Sewer Assessments:

MSD has entered into agreements to sell sanitary sewer assessments to a local bank. These assessments reflect the portion of the cost that residents pay to have sewer lines installed in their neighborhood. Residents were given the opportunity to pay the assessment in full or to finance it over a twenty-year period at 7% interest per annum. The original agreement called for the bank to accept up to \$25,000,000 of outstanding assessments and for MSD to receive 104% of the face value of the assessments.

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The subsequent agreement allows an additional \$5,000,000 of assessments to be sold to the bank at face value. These agreements give the bank the option to place the assessments back with MSD if the property owner's payments are 90 days in arrears or the property owner does not respond to the bank's demand for payment within a 90-day period after the issuance of the assessment. Sales to the bank are net of any subsequent repurchases of warrants by MSD. The unpaid principal balance of loans held by the bank at June 30, 2023 was \$135,409.

Consent Decree:

On August 12, 2005, MSD agreed to enter a consent decree with the Commonwealth of Kentucky's Environmental and Public Protection Cabinet (KEPPC) and the U.S. Environmental Protection Agency (EPA). The consent decree called for MSD to submit a final Long-Term Control Plan (LTCP) to the KEPPC and EPA for review and joint approval. The final Sanitary Sewer Discharge Plan (SSDP) and the LTCP were certified on December 19, 2008, under the title of the Integrated Overflow Abatement Plan (IOAP). The SSDP included schedules and deadlines for capital projects to be completed by the end of 2024. The LTCP included schedules, and deadlines for combined sewer overflow projects to be completed by December 31, 2020. MSD agreed to pay a civil penalty to the Commonwealth of Kentucky in the amount of \$1,000,000 to resolve the violations alleged in the KEPPC's and EPA's complaints up through the date of entry of the consent decree. The agreement called for MSD to perform supplemental environmental projects at an amount of not less than \$2,250,000. MSD neither admitted nor denied the alleged violations but acknowledged that discharges occurred and accepted the obligations imposed in the consent decree.

On April 10, 2009, MSD agreed to enter an amended consent decree with the KEPPC and the EPA. The amended consent decree resolved all pending claims of violations of the Federal Water Pollution Control Act and the Water Quality Act of 1987. The amended consent decree superseded and replaced the original consent decree entered on August 12, 2005. The amended consent decree contains stipulated penalties for MSD's failure to comply with the provisions contained therein. The IOAP was amended in 2012 and 2014 to improve compliance and adjust capital project schedules. To date, MSD has complied with all submittal and report requirements contained in the amended consent decree.

In 2019, MSD proactively approached Federal and state regulators to renegotiate the time to complete the remaining LTCP and SSDP projects required by the amended consent decree to reprioritize capital dollars for rehabilitation of MSD's aging biosolids systems, failing sewer interceptors and flood protection system rehabilitation. MSD, along with KEPPC and EPA, negotiated the second amended consent decree which grants a time extension for completing the remaining LTCP and SSDP projects to 2035. In exchange, MSD agreed to invest a minimum of \$25 million annually for asset management projects through 2035. Additionally, MSD agreed to incorporate \$70 million for critical sewer rehabilitation in its 5-year capital improvement plan. These financial commitments are achievable within the MSD Board's rate increase authority of 6.9% per year. The United States District Court granted final approval of the second amended consent decree on September 14, 2022. The second amended consent decree supersedes and replaced the 2009 amended consent decree and the 2014 IOAP.

Since the start of the consent decree in 2005, MSD has seen a significant reduction in sewer overflows. For a 2-year cloudburst storm, 134 sanitary sewer overflow locations have been eliminated, from 197 modeled locations in 2007, to 65 in 2021, and 63 in 2022. Combined sewer overflow volumes have been reduced by 5.85 billion gallons per typical year, from 6.5 billion gallons in 2001, to 1.1 billion gallons in 2021, and 648 million gallons in 2022. Through June 30, 2023, capital expenditures related to the consent decree totaled approximately \$1.2 billion. MSD estimates total capital expenditures associated with complying with the requirements of the second amended consent decree could range from \$2.0 billion to \$2.2 billion. As with any estimate, the actual costs incurred could differ materially.

Claims and Litigation:

MSD is a defendant in various active lawsuits. Although the outcome of these lawsuits is not presently determinable, it is the opinion of the MSD's management that resolution of these matters will not have a

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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material adverse effect on the financial statements of MSD. All material claims and litigation settlements that are both probable and reasonably measurable are recorded in accounts payable.

Other Commitments:

MSD is committed under various contracts for completion of construction or acquisition of utility plant and equipment. Outstanding contractual commitments related to the capital improvement program as of June 30, 2023, were \$281,231,715. These commitments will be paid for with bond proceeds, commercial paper, grants, and future pay-as-you-go revenues.

On January 1, 2022, MSD entered into an agreement with Louisville Water Company to provide customer billing services through December 31, 2027. The remaining cost of the contract including the portion of the contract treated as a SBITA at June 30, 2023, is \$34,650,126.

NOTE 13 - SUBSEQUENT EVENTS

KIA Loan A23-002:

On July 6, 2023, the KIA approved loan A23-002 for the Bullitt Hills and Hillview wastewater treatment plants and pump station elimination project. The total amount of the loan shall not exceed \$11,200,000. Interest is payable semiannually at a fixed rate of 1.25% per annum commencing after funds are first drawn on the loan. The loan shall be repaid over a period not to exceed 20 years from the date of initiation of operation for the project.

KIA Loan A23-007:

On July 31, 2023, the KIA invited MSD to apply for loan A23-007 for the Paddy's Run Flood Pumping Station Capacity Improvements project. The total amount of the loan shall not exceed \$27,783,547.

Rate Increase:

On August 1, 2023, MSD's rates for wastewater and drainage service charges increased by 6.9% for Jefferson County customers. Wastewater volume rates increased 5% for Oldham County customers.

KIA Loan A23-007E:

On August 3, 2023, the KIA approved loan A23-007E for the Paddy's Run Flood Pumping Station Capacity Improvements project. The total amount of the loan is \$1,118,600. This loan is eligible for principal forgiveness.

Commercial Paper Program:

Commercial paper notes of \$419,195,000 are outstanding as of October 31, 2023, in accordance with the respective Revolving Credit Agreements. Interest rates on the notes outstanding range from 3.75% to 3.90% and maturities range from 3 to 85 days. Commercial paper notes of \$200,000,000 were economically defeased by the issuance of the Series 2023C bonds and will be discharged on January 24, 2024. MSD intends to reissue the remaining commercial paper notes at maturity in accordance with the refinancing terms of the Revolving Credit Agreements.

2022 BAN Maturity:

On October 6, 2023, MSD paid off the 2022 BAN with \$7,145,000 of unrestricted cash and \$219,195,000 of commercial paper proceeds. MSD's plan is to amortize the commercial paper notes issued to pay off the BAN over the same period as the amortization of the notional amount of the hedging derivative instruments⁹.

Series 2023C Bonds: On October 12, 2023, MSD sold \$351,975,000 of its tax-exempt sewer and drainage system revenue and refunding bonds, Series 2023C. The proceeds of the Series 2023C bonds will be used: (i) to refund portions of the outstanding Series 2013B and Series 2020C bonds, (ii) to refund \$200,000,000 of outstanding commercial paper notes, (iii) to pay or reimburse the costs of construction and acquisition of

⁹ See Note 9 – Derivative Instruments

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the capital improvement program, (iv) to fund the required increase in the reserve account equal to the debt service reserve requirement, and (v) to pay the costs of issuance of the 2023C bonds. The final maturity of Series 2023C bonds is in 2053. The 2023C bonds closed on October 26, 2023.

NOTE 14 - DEFINED BENEFIT PENSION AND OTHER POSTEMPLOYMENT BENEFITS PLAN

General Information about the Pension and OPEB Plan:

All full-time and eligible part-time employees of MSD participate in County Employee Retirement System (CERS), a cost-sharing, multiple-employer defined benefit pension plan administered by the Kentucky Public Pension Authority (KPPA, the system), an agency of the Commonwealth. Under the provisions of Kentucky Revised Statute Section 78.782 and 61.645, the Board of Trustees (the Board) of KPPA administers CERS, Kentucky Employee Retirement System, and State Police Retirement System. Although the assets of the systems are invested as a whole, each system's assets are accounted for separately; invested according to plan-specific asset allocation goals; and, are used only for the payment of benefits to the members of that plan and a pro rata share of administrative costs, in accordance with the provisions of Kentucky Revised Statute Sections 78.632, 613571, and 16.555.

The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may also be extended to beneficiaries of plan members under certain circumstances. Under the provisions of Kentucky Revised Statute Section 61.701, the Board of KPPA also administers the Kentucky Retirement System's Insurance Fund. The statutes provide for a single insurance fund to provide group hospital and medical benefits to retirees drawing a benefit from the three pension funds administered by KPPA. The assets of the insurance fund are invested as a whole. KPPA and the Commonwealth have statutory authority to determine Plan benefits and employer contributions.

KPPA issues a publicly available financial report that includes financial statements and required supplementary information for CERS. The report may be obtained by writing to Kentucky Public Pension Authority, 1260 Louisville Road, Frankfort, Kentucky 40601, or it may be found at the KPPA website at www.kyret.ky.gov.

Basis of Accounting:

For purposes of measuring the net pension and other post-employment benefits plan (OPEB) liabilities, deferred outflow of resources and deferred inflow of resources related to pensions and OPEB, pension and OPEB expense, information about the fiduciary net position of CERS and additions to/deductions from CERS's fiduciary net position have been determined on the same basis as they are reported by CERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Pension Benefits Provided:

The information below summarizes the major retirement benefit provisions of CERS-nonhazardous. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Members whose participation began before 8/1/2004:

Age and Service Requirement: Age 65 with at least one month of nonhazardous duty service credit, or at any age with 27 or more years of service credit.

Benefit: If a member has at least 48 months of service, the monthly benefit is 2.20% times final average compensation times years of service depending on participation and retirement dates. Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used. If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

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Members whose participation began on or after 8/1/2004, but before 9/1/2008:

Age and Service Requirement: Age 65 with at least one month of nonhazardous duty service credit, or at any age with 27 or more years of service credit.

Benefit: If a member has at least 48 months of service, the monthly benefit is 2.00% multiplied by final average compensation, multiplied by years of service. Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used. If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 9/1/2008, but before 1/1/2014:

Age and Service Requirement: Age 65 with 60 months of nonhazardous duty service credit, or age 57 if age plus service equals at least 87.

Benefit: The monthly benefit is the following benefit factor based on service credit at retirement plus 2.00% for each year of service greater than 30 years, multiplied by final average compensation, multiplied by years of service.

<u>Service Credit</u>	<u>Benefit Factor</u>
10 years or less	1.10%
10+ - 20 years	1.30%
20+ - 26 years	1.50%
26+ - 30 years	1.75%

Final compensation is calculated by taking the average of the last (not highest) five (5) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Members whose participation began on or after 1/1/2014:

Age and Service Requirement: Age 65 with 60 months of nonhazardous duty service credit, or age 57 if age plus service equals at least 87.

Benefit: Each year that a member is an active contributing member to the System, the member contributes 5% of creditable compensation, and the member's employer contributes 4.00% of creditable compensation, which is a portion of the total employer contribution, into a hypothetical account. The hypothetical account will earn interest annually on both the member's and employer's contribution at a minimum rate of 4%. If the System's geometric average net investment return for the previous five years exceeds 4%, then the hypothetical account will be credited with an additional amount of interest equal to 75% of the amount of the return which exceeds 4%. All interest credits will be applied to the hypothetical account balance on June 30 based on the account balance as of June 30 of the prior year. Upon retirement the hypothetical account which includes member contributions, employer contributions and interest credits can be withdrawn from the System as a lump sum or annuitized into a single life annuity option.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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OPEB Benefits Provided:

The information below summarizes the major retirement benefit provisions of CERS-nonhazardous. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Insurance Tier 1: Participation began before 7/1/2003

Benefit Eligibility: Recipient of a retirement allowance

Benefit: The percentage of member premiums paid by the retirement system are dependent on the number of years of service. Benefits also include duty disability retirements, duty death in service, non-duty death in service and surviving spouse of a retiree.

Insurance Tier 2: Participation began on or after 7/1/2003, but before 9/1/2008

Benefit Eligibility: Recipient of a retirement allowance with at least 120 months of service at retirement

Benefit: The system provides a monthly contribution subsidy of \$10 for each year of earned service. The monthly contribution is increased by 1.5% each July 1. Benefits also include duty disability retirements, duty death in service and non-duty death in service.

Insurance Tier 3: Participation began on or after 9/1/2008

Benefit Eligibility: Recipient of a retirement allowance with at least 180 months of service at retirement

Benefit: The system provides a monthly contribution subsidy of \$10 for each year of earned service. The monthly contribution is increased by 1.5% each July 1. Benefits also include duty disability retirements, duty death in service and non-duty death in service.

Contributions:

MSD is required to contribute at an actuarially determined rate determined by Statute. Per Kentucky Revised Statute Section 78.545(33) normal contribution and past service contribution rates shall be determined by the KPPA Board based on an annual valuation last preceding July 1 of a new biennium. The KPPA Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined based on a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the KPPA Board.

For the fiscal year ended June 30, 2023, participating CERS employers contributed 26.79% (23.40 % allocated to pension and 3.39% allocated to OPEB) of each nonhazardous employee's creditable compensation. These percentages are inclusive of both pension and insurance payments for employers. Administrative costs of KPPA are financed through employer contributions and investments earnings.

MSD has met 100% of the contribution funding requirement for the fiscal year ended June 30, 2023. Total contributions recognized by the Plan were \$14,946,028 (\$13,054,761 related to pension and \$1,891,267 related to OPEB). The OPEB contribution amount does not include the implicit subsidy reported in the amount of \$1,303,172.

Members whose participation began before 9/1/2008:

Nonhazardous member contributions equal 5% of all creditable compensation. Interest paid on the members' accounts is currently 2.5%; and per statute shall not be less than 2.0%. Members are entitled to a full refund of contributions with interest.

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Members whose participation began on or after 9/1/2008, but before 1/1/2014:

Nonhazardous member contributions equal to 6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KPPA 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Members are entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.

Members whose participation began on or after 1/1/2014:

Nonhazardous member contributions equal to 6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KPPA 401(h) Account. Members are entitled to a full refund of contributions and interest on the member's portion of the hypothetical account, however, the 1% contributed to the insurance fund is non-refundable.

Pension Plan Information:

Total Pension Liability: The total pension liability (TPL) was determined by an actuarial valuation as of June 30, 2022. An expected TPL was determined at June 30, 2022 using standard roll-forward techniques. The following actuarial assumptions were applied to all periods included in the measurement:

Price Inflation	2.30%
Salary increases	3.30 to 10.30% varying by service years, including inflation
Investment rate of return	6.25%, net of pension plan investment expense, including inflation

The mortality table used for active members is PUB-2010 General Mortality table, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. For healthy retired members and beneficiaries, the mortality table used is the PUB-2010 General Mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2019 (set back 3 years for males). For disabled members, the mortality table used is the PUB-2010 Disabled Mortality table, with a 4-year set-forward for both male and female rates, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2013 – June 30, 2018.

Discount rate assumptions:

- (a) Discount Rate: The discount rate used to measure the total pension liability was 6.25% which did not change from the prior year.
- (b) Projected Cash Flows: The projection of cash flows used to determine the discount rate assumes that the funds receive the required employer contributions each future year, as determined by the current funding policy established by Statute as amended by House Bill 362 (passed in 2018) over the remaining 30 years (closed) amortization period of the unfunded actuarial accrued liability.
- (c) Long-Term Rate of Return: The long-term expected return on plan assets is reviewed as part of the regular experience studies prepared every five years for the System. The most recent analysis, performed for the period covering fiscal years 2013 through 2018 is outlined in a report dated April 12, 2019. However, the Board of KPPA has the authority to review the assumptions on a more frequent basis and adopt new assumptions prior to the next scheduled experience study. The long-term expected rate of return was determined by using a building-block method in which best-estimate ranges of expected future real rate of returns are developed for each asset class. The ranges are combined by weighting the expected future real rate of return by the target asset allocation percentage.

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- (d) **Municipal Bond Rate:** The discount rate determination does not use a municipal bond rate. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the non-hazardous and hazardous pension plans' fiduciary net position and future contributions were separately projected and were each sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability for each plan.
- (e) **Periods of Projected Benefit Payments:** The long-term assumed rate of return was applied to all periods of projected benefit payments to determine the TPL.
- (f) **Assumed Asset Allocation:** The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table.

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Public equity	50.00%	4.45%
Private equity	10.00%	10.15%
Core fixed income	10.00%	0.28%
Specialty credit	10.00%	2.28%
Cash	0.00%	-0.91%
Real estate	7.00%	3.67%
Real return	13.00%	4.07%
Total	<u>100.00%</u>	

The long-term expected rate of return on pension plan assets was established by the KPPA Board of Trustees at 6.25% based on a blending of the factors described above.

- (g) **Sensitivity Analysis:** This paragraph requires disclosure of the sensitivity of the net pension liability (NPL) to changes in the discount rate. The following table presents MSD's allocated portion of the NPL of the System, calculated using the discount rate of 6.25%, as well as what MSD's allocated portion of the NPL would be if it were calculated using a discount rate that is one percentage-point lower (5.25%) or 1 percentage-point higher (7.25%) than the current rate.

<i>(dollars in thousands)</i>	1% Decrease (5.25%)	Current Discount Rate (6.25%)	1% Increase (7.25%)
MSD's net pension liability	\$ 165,493	\$ 132,407	\$ 105,043

Employer's Portion of the Collective NPL: MSD's proportionate share of the NPL, as indicated in the prior table, is \$132,407,406 or approximately 1.83%, a decrease of 0.12% from fiscal year 2022. The NPL was distributed based on 2022 actual employer contributions to the plan.

Measurement Date: The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2020. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2022, using generally accepted actuarial principles.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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Changes in Assumptions and Benefit Terms: Since the prior measurement date, there were no changes in assumptions and benefit terms.

Changes Since Measurement Date: There were no changes between the measurement date of the collective NPL and the employer's reporting date.

Pension Expense: MSD was allocated pension expense of (\$1,630,824) related to the CERS for the year ending June 30, 2023.

Deferred Outflows and Deferred Inflows: Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce pension expense, they are labeled as deferred inflows. If they will increase pension expense, they are labeled deferred outflows. The amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average remaining service life of the active and inactive System members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five-year period. Deferred inflows and outflows as of the measurement date include:

<i>(dollars in thousands)</i>	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	\$ 141	\$ 1,179
Changes in proportion and differences between employer contributions and proportionate shares of contributions	3,394	-
Differences between expected and actual investment earning on plan investments	<u>3,512</u>	<u>5,426</u>
	7,047	6,605
Contributions subsequent to the measurement date	<u>13,055</u>	<u>-</u>
Total	<u>\$ 20,102</u>	<u>\$ 6,605</u>

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$13,054,761 will be recognized as a reduction of NPL in the year ending June 30, 2024. The remainder of the deferred outflows and deferred inflows of resources are amortized over two to four years with remaining amortization as follows:

<i>(dollars in thousands)</i>	
Year Ending June 30:	
2023	\$ 158
2024	(2,364)
2025	(1,113)
2026	<u>3,761</u>
	<u>\$ 442</u>

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

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
NOTES TO THE FINANCIAL STATEMENTS**

OPEB Information:

Total OPEB Liability: The total other post-employment benefits plan (OPEB) was determined by an actuarial valuation as of June 30, 2022. An expected total OPEB liability was determined at June 30, 2022 using standard roll-forward techniques. The following actuarial assumptions were applied to all periods included in the measurement:

Price inflation	2.30%
Payroll growth rate	2.00%
Salary increases	3.30% to 10.30%, varies by service
Investment rate of return	6.25%
Healthcare trend rates:	
Pre-65	Initial trend starting at 6.40 % at January 1, 2022 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 14 years.
Post-65	Initial trend starting at 6.30% at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 years.

The mortality table used for active members is PUB-2010 General Mortality table, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. For healthy retired members and beneficiaries, the mortality table used is the PUB-2010 General Mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2019 (set back 3 years for males).

For disabled members, the mortality table used is the PUB-2010 Disabled Mortality table, with a 4-year set-forward for both male and female rates, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period of July 1, 2013 – June 30, 2018.

Discount rate assumptions:

- (a) **Discount Rate:** The discount rate used to measure the total OPEB liability was 5.70%, which increased from the prior year rate of 5.20%.
- (b) **Projected Cash Flows:** The projection of cash flows used to determine the discount rate assumed the local employers and plan members would contribute the actuarially determined contribution rate of projected compensation for each future year calculated in accordance with the current funding policy.
- (c) **Long-Term Rate of Return:** The long-term expected return on plan assets is reviewed as part of the regular experience studies prepared every five years for the System. The most recent analysis, performed for the period covering fiscal years 2013 through 2018 is outlined in a report dated April 12, 2019. However, the Board of KPPA has the authority to review the assumptions on a more frequent basis and adopt new assumptions prior to the next scheduled experience study. The long-term expected rate of return was determined by using a building-block method in which best-estimate ranges of expected future real rate of returns are developed for each asset class. The ranges are combined by weighting the expected future real rate of return by the target asset allocation percentage.
- (d) **Municipal Bond Rate:** The discount rate determination used a municipal bond rate of 3.69% as reported in Fidelity Index's "20 – Year Municipal GO AA Index" as of June 30, 2022. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, each plan's fiduciary net position and future contributions were projected separately and were sufficient to

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NOTES TO THE FINANCIAL STATEMENTS**

finance the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on insurance plan investments was applied to all periods of the projected benefit payments paid from the plan. However, the cost associated with the implicit employer subsidy is not currently being included in the calculation of the plan's actuarially determined contributions, and it is our understanding that any cost associated with the implicit subsidy will not be paid out of the plan's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

- (e) **Period of Projected Benefit Payments:** Current assets, future contributions, and investment earnings are projected to be sufficient to pay the projected benefit payments from the retirement system. However, the cost associated with the implicit employer subsidy is not currently being included in the calculation of the system's actuarial determined contributions, and it is the actuary's understanding that any cost associated with the implicit subsidy will not be paid out of the system's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.
- (f) **Assumed Asset Allocations:** The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Public equity	50.00%	4.45%
Private equity	10.00%	10.15%
Core fixed income	10.00%	0.28%
Specialty credit	10.00%	2.28%
Cash	0.00%	-0.91%
Real estate	7.00%	3.67%
Real return	13.00%	4.07%
Total	<u>100.00%</u>	

The long-term expected rate of return on pension plan assets was established by the KPPA Board of Trustees at 6.25% based on a blending of the factors described above.

- (g) **Sensitivity Analysis:** This paragraph requires disclosure of the sensitivity of the net OPEB liability to changes in the discount rate and changes in the healthcare cost trend rate.

The following table presents MSD's allocated portion of the net OPEB liability of the System, calculated using the discount rate of 5.70%, as well as what the MSD's allocated portion of the System's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.270%) or 1-percentage-point higher (6.70%) than the current rate for nonhazardous.

<i>(dollars in thousands)</i>	1% Decrease (4.70%)	Current Discount Rate (5.70%)	1% Increase (6.70%)
MSD's net OPEB liability	\$ 48,320	\$ 36,145	\$ 26,080

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The following table presents the MSD's allocated portion of the net OPEB liability of the System, calculated using the healthcare cost trend rate of percent, as well as what the MSD's allocated portion of the System's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate for nonhazardous.

<i>(dollars in thousands)</i>	1% Decrease	Current Healthcare Cost Trend Rate	1% Increase
MSD's net OPEB liability	\$ 26,873	\$ 36,145	\$ 47,279

Employer's Portion of the Collective OPEB Liability: MSD's proportionate share of the net OPEB liability, as indicated in the prior table, is \$36,145,040 or approximately 1.83%, or a decrease of 0.12% from fiscal year 2022. The net OPEB liability was distributed based on 2022 actual employer contributions to the plan.

Measurement Date: The total OPEB liability, net OPEB liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2020. The total OPEB liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2022, using generally accepted actuarial principles.

Changes in Assumptions and Benefit Terms: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total OPEB liability have been updated as follows:

- The discount rate used to calculate the total OPEB liability increased from 5.20% to 5.70%.

Changes Since Measurement Date: There were no changes between the measurement date of the collective net OPEB liability and the employer's reporting date.

OPEB Expense: MSD was allocated OPEB expense of \$3,762,624 related to the CERS for the year ending June 30, 2022.

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NOTES TO THE FINANCIAL STATEMENTS**

Deferred Outflows and Deferred Inflows: Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce OPEB expense, they are labeled as deferred inflows. If they will increase OPEB expense, they are labeled as deferred outflows. The amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average remaining service life of the active and inactive System members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five-year period. Deferred inflows and outflows as of the measurement date include:

<i>(dollars in thousands)</i>	<u>Deferred Outflow of Resources</u>	<u>Deferred Inflow of Resources</u>
Difference between expected and actual experience	\$ 3,638	\$ 8,289
Change of assumptions	5,717	4,710
Changes in proportion and differences between employer contributions and proportionate shares of contributions	1,467	-
Differences between expected and actual investment earning on plan investments	<u>2,380</u>	<u>2,031</u>
	13,202	15,030
Contributions subsequent to the measurement date	<u>3,195</u>	<u>-</u>
Total	<u>\$ 16,397</u>	<u>\$ 15,030</u>

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$3,194,439 which include the implicit subsidy reported of \$1,303,172 will be recognized as a reduction of net OPEB liability in the year ending June 30, 2024. The remainder of the deferred outflows and deferred inflows of resources are amortized over two to four years with remaining amortization as follows:

<i>(dollars in thousands)</i>	
Year Ending June 30:	
2023	\$ 452
2024	153
2025	(2,170)
2026	<u>(263)</u>
	<u>\$ (1,828)</u>

OPEB Plan Fiduciary Net Position: Detailed information about the OPEB plans' fiduciary net position is available in the separately issued OPEB plan financial reports.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION**

Louisville and Jefferson County Metropolitan Sewer District Schedule of Proportionate Share of the Net Pension Liability For the Years Ended June 30, (dollars in thousands)									
	2023	2022	2021	2020	2019	2018	2017	2016	2015
MSD's proportion of the net pension liability	1.83%	1.95%	1.82%	1.80%	1.72%	1.60%	1.51%	1.60%	1.60%
MSD's proportionate share of the net pension liability	\$132,407	\$124,564	\$139,401	\$126,866	\$104,511	\$93,517	\$74,132	\$68,653	\$51,988
MSD's covered payroll	54,678	52,828	49,808	48,391	45,859	43,084	39,596	37,900	37,100
MSD's proportion of the net pension liability as a percentage of its covered payroll	242.2%	235.8%	279.9%	262.2%	227.9%	217.1%	187.2%	181.1%	140.1%
Plan fiduciary net position as a percentage of the total pension liability	52.42%	57.33%	47.81%	50.45%	53.54%	53.32%	55.50%	59.97%	66.80%

Notes:

- 1) The amounts presented for each fiscal year were determined as of the prior year end.
- 2) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years that information is available.

Changes in Assumptions and Benefit Terms:

2015: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total pension liability have been updated as described in Schedule D of the CERS actuary report. The changes are noted below:

- The assumed investment rate of return was decreased from 7.75% to 7.50%.
- The assumed rate of inflation was reduced from 3.50% to 3.25%.
- The assumed rate of wage inflation was reduced from 1.00% to 0.75%.
- Payroll growth assumption was reduced from 4.50% to 4.00%.
- The mortality table used for active members is RP-2000 Combined Mortality Table projected with Scale BB to 2013 (multiplied by 50% for males and 30% for females).
- For healthy retired members and beneficiaries, the mortality table used is the RP-2000 Combined Mortality Table projected with Scale BB to 2013 (set back 1 year for females). For disabled members, the RP-2000 Combined Disabled Mortality Table projected with Scale BB to 2013 (set back 4 years for males) is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.
- The assumed rates of retirement, withdrawal and disability were updated to more accurately reflect experience.

2016: There were no changes in assumptions and benefit terms since the prior measurement date.

2017: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total pension liability have been updated as follows:

- The assumed investment rate of return was decreased from 7.50% to 6.25%.
- The assumed rate of inflation was reduced from 3.25% to 2.30%.
- Payroll growth assumption was reduced from 4.00% to 3.05%.

2018: Since the prior measurement date, there have been no changes in actuarial assumptions. However, during the 2018 legislative session, House Bill 185 was enacted, which updated the benefit provisions for active members who die in the line of duty. Benefits paid to the spouses of deceased members have been increased from 25% of the member's final rate of pay to 75% of the member's average pay. If the member does not have a surviving spouse, benefits paid to surviving dependent children have been increased from 10% of the member's final pay rate to 50% of average pay for one child, 65% of average pay for two

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REQUIRED SUPPLEMENTARY INFORMATION**

children, or 75% of average pay for three children. The total pension liability as of June 30, 2018 was determined using these updated benefit provisions.

2019: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total pension liability have been updates as follows:

- Salary increases were increased from 3.05% to a range of 3.30% - 10.30%.
- The Mortality Table was changed from RP-2000 to PUB-2010.

2020: Since the prior measurement date, there were no changes in assumptions, however benefit terms were updated as follows, which did not have a material impact on the total pension liability:

- The monthly payment to a surviving spouse of a member whose death was due to a duty-related injury upon remarriage of the spouse was reduced.
- Benefits were increased for a small number of beneficiaries.

2021: There were no changes in assumptions and benefit terms since the prior measurement date.

2022: There were no changes in assumptions and benefit terms since the prior measurement date.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION**

Louisville and Jefferson County Metropolitan Sewer District Schedule of Employer Contributions - Pension For the Years Ended June 30, (dollars in thousands)									
	2023	2022	2021	2020	2019	2018	2017	2016	2015
Statutorily required contribution for pension	\$ 13,055	\$ 11,009	\$ 9,850	\$ 9,133	\$ 7,534	\$ 6,196	\$ 5,279	\$ 4,767	\$ 4,576
Contribution in relation to the statutorily required contribution	(13,055)	(11,009)	(9,850)	(9,133)	(7,534)	(6,196)	(5,279)	(4,767)	(4,576)
Annual contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MSD contributions as a percentage of statutorily required contribution for pension	100%	100%	100%	100%	100%	100%	100%	100%	100%
MSD covered payroll	\$ 59,356	\$ 54,678	\$ 52,828	\$ 49,808	\$ 48,391	\$45,859	\$43,084	\$39,596	\$37,900
Contributions as a percentage of MSD's covered payroll	21.99%	20.13%	18.65%	18.34%	15.57%	13.51%	12.25%	12.04%	12.07%

Notes:

- 1) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years that information is available.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION**

Louisville and Jefferson County Metropolitan Sewer District Schedule of Proportionate Share of the Net OPEB Liability For the Years Ended June 30, (dollars in thousands)						
	2023	2022	2021	2020	2019	2018
MSD's proportion of the net OPEB liability	1.83%	1.95%	1.82%	1.80%	1.72%	1.60%
MSD's proportionate share of the net OPEB liability	\$36,145	\$37,395	\$ 43,904	\$30,343	\$30,470	\$32,119
MSD's covered payroll	54,678	52,828	49,808	48,391	45,859	43,084
MSD's proportion of the net OPEB liability as a percentage of its covered payroll	66.11%	70.79%	88.15%	62.70%	66.44%	74.55%
Plan fiduciary net position as a percentage of the total OPEB liability	60.95%	62.91%	51.67%	60.44%	57.62%	52.39%

Notes:

- 1) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years that information is available.

Changes in Assumptions and Benefit Terms:

2017: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total OPEB liability have been updated as follows:

- The assumed rate of return was decreased from 7.50% to 6.25%.
- The assumed rate of inflation was reduced from 3.25% to 2.30%.
- Payroll growth assumption was reduced from 4.0% to 3.05%.

2018: Since the prior measurement date, there have been no changes in actuarial assumptions. However, during the 2018 legislative session, House Bill 185 was enacted, which updated the benefit provisions for active members who die in the line of duty. The system shall now pay 100% of the insurance premium for spouses and children of all active members who die in the line of duty. The total OPEB liability as of June 30, 2018 was determined using these updated benefit provisions.

2019: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total pension liability have been updated as follows:

- Salary increases were increased from 3.05% to a range of 3.30% - 10.30%.
- The Mortality Table was changed from RP-2000 to PUB-2010.

2020: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total OPEB liability have been updated as follows:

- The discount rate used to calculate the total OPEB liability decreased from 5.68% to 5.34%.
- The assumed increase in future health care costs, or trend assumption, is reviewed on an annual basis and was updated (i.e. increased) to better reflect more current expectations relating to anticipated future increases in the medical costs.
- Actuarial information has been updated to reflect anticipated savings from the repeal of the "Cadillac Tax" and "Health Insurer Fee" which occurred in December 2019.

2021: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total OPEB liability have been updated as follows:

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION**

- The discount rate used to calculate the total OPEB liability decreased from 5.34% to 5.20%.
- The assumed increase in future health care costs, or trend assumption, is reviewed on an annual basis and was updated (i.e. increased) to better reflect more current expectations relating to anticipated future increases in the medical costs.

2022: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total OPEB liability have been updated as follows:

- The discount rate used to calculate the total OPEB liability increased from 5.20% to 5.70%.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION**

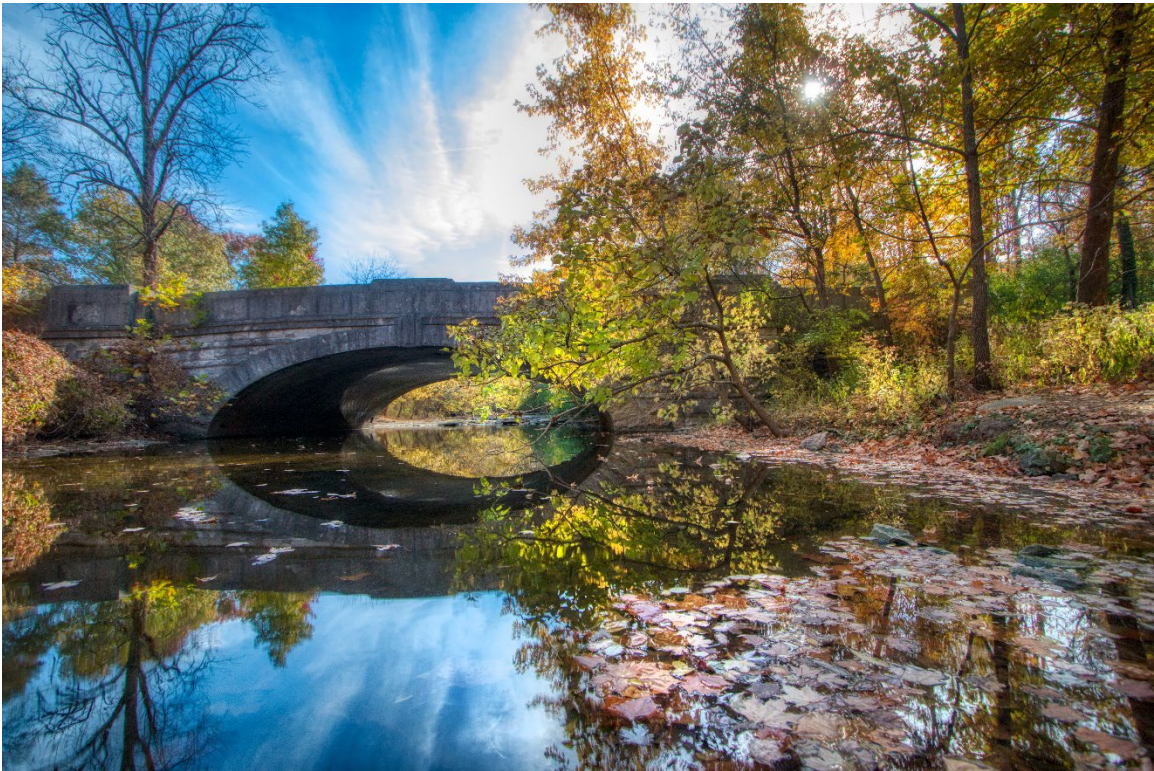
Louisville and Jefferson County Metropolitan Sewer District Schedule of Employer Contributions - OPEB For the Years Ended June 30, <i>(dollars in thousands)</i>						
	2023	2022	2021	2020	2019	2018
Statutorily required contribution	\$ 1,891	\$ 3,006	\$ 2,429	\$ 2,252	\$ 2,443	\$ 2,011
Contributions in relation to the statutorily required contribution	<u>(1,891)</u>	<u>(3,006)</u>	<u>(2,429)</u>	<u>(2,252)</u>	<u>(2,443)</u>	<u>(2,011)</u>
Annual contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
MSD contributions as a percentage of statutorily required contribution for OPEB	100%	100%	100%	100%	100%	100%
MSD covered payroll	\$59,356	\$54,678	\$52,828	\$49,808	\$48,391	\$45,859
Contributions as a percentage of MSD's covered payroll	3.19%	5.50%	4.60%	4.52%	5.05%	4.39%

Notes:

- 1) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years that information is available.



**STATISTICAL SECTION
(Unaudited)**



Louisville's Cherokee Park

STATISTICAL SECTION

This section of MSD's Annual Comprehensive Financial Report presents detailed information as a supplement to the information presented in the financial statements and note disclosures to assist readers in assessing MSD's overall financial health.

Financial Trends..... 74

These schedules contain trend information to help readers understand how MSD's financial performance and position have changed over time. The information presented includes changes in net assets, an analysis of revenues and expenses and comparative statements of cash flows.

Revenue Capacity 78

These schedules contain trend information to help readers assess how MSD's revenues have changed over time. The information presented includes changes in operating revenues, changes in rates and top 10 customers by county.

Debt Capacity..... 82

These schedules present information showing trends in MSD's debt service coverage and levels of outstanding debt.

Operating Information..... 84

These schedules contain information to help readers understand MSD's system. The information presented includes a schedule of assets, service and administrative costs, 2023 budget to actual results, miscellaneous operating indicators, and MSD's current wastewater treatment plant capacity.

Demographic and Economic Information 89

These schedules provide information on the largest employers in the Louisville area and other local demographic information.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
ASSETS AND DEFERRED OUTFLOW OF RESOURCES
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Current assets:										
Unrestricted cash and cash equivalents	\$ 66,305	\$ 48,875	\$ 79,281	\$ 99,973	\$ 43,728	\$ 50,276	\$ 42,449	\$ 69,481	\$ 63,013	\$ 84,780
Unrestricted investments	69,417	69,754	28,124	100	36,744	25,080	10,095	100	100	100
Restricted cash and cash equivalents	22,414	20,788	21,181	17,776	22,348	29,987	19,454	5,379	16,342	39,507
Restricted investments	-	12,947	-	-	30,172	-	22,675	14,999	-	-
Accounts receivable	28,963	26,242	24,664	27,227	27,915	26,332	23,480	26,696	23,787	21,809
Inventories	5,811	5,262	5,086	4,977	4,623	4,407	4,184	4,210	3,981	3,808
Prepaid expenses and other current assets	826	3,290	6,386	4,147	3,918	3,845	2,877	3,184	2,880	2,636
Total current assets	193,736	187,158	164,722	154,200	169,448	139,927	125,214	124,049	110,103	152,640
Noncurrent assets:										
Unrestricted noncurrent assets	5,271	7,138	10,478	12,776	13,730	1,399	37,642	29,235	18,615	-
Restricted noncurrent assets	77,898	80,331	82,930	79,555	76,678	151,039	86,550	120,212	120,165	121,216
Plant, lines and other facilities:										
Utility plant in service	4,625,654	4,291,770	3,849,047	3,697,720	3,580,741	3,047,458	2,943,414	2,812,333	2,455,476	2,451,961
Less: accumulated depreciation	(1,507,858)	(1,418,965)	(1,305,547)	(1,221,668)	(1,208,329)	(1,109,966)	(1,046,707)	(979,405)	(925,901)	(871,412)
Net capital assets in service	3,117,796	2,872,805	2,543,500	2,476,052	2,372,412	1,937,492	1,896,707	2,085,588	1,769,285	1,580,549
Construction in progress	309,372	420,200	625,113	538,013	460,501	711,655	581,222	487,674	623,181	463,167
Subscription assets, net of amortization	6,093	-	-	-	-	-	-	-	-	-
Net capital assets	3,433,261	3,293,005	3,168,613	3,014,065	2,832,913	2,649,147	2,477,929	2,573,262	2,392,466	2,043,716
Other noncurrent assets	297,999	302,370	306,176	305,715	303,660	309,056	296,876	281,975	270,517	260,287
Total noncurrent assets	3,814,429	3,682,844	3,568,197	3,412,111	3,226,981	3,110,641	2,898,997	3,004,684	2,801,763	2,425,219
Total assets	4,008,165	3,870,002	3,732,919	3,566,311	3,396,429	3,250,568	3,024,211	3,128,733	2,911,866	2,577,859
Deferred outflow of resources	59,456	72,110	80,984	79,767	52,018	54,267	35,911	23,708	20,407	22,862
Total assets and deferred outflows	\$ 4,067,621	\$ 3,942,112	\$ 3,813,903	\$ 3,646,078	\$ 3,448,447	\$ 3,304,835	\$ 3,060,122	\$ 2,899,781	\$ 2,692,563	\$ 2,600,721

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
LIABILITIES, DEFERRED INFLOW OF RESOURCES AND NET POSITION
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Liabilities:										
Current liabilities (payable from current assets):										
Accounts payable and accrued expenses	\$ 17,940	\$ 20,395	\$ 29,099	\$ 24,176	\$ 18,168	\$ 16,342	\$ 16,550	\$ 17,420	\$ 14,936	\$ 13,653
Total current liabilities (payable from current assets)	17,940	20,395	29,099	24,176	18,168	16,342	16,550	17,420	14,936	13,653
Current liabilities (payable from restricted assets):										
Accounts payable and accrued expenses	38,706	30,464	46,237	39,860	31,945	47,472	30,764	33,271	30,607	14,712
Accrued interest	17,895	16,622	20,093	17,315	17,819	18,455	15,935	17,533	13,036	12,834
Revenue bonds payable	52,375	52,880	47,565	43,460	42,200	40,190	33,655	31,825	29,415	28,525
Bank notes	-	-	-	100	100	-	-	-	-	-
Bond anticipation note	14,145	-	-	-	-	-	-	-	-	-
Other subordinate debt	3,095	2,038	1,817	2,167	545	105	-	-	-	-
Refundable deposits	2,142	1,920	2,757	2,954	2,928	2,861	2,300	2,557	1,639	1,568
Total current liabilities (payable from restricted assets)	128,358	103,924	118,469	105,856	95,537	109,083	82,654	85,186	74,697	57,639
Noncurrent liabilities:										
Revenue bonds payable	2,151,935	2,228,405	2,057,555	1,868,455	1,914,340	1,956,540	1,831,605	1,722,745	1,583,390	1,549,700
Unamortized debt premium/discount	98,019	88,050	74,817	74,458	80,421	90,628	74,328	67,462	60,797	60,263
Bond anticipation note	212,195	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340
Commercial paper notes	165,000	50,000	150,000	255,000	120,000	-	-	-	-	-
Other subordinated debt	48,296	50,604	44,304	28,284	2,113	1,766	1,973	2,072	2,168	2,261
Investment derivative asset liability	27,247	40,914	63,431	72,228	73,040	59,443	-	-	-	-
At-market derivative asset liability	-	-	8,541	20,822	-	-	-	-	-	-
Net Pension liability and Net OPEB liability	168,552	161,959	183,305	157,209	134,981	125,636	74,132	68,653	51,988	58,825
Subscription Asset Liability	4,952	-	-	-	-	-	-	-	-	-
Other long-term liabilities	-	-	-	-	-	-	-	690	944	761
Total long-term debt	2,876,196	2,846,272	2,808,293	2,702,796	2,551,235	2,460,353	2,208,378	2,087,962	1,925,627	1,898,150
Total liabilities	3,022,494	2,970,591	2,955,861	2,832,828	2,664,940	2,585,778	2,307,582	2,190,568	2,015,260	1,969,442
Deferred inflow of resources	40,848	48,489	10,277	16,520	12,955	10,383	84,052	108,633	92,233	82,293
Net position:										
Net investment in capital assets	955,494	850,316	762,848	684,412	672,304	528,377	562,784	501,675	506,187	418,784
Restricted	82,418	84,607	84,429	80,421	81,207	156,425	150,386	84,639	80,424	148,451
Unrestricted	(33,633)	(11,891)	488	31,897	17,041	23,872	(44,682)	14,266	(1,541)	(18,249)
Total net position	1,004,279	923,032	847,765	796,730	770,552	708,674	668,488	600,580	585,070	548,986
Total liabilities, deferred inflows and net position	\$ 4,067,621	\$ 3,942,112	\$ 3,813,903	\$ 3,646,078	\$ 3,448,447	\$ 3,304,835	\$ 3,060,122	\$ 2,899,781	\$ 2,692,563	\$ 2,600,721

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Operating revenue:										
Wastewater service charges	\$ 290,697	\$ 270,066	\$ 245,802	\$ 237,807	\$ 219,467	\$ 210,636	\$ 194,965	\$ 183,592	\$ 173,895	\$ 165,599
Drainage service charges	94,466	86,804	79,915	75,052	69,706	63,868	58,978	54,888	51,567	48,457
Other operating income	6,863	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576
Total operating revenue	392,026	365,367	329,418	319,057	294,368	279,149	259,634	243,290	229,869	216,632
Operating expenses:										
Service and administrative costs	167,924	169,869	170,073	167,771	154,325	142,711	122,098	121,674	106,174	108,814
Capitalization/recovery of cost	(41,151)	(42,166)	(41,785)	(39,643)	(38,383)	(38,147)	(31,949)	(30,516)	(30,056)	(33,568)
Capitalized overhead (over) under applied	-	-	-	-	-	88	-	-	-	-
Depreciation and amortization	114,562	103,964	97,874	98,872	87,882	77,954	77,156	62,820	63,321	63,516
Total operating expenses	241,335	231,667	226,162	227,000	203,824	182,606	167,305	153,978	139,439	138,762
Income (loss) from operations	150,691	133,700	103,256	92,057	90,544	96,543	92,329	89,312	90,430	77,870
Non-operating revenue (expense):										
Gain/loss disposal of assets	(14,320)	124	(21)	(15,008)	15	-	-	-	-	-
Investment income	7,253	(1,467)	1,777	5,275	8,338	6,280	4,047	7,559	7,527	10,234
Build America bond refund	11,350	10,344	10,398	10,325	10,339	10,249	10,226	10,332	10,096	10,096
Interest expense - bonds	(91,736)	(86,792)	(93,067)	(92,274)	(94,831)	(95,041)	(90,117)	(86,818)	(83,404)	(80,613)
Interest expense - swaps	(3,988)	(9,502)	(9,793)	(8,027)	(6,468)	(7,724)	(8,926)	(9,514)	(9,737)	(9,733)
Interest expense - other	(15,337)	(12,873)	(13,104)	(13,129)	(13,497)	(9,873)	(9,317)	(8,601)	(4,611)	(4,629)
Amortization of debt discount/premium	13,189	17,172	17,429	12,688	14,344	15,198	13,701	12,052	7,887	7,296
Amortization of loss on refunding	(3,631)	(3,768)	(3,107)	(2,404)	(2,817)	(3,147)	(3,070)	(1,949)	(1,980)	(2,552)
Capitalized interest	6,961	7,464	12,049	13,043	18,582	21,859	20,074	21,051	20,511	19,103
Change in fair values - swaps	7,614	11,293	8,796	812	(13,597)	16,317	26,072	(22,951)	(5,240)	(1,222)
Total non-operating revenue (expenses), net	(82,645)	(68,005)	(68,643)	(88,699)	(79,592)	(45,882)	(37,310)	(78,839)	(58,951)	(52,020)
Net income / (loss) before contributions	68,046	65,695	34,613	3,358	10,952	50,661	55,019	10,473	31,479	25,850
Contributions										
Property owner assessments	-	-	-	-	-	-	2,376	-	-	-
All other	13,201	9,572	16,422	9,085	50,926	12,726	10,513	5,037	4,605	8,103
Increase (decrease) in net position	81,247	75,267	51,035	12,443	61,878	63,387	67,908	15,510	36,084	33,953
Net position, beginning of year	923,032	847,765	796,730	770,552	708,674	668,488	600,580	585,070	548,986	566,914
Net position, OCEA merger	-	-	-	13,735	-	-	-	-	-	-
Restatement for GASB 68 implementation	-	-	-	-	-	-	-	-	-	(51,881)
Restatement for GASB 75 implementation	-	-	-	-	-	(23,201)	-	-	-	-
Net Position, beginning of year, as restated	923,032	847,765	796,730	784,287	708,674	645,287	600,580	585,070	548,986	515,033
Net position, end of year	\$ 1,004,279	\$ 923,032	\$ 847,765	\$ 796,730	\$ 770,552	\$ 708,674	\$ 668,488	\$ 600,580	\$ 585,070	\$ 548,986

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF CASH FLOWS
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Cash flows from operating activities:										
Cash received from customers	\$ 389,490	\$ 362,992	\$ 331,767	\$ 319,701	\$ 292,791	\$ 276,711	\$ 262,055	\$ 240,202	\$ 227,976	\$ 213,215
Cash paid to suppliers and employees	(166,086)	(166,818)	(107,122)	(105,649)	(103,173)	(95,150)	(88,300)	(85,202)	(75,258)	(73,175)
Net cash provided by operating activities	223,404	196,174	224,645	214,052	189,618	181,561	173,755	155,000	152,718	140,040
Cash flows from capital and related financing activities:										
Proceeds from issuance of revenue bonds	-	248,821	233,133	-	-	175,000	150,000	175,000	80,000	100,000
Proceeds from issuance of bond anticipation note	229,468	232,924	237,295	230,079	230,334	226,340	226,340	226,340	226,340	226,340
Proceeds from issuance of commercial paper	595,000	375,000	365,000	770,000	319,112	-	-	-	-	-
Proceeds from issuance of notes	-	-	-	90,200	100	-	-	-	-	-
Proceeds from issuance of other subordinate debt	1,282	7,824	17,788	-	-	-	-	-	-	-
Premium from sale of bonds	-	-	-	-	-	21,894	15,715	16,887	-	-
Payments for retirement of revenue bonds	(57,455)	(55,497)	(48,033)	(43,120)	(40,190)	-	-	-	-	-
Payments for retirement of bond anticipation note	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	-	-	-	-	-
Payments for retirement of commercial paper	(480,000)	(475,000)	(470,000)	(635,000)	(200,000)	-	-	-	-	-
Payments for retirement of notes	-	-	(100)	(90,200)	-	-	-	-	-	-
Payments for retirement of other subordinate debt	(2,533)	(1,926)	(2,119)	(2,120)	(317)	-	-	-	-	-
Principal paid on debt	-	-	-	-	-	(263,395)	(271,064)	(255,291)	(271,853)	(253,465)
Payments for interest expense	(105,800)	(103,136)	(103,393)	(106,312)	(108,511)	(102,394)	(103,919)	(92,246)	-	-
Payments for interest on swaps	(3,988)	(9,502)	(9,793)	(7,622)	(6,468)	(7,724)	(8,926)	(9,514)	(9,737)	(9,733)
Build America bond refund	11,350	10,344	10,398	10,325	10,339	10,248	10,226	10,332	10,096	10,096
Proceeds from capital grants	1,436	2,610	1,914	1,786	9,373	7,183	6,386	91	-	-
Proceeds from sale of capital assets	-	124	-	-	15	3	10	614	-	-
Payments for capital assets	(190,945)	(182,495)	(219,909)	(224,418)	(233,360)	(216,503)	(220,892)	(213,996)	-	-
Proceeds from assessments	1,956	3,378	2,465	1,169	780	1,621	1,254	2,329	-	-
Assessments extended	-	-	-	-	-	-	(2,376)	-	-	-
Capital contributed by governments, property owners & developers	-	-	-	-	-	-	-	-	4,605	8,103
Assessments receivable	-	-	-	-	-	-	-	-	2,050	1,695
Interest income - assessments	-	-	-	-	-	-	-	-	340	687
Interest paid on revenue bonds	-	-	-	-	-	-	-	-	(87,813)	(91,719)
Acquisition and construction of capital assets	-	-	-	-	-	-	-	-	(147,842)	(121,237)
Acquisition of non-operating property	-	-	-	-	-	-	-	-	(247)	(211)
Net cash provided (used) by capital and related financing activities	(226,569)	(172,871)	(211,694)	(231,573)	(245,133)	(147,727)	(197,246)	(139,454)	(194,061)	(129,444)
Cash flows from investing activities:										
Change in investments	17,574	(55,638)	(55,205)	86,661	34,428	(56,798)	15,990	(15,047)	1,052	(30,642)
Investment income	5,523	2,203	1,423	6,864	6,238	5,081	2,951	5,626	13,974	15,708
Net cash provided (used) by investing activities	23,097	(53,435)	(53,782)	93,525	40,666	(51,717)	18,941	(9,421)	15,026	(14,934)
Net increase (decrease) in cash and cash equivalents	19,932	(30,132)	(40,831)	76,004	(14,849)	(17,883)	(4,550)	6,125	(26,317)	(4,338)
Cash and cash equivalents, beginning of year	71,854	101,986	142,817	66,813	81,662	99,545	104,095	97,970	124,287	128,625
Cash and cash equivalents, end of year	\$ 91,786	\$ 71,854	\$ 101,986	\$ 142,817	\$ 66,813	\$ 81,662	\$ 99,545	\$ 104,095	\$ 97,970	\$ 124,287

Presentation and classification of items in the Cash flows from capital and related financing activities section was changed to provide better clarity beginning with the 2017 ACFR. Prior years were not reclassified and are shown as originally presented.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE SUMMARIES OF OPERATING REVENUE
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Service charges:										
Wastewater service charges:										
Residential	\$ 167,136	\$ 156,764	\$ 148,091	\$ 140,125	\$ 122,830	\$ 116,458	\$ 108,809	\$ 101,405	\$ 96,563	\$ 89,691
Commercial	94,538	86,009	74,459	74,134	71,054	66,651	61,860	58,343	62,257	58,812
Industrial	24,938	23,558	23,080	21,758	23,171	24,439	21,218	19,878	17,605	19,738
Other - net	9,156	7,840	2,588	5,997	6,803	7,517	6,853	8,186	2,806	2,611
Free wastewater to Metro Government	(5,071)	(4,105)	(2,416)	(4,207)	(4,391)	(4,429)	(3,775)	(4,220)	(5,336)	(5,253)
Total wastewater service charges	290,697	270,066	245,802	237,807	219,467	210,636	194,965	183,592	173,895	165,599
Drainage service charges:										
Residential	34,340	31,497	29,413	27,684	25,716	23,811	22,111	20,439	20,090	18,522
Commercial	52,462	48,525	45,220	41,960	38,775	35,778	35,372	32,971	28,936	27,910
Industrial	6,277	5,671	5,239	4,815	4,373	3,864	3,445	3,219	3,030	3,112
Other - net	4,274	3,802	2,576	2,999	2,834	2,533	-	-	-	-
Free drainage to Metro Government	(2,887)	(2,691)	(2,533)	(2,406)	(1,992)	(2,118)	(1,950)	(1,741)	(489)	(1,087)
Total stormwater service charges	94,466	86,804	79,915	75,052	69,706	63,868	58,978	54,888	51,567	48,457
Total service charges	385,163	356,870	325,717	312,859	289,173	274,504	253,943	238,480	225,462	214,056
Other operating income:										
Capacity charges	3,204	5,072	2,309	4,151	3,552	3,132	3,318	2,087	2,667	1,620
Connection fees	-	151	135	363	14	76	(723)	1,118	379	133
Inflow & infiltration fees	1,092	1,610	628	1,155	1,162	-	-	-	-	-
Regional facilities fees	-	-	-	-	-	-	-	16	34	-
Reserve capacity charges	-	-	-	-	-	-	-	-	-	-
Wastewater miscellaneous	2,567	1,664	629	529	467	1,437	3,096	1,589	1,327	823
Drainage miscellaneous	-	-	-	-	-	-	-	-	-	-
Total other operating income	6,863	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576
Total operating revenue	\$ 392,026	\$ 365,367	\$ 329,418	\$ 319,057	\$ 294,368	\$ 279,149	\$ 259,634	\$ 243,290	\$ 229,869	\$ 216,632

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
AVERAGE RESIDENTIAL WATER AND DRAINAGE CHARGES
YEARS ENDED JUNE 30

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Jefferson County:										
Wastewater service charges:										
Service charge	\$ 19.85	\$ 18.90	\$ 17.68	\$ 16.83	\$ 15.75	\$ 14.73	\$ 13.78	\$ 12.89	\$ 12.22	\$ 11.59
Volume charge ¹	21.67	20.64	19.32	18.40	17.20	16.08	15.04	14.08	13.36	12.68
Consent decree charge	16.22	15.45	14.45	13.76	12.87	12.04	11.26	10.53	9.98	9.46
Total wastewater service charges	57.74	54.99	51.45	48.99	45.82	42.85	40.08	37.50	35.56	33.73
Drainage service charges:										
Residential	12.47	11.88	11.11	10.58	9.90	9.26	8.66	8.10	7.68	7.28
Total drainage service charges	12.47	11.88	11.11	10.58	9.90	9.26	8.66	8.10	7.68	7.28
Total MSD bill	\$ 70.21	\$ 66.87	\$ 62.56	\$ 59.57	\$ 55.72	\$ 52.11	\$ 48.74	\$ 45.60	\$ 43.24	\$ 41.01
Bill as a % of MHI	1.39%	1.32%	1.24%	1.15%	1.13%	1.12%	1.06%	1.05%	1.01%	1.02%
Oldham County:										
Wastewater service charges:										
Service charge	\$ 47.92	\$ 47.92	\$ 47.92	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	31.20	31.20	31.20	-	-	-	-	-	-	-
Total MSD bill	\$ 79.12	\$ 79.12	\$ 79.12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bill as a % of MHI	0.87%	0.87%	0.87%							
Bullitt County (former BCSD):										
Wastewater service charges:										
Service charge	\$ 39.85	\$ 35.58	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	23.18	20.70	-	-	-	-	-	-	-	-
Total MSD bill	\$ 63.03	\$ 56.28	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bill as a % of MHI	1.10%	0.98%								
Bullitt County (former Hunter's Hollow & Big Valley):										
Wastewater service charges:										
Service charge	\$ 31.66	\$ 26.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	11.60	8.00	-	-	-	-	-	-	-	-
Total MSD bill	\$ 43.26	\$ 34.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bill as a % of MHI	0.76%	0.61%								

¹Average residential volume charge is based on 4,000 gallons/month of water use.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
JEFFERSON COUNTY TOP 10 WASTEWATER AND DRAINAGE CUSTOMERS**

Rank	Customer Name	FY 23 Wastewater Billed	Percent Total Wastewater Revenue
1	Heaven Hill Distilleries	\$ 5,035,257	1.73%
2	Lubrizol Advanced Material	2,271,808	0.78%
3	The Chemours Company FC LLC	1,967,224	0.68%
4	Early Times Distillery	1,726,439	0.59%
5	Ford Motor Co.	1,384,127	0.48%
6	Swift Pork Co.	1,152,153	0.40%
7	Haier US Appliance Solutions	103,889	0.04%
8	Rohm & Haas	970,892	0.33%
9	Ford Motor Co.	736,132	0.25%
10	Louisville Metro Housing Authority	672,893	0.23%
Total		16,020,814	5.51%
Total FY 23 Wastewater Revenue:		\$ 290,696,742	

Rank	Customer Name	FY 22 Wastewater Billed	Percent Total Wastewater Revenue
1	Heaven Hill Distilleries	\$ 4,219,789	1.45%
2	Lubrizol Advanced Material	2,751,255	0.95%
3	The Chemours Company FC LLC	1,723,158	0.59%
4	Swift Pork Co.	1,461,306	0.50%
5	Clariant Corporation	1,437,880	0.49%
6	Early Times Distillery	1,420,078	0.49%
7	Ford Motor Co.	1,193,083	0.41%
8	Haier US Appliance Solutions	955,585	0.33%
9	Rohm & Haas	783,570	0.27%
10	Ford Motor Co.	744,470	0.26%
Total		16,690,174	5.74%
Total FY 22 Wastewater Revenue:		\$ 270,066,040	

Rank	Customer Name	FY 23 Drainage Billed	Percent Total Drainage Revenue
1	Regional Airport Authority	\$ 1,884,745	2.00%
2	United Parcel Service	1,538,822	1.63%
3	Jeff Co Bd Of Ed	976,873	1.03%
4	Ford Motor Co.	484,892	0.51%
5	Regional Airport Authority	382,363	0.40%
6	LIT Industrial Limited Partner	371,196	0.39%
7	Kentucky State Fair	339,704	0.36%
8	Churchill Downs Inc	314,703	0.33%
9	The University of Louisville Campus	301,156	0.32%
10	Seaboard System RR-00822	290,570	0.31%
Total		6,885,024	7.29%
Total FY 23 Drainage Revenue:		\$ 94,465,996	

Rank	Customer Name	FY 22 Drainage Billed	Percent Total Drainage Revenue
1	Regional Airport Authority	\$ 1,645,863	1.74%
2	United Parcel Service	1,456,321	1.54%
3	Jeff Co Bd Of Ed	865,812	0.92%
4	Ford Motor Co.	456,942	0.48%
5	LIT Industrial Limited Partner	346,273	0.37%
6	Kentucky State Fair	321,966	0.34%
7	Regional Airport Authority	320,679	0.34%
8	The University of Louisville Campus	308,517	0.33%
9	Churchill Downs Inc	298,224	0.32%
10	Seaboard System RR-00822	273,149	0.29%
Total		6,293,746	6.66%
Total FY 22 Drainage Revenue:		\$ 86,804,258	

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REGIONAL SYSTEM TOP 10 WASTEWATER CUSTOMERS**

MSD Oldham County Service Area - Fiscal Year 2023

Rank	Customer Name	FY 23 Wastewater Billed	Percent Total County Revenue
1	Oldham Co Board of Education	\$ 104,289	1.48%
2	Prospect Glen Villas Condo	71,510	1.02%
3	Ridgeway Property Mgmt LLC	58,318	0.83%
4	Oldham Co Board of Education	24,500	0.35%
5	Gardens of Hunters Ridge HOA	23,179	0.33%
6	Oldham Co Board of Education	21,847	0.31%
7	KYTC D5 Office	15,473	0.22%
8	Harmony Landing Club	9,786	0.14%
9	Hillcrest Community Assoc. INC	9,715	0.14%
10	Hunters Ridge	7,650	0.11%
Total		346,267	4.92%
Total FY 23 Oldham County Revenue:		\$ 7,043,419	

MSD Bullitt County Service Area - Fiscal Year 2023

Rank	Customer Name	FY 23 Wastewater Billed	Percent Total County Revenue
1	Sabert Corporation	\$ 516,715	11.68%
2	Noltemeyer Capital LLLP	349,801	7.91%
3	Jewish Hospital	292,423	6.61%
4	AMHC	161,241	3.64%
5	PC Tanyard Park LLC	108,286	2.45%
6	Prologisna2 KY V GP	100,371	2.27%
7	True by Hilton, LLC	65,761	1.49%
8	Hrs Brooks INC.	63,954	1.45%
9	Linda's Place LLLP	55,490	1.25%
10	Prologis Development Serv LLC	47,840	1.08%
Total		1,761,882	39.83%
Total FY 23 Bullitt County Revenue:		\$ 4,423,801	

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE SCHEDULE OF DEBT SERVICE COVERAGE
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Revenues:										
Service charges	\$ 385,163	\$ 356,870	\$ 325,717	\$ 312,859	\$ 289,173	\$ 274,504	\$ 253,943	\$ 238,480	\$ 225,462	\$ 214,056
Other operating income	6,863	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576
Assessments	429	583	799	909	1,258	1,232	1,375	9,457	1,901	2,129
Investment income	18,603	8,877	12,175	15,600	18,692	16,531	14,273	17,278	17,623	20,330
Less: capitalized investment income	-	-	-	-	-	-	-	-	-	-
Total revenues	411,058	374,827	342,392	335,566	314,318	296,912	275,282	270,025	249,393	239,091
Operating expenses:										
Service and administrative costs ¹	165,792	161,144	151,527	149,945	142,082	131,948	119,586	117,671	106,301	108,814
Less: capitalized overhead	(41,151)	(42,166)	(41,785)	(39,643)	(38,383)	(38,148)	(31,949)	(30,516)	(30,056)	(33,568)
Capitalization Rate	25%	26%	28%	26%	27%	29%	27%	26%	28%	31%
Total operating expenses	124,641	118,978	109,742	110,302	103,699	93,800	87,637	87,155	76,245	75,246
Net revenues	286,417	255,849	232,650	225,264	210,619	203,112	187,645	182,870	173,148	163,845
Aggregate debt service:										
Current maturities of long-term debt	52,838	51,597	43,802	40,637	40,358	33,906	33,655	31,825	29,415	28,525
Interest expense - senior lien	91,736	86,792	93,067	92,274	94,831	95,041	90,117	86,818	83,404	80,613
Less: capitalized interest expense	(6,961)	(7,464)	(12,050)	(13,043)	(18,582)	(21,859)	(20,074)	(21,051)	(20,511)	(19,103)
Aggregate net debt service	\$ 137,613	\$ 130,925	\$ 124,819	\$ 119,868	\$ 116,607	\$ 107,088	\$ 103,698	\$ 97,592	\$ 92,308	\$ 90,035
Debt service coverage ratio²	208%	195%	186%	188%	181%	190%	181%	187%	188%	182%

¹Excludes the actuarial portion of changes to GASB 68 pension expense and GASB 75 OPEB for the year.

²Excludes the actuarial portion of changes to GASB 68 pension expense and GASB 75 OPEB for the year.

This table has been prepared using the definitions of revenue, expense and debt service contained in MSD's 1993 Sewer & Drainage System Revenue Bond Resolution.

The 1993 Resolution and its supplements require MSD to provide "Available Revenues", as defined in the Resolution, sufficient to pay 110% of each fiscal year's "Aggregate Net Debt Service" on Revenue Bonds and 100% of "Operating Expenses". "Available Revenues", as used only for purposes of the Resolution, means all revenues and other amounts received by MSD and pledged as security for payment of Bonds issued pursuant to the Resolution, but excludes any interest income which is capitalized in accordance with generally accepted accounting principles. "Operating Expenses" includes all reasonable, ordinary, usual or necessary current expenses of maintenance, repair and operation determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. "Operating Expenses" does not include reserves for extraordinary maintenance and repair, nor does it include administrative and engineering expenses of MSD which are necessary or incidental to capital improvements for which debt has been issued and which may be paid from the proceeds of such debt. "Aggregate Net Debt Service" is aggregate current principal and interest requirements on all Bonds issued pursuant to the Resolution, excluding (i) interest expense, which in accordance with generally accepted accounting principles, is capitalized and which may be paid from the proceeds of debt, and (ii) other amounts, if any, available, or expected to become available in the ordinary course for payment of principal and interest, and not included in "Available Revenues".

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE SCHEDULE OF OUTSTANDING DEBT
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS (except per capita)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Senior debt:										
Series 2005A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	18,820
Series 2006A	-	-	-	-	-	-	-	-	87,290	89,325
Series 2007A	-	-	-	-	-	-	42,965	44,425	45,815	48,080
Series 2008A	-	-	-	-	-	-	65,520	97,860	99,850	100,860
Series 2009A	-	-	-	-	-	6,640	13,040	41,485	47,280	52,720
Series 2009B	-	-	-	-	35,155	52,975	69,725	136,115	150,900	164,785
Series 2009C	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000
Series 2010A	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000
Series 2011A	-	-	243,910	246,225	248,440	250,565	252,610	254,590	256,490	258,330
Series 2013A	-	115,790	117,480	115,790	115,790	115,790	115,790	115,790	115,790	115,790
Series 2013B	107,515	109,280	109,280	112,575	114,100	115,550	116,940	118,255	119,515	119,515
Series 2013C	-	125	250	99,250	99,375	99,500	99,625	99,750	99,875	100,000
Series 2014A	79,600	79,650	79,700	79,750	79,800	79,850	79,900	79,950	80,000	-
Series 2015A	170,845	171,395	172,175	173,160	173,360	173,735	174,280	175,000	-	-
Series 2015B	62,995	65,975	68,815	71,515	74,160	76,685	79,085	81,350	-	-
Series 2016A	146,540	147,500	148,415	149,290	149,530	149,760	150,000	-	-	-
Series 2016B	17,830	19,910	21,960	23,915	25,825	28,095	28,095	-	-	-
Series 2016C	-	12,995	32,305	50,515	67,685	73,415	67,685	-	-	-
Series 2017A	143,280	149,390	155,790	161,895	169,270	169,270	-	-	-	-
Series 2017B	30,245	31,210	32,055	32,885	33,670	34,520	-	-	-	-
Series 2018A	60,380	60,380	60,380	60,380	60,380	60,380	-	-	-	-
Series 2019A	-	8,845	17,065	24,770	-	-	-	-	-	-
Series 2020A	223,000	224,000	224,750	-	-	-	-	-	-	-
Series 2020C	108,415	109,605	110,790	-	-	-	-	-	-	-
Series 2021A	227,720	240,485	-	-	-	-	-	-	-	-
Series 2022A	224,250	224,750	-	-	-	-	-	-	-	-
Series 2023A	49,745	-	-	-	-	-	-	-	-	-
Series 2023B	41,950	-	-	-	-	-	-	-	-	-
Total senior debt	2,204,310	2,281,285	2,105,120	1,911,915	1,956,540	1,996,730	1,865,260	1,754,570	1,612,805	1,578,225
Subordinate debt:										
Bond anticipation note	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340
Commercial paper	165,000	50,000	150,000	255,000	120,000	-	-	-	-	-
Notes payable	-	-	-	100	100	-	-	-	-	-
Series 2009 general obligation bonds	-	400	785	1,155	-	-	-	-	-	-
Series 2014 general obligation bonds	6,565	7,010	7,445	7,865	-	-	-	-	-	-
Series 2017 general obligation bonds	3,329	3,364	3,399	3,433	-	-	-	-	-	-
Financing lease	1,700	1,870	2,030	2,180	-	-	-	-	-	-
Loan A09-41	1,315	1,433	1,548	1,659	1,767	1,871	1,973	2,072	2,168	2,261
Loan A10-04	1,563	1,702	1,840	1,974	-	-	-	-	-	-
Loan A10-05	574	622	670	715	-	-	-	-	-	-
Loan A10-06	64	70	76	81	-	-	-	-	-	-
Loan A10-07	1,457	1,581	1,703	1,821	-	-	-	-	-	-
Loan A11-15	369	402	434	466	-	-	-	-	-	-
Loan A12-29	4,630	4,932	5,228	5,520	-	-	-	-	-	-
Loan A17-028	2,084	2,084	2,084	2,013	-	-	-	-	-	-
Loan A18-010	996	1,045	1,092	1,116	-	-	-	-	-	-
Loan A98-04	-	-	-	454	891	-	-	-	-	-
Loan A19-015	2,528	2,640	-	-	-	-	-	-	-	-
Loan A19-028	23,705	22,918	17,788	-	-	-	-	-	-	-
Loan B10-01	210	236	-	-	-	-	-	-	-	-
Loan B10-04	236	262	-	-	-	-	-	-	-	-
Loan B15-006	66	70	-	-	-	-	-	-	-	-
Total subordinate debt	442,731	328,982	422,461	511,891	349,098	228,211	228,313	228,412	228,508	228,601
Total senior and subordinate debt	2,647,041	2,610,267	2,527,581	2,423,806	2,305,638	2,224,941	2,093,573	1,982,982	1,841,313	1,806,826
Unamortized bond premiums	(1,004)	(1,052)	(1,101)	(868)	(916)	(963)	(1,011)	(1,431)	(1,495)	(1,560)
Unamortized bond discounts	99,023	89,102	75,918	75,326	81,337	91,591	75,339	68,893	62,292	61,823
Total debt	\$ 2,745,060	\$ 2,698,317	\$ 2,602,398	\$ 2,498,265	\$ 2,386,059	\$ 2,315,569	\$ 2,167,901	\$ 2,050,444	\$ 1,902,110	\$ 1,867,088
Debt per capita ¹	NA	\$ 3,489	\$ 3,346	\$ 3,194	\$ 3,112	\$ 3,005	\$ 2,833	\$ 2,682	\$ 2,491	\$ 2,457
Debt - percentage of personal income ¹	NA	NA	1.84%	1.78%	1.76%	1.73%	1.74%	1.78%	1.82%	1.85%

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE SCHEDULES OF PLANT, LINES AND OTHER FACILITIES
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Completed projects										
Sewer lines	\$ 2,172,413	\$ 2,070,342	\$ 1,761,425	\$ 1,746,705	\$ 1,648,891	\$ 1,497,090	\$ 1,440,360	\$ 1,379,153	\$ 1,277,745	\$ 1,274,180
Wastewater treatment facilities	754,084	696,900	641,414	627,903	669,041	648,503	637,166	629,083	489,292	489,289
Drainage facilities	1,167,937	1,033,710	997,461	880,863	839,159	561,341	542,271	515,898	448,853	448,899
Pumping and lift stations	298,862	286,975	260,231	256,228	240,963	183,795	166,158	139,651	96,812	96,819
Administrative facilities	53,173	52,471	52,348	52,297	51,734	50,818	50,817	49,342	49,342	49,342
Maintenance facilities	20,572	14,576	14,301	12,459	12,074	8,504	8,504	8,504	8,037	8,037
Machinery, equipment and other	158,613	136,797	121,868	121,265	118,879	97,407	98,138	90,702	85,395	85,395
Total completed projects	4,625,654	4,291,771	3,849,048	3,697,720	3,580,741	3,047,458	2,943,414	2,812,333	2,455,476	2,451,961
Less accumulated depreciation	(1,507,858)	(1,417,629)	(1,305,547)	(1,221,668)	(1,208,329)	(1,109,966)	(1,046,707)	(979,405)	(925,901)	(871,412)
Total completed projects - net	3,117,796	2,874,142	2,543,501	2,476,052	2,372,412	1,937,492	1,896,707	1,832,928	1,529,575	1,580,549
Total construction in progress	309,372	420,200	625,113	538,013	460,501	711,655	581,222	487,674	623,181	463,167
Total net plant, lines and other facilities	\$ 3,427,168	\$ 3,294,342	\$ 3,168,614	\$ 3,014,065	\$ 2,832,913	\$ 2,649,147	\$ 2,477,929	\$ 2,320,602	\$ 2,152,756	\$ 2,043,716

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE SUMMARIES OF SERVICE AND ADMINISTRATIVE COSTS
YEARS ENDED JUNE 30
DOLLARS IN THOUSANDS

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Service and administrative costs:										
Labor ¹	\$ 86,469	\$ 81,552	\$ 77,789	\$ 73,476	\$ 71,379	\$ 64,718	\$ 59,183	\$ 55,229	\$ 54,378	\$ 55,356
Utilities	18,838	16,595	16,265	17,923	19,520	16,640	14,427	18,256	13,817	14,563
Materials & supplies	6,826	8,012	6,840	7,591	8,639	8,647	7,976	4,183	9,706	8,151
Contractual services	31,691	31,288	34,084	37,326	28,604	27,864	25,021	27,448	20,478	19,036
Chemicals	7,599	6,905	5,017	4,649	4,761	4,429	5,298	4,372	3,681	3,306
Fuel	1,694	1,658	1,083	1,069	1,393	1,276	1,077	1,326	1,616	1,837
Insurance premiums & claims	7,597	7,216	3,624	2,249	2,057	2,423	1,669	1,316	1,505	1,948
Bad debt	3,046	6,422	5,501	4,009	3,748	3,938	3,495	2,603	2,068	1,781
Other operating expense	2,032	1,496	1,323	1,654	1,981	2,012	1,440	2,939	1,052	943
Total service and administrative costs	165,792	161,144	151,526	149,945	142,082	131,947	119,586	117,671	108,301	106,921
Less: capitalized overhead										
Capitalized project cost	(41,151)	(42,166)	(41,785)	(39,643)	(38,383)	(38,147)	(31,949)	(30,516)	(30,056)	(33,568)
Net service and administrative costs	\$ 124,641	\$ 118,978	\$ 109,741	\$ 110,302	\$ 103,699	\$ 93,800	\$ 87,637	\$ 87,155	\$ 78,245	\$ 73,353

¹Excludes the actuarial portion of changes to GASB 68 pension expense and GASB 75 OPEB expense for the year.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
FISCAL YEAR 2023 BUDGETARY COMPARISON SCHEDULE
DOLLARS IN THOUSANDS

	<u>Approved Budget</u>	<u>Actual Expenditures</u>	<u>Variance</u>
Salaries & wages	61,871	58,764	3,107
Labor related overhead	28,827	27,705	1,122
Utilities	17,696	18,838	(1,142)
Materials & supplies	8,831	6,824	2,007
Contractual services	36,098	31,691	4,407
Chemicals	9,255	7,600	1,655
Fuel	2,116	1,694	422
Insurance premiums & claims	6,277	7,597	(1,320)
Bad debt	3,535	3,046	489
Other operating expense	2,161	2,033	128
Interest expense	103,795	101,503	2,292
	<u>280,462</u>	<u>267,295</u>	<u>13,167</u>

Reconciliation between total budgetary basis expenditures and total expenses reported in statements of revenues, expenses and changes in net position:

Actual budget expenditures	267,295
Capitalized overhead	(41,151)
Depreciation and amortization expense	114,562
GASB 68 pension expense	(1,631)
GASB 75 OPEB expense	3,763
Capitalized interest	(6,961)
Change in fair value - derivative instruments	(7,614)
Total expenses reported in statements of revenues, expenses and changes in net position	<u>328,263</u>

Expenses reported in statements of revenues, expenses and changes in net position:

Total operating expenses	241,335
Interest expense - bonds	91,736
Interest expense - swaps	3,988
Interest expense - other	15,337
Amortization of debt discount / premium	(13,189)
Amortization of loss on refunding	3,631
Capitalized interest	(6,961)
Change in fair value - derivative instruments	(7,614)
Total expenses reported in statements of revenues, expenses and changes in net position	<u>328,263</u>

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MISCELLANEOUS OPERATING INDICATORS
YEARS ENDED JUNE 30

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Miscellaneous Operating Indicators												
Jefferson County												
Miles of sewers	3,404	3,390	3,372	3,488	3,348	3,463	3,322	3,293	3,240	3,263	3,240	3,332
Miles of stormwater mains*	1,179	1,175	1,160	-	-	-	-	-	-	-	-	-
Number of treatment plants	5	5	5	5	5	5	5	5	16	19	19	20
Daily average treatment (MGD)	138	153	157	164	173	150	112	139	143	141	131	145
Daily treatment capacity (MGD)	200	200	200	200	200	200	170	170	177	177	177	173
Oldham County												
Miles of sewers	145	145	135	-	-	-	-	-	-	-	-	-
Number of treatment plants	8	8	8	-	-	-	-	-	-	-	-	-
Daily average treatment (MGD)	3	2	2	-	-	-	-	-	-	-	-	-
Daily treatment capacity (MGD)	4	4	4	-	-	-	-	-	-	-	-	-
Bullitt County												
Miles of sewers	58	54	-	-	-	-	-	-	-	-	-	-
Number of treatment plants	8	7	-	-	-	-	-	-	-	-	-	-
Daily average treatment (MGD)	1	1	-	-	-	-	-	-	-	-	-	-
Daily treatment capacity (MGD)	2	2	-	-	-	-	-	-	-	-	-	-

MGD - millions of gallons per day
*Historical data not available

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
FISCAL YEAR 2023 WASTEWATER TREATMENT PLANT CAPACITY**

Location ¹	Design Capacity	Avg Daily Flow	Eventual Capacity	Active Customers ²			Total	Year Built	Treatment Process
				Residential	Commercial	Industrial			
Jefferson County Water Quality Treatment Centers									
Morris Forman	120.0	100.3	120.0	119,567	13,552	301	133,420	1958	Secondary added in 1976.
Derek R. Guthrie	60.0	37.6	60.0	64,416	3,818	44	68,278	1986	Secondary
Cedar Creek	7.5	6.9	11.3	19,331	1,101	14	20,446	1995	Tertiary: sand filter
Floyd's Fork	6.5	3.8	9.8	10,818	588	5	11,411	2001	Tertiary: sand filter
Hite Creek	9.0	4.3	9.0	10,959	683	9	11,651	1970	Tertiary: sand filter
Oldham County plants (combined)	4.3	2.7	4.3	5,238	39	1	5,278	Varies	
Bullitt County plants (combined)	1.7	1.5	1.7	4,003	116	1	4,120	Varies	
Total wastewater treatment system	209.0	157.1	216.0	234,332	19,897	375	254,604		

¹Only MSD-owned treatment plants are included.

²Active customer counts include Louisville Metro customers. Metro wastewater services are provided free of charge.

**LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MISCELLANEOUS DEMOGRAPHIC INFORMATION**

Fiscal Year	Population¹	Personal Income²	Unemployment Rate³	# of MSD Employees	Miles of Sewer Line
2014	760,026	\$ 34,609,792	6.4%	606	3,263
2015	763,623	\$ 34,575,582	4.9%	591	3,288
2016	764,378	\$ 36,517,217	4.6%	617	3,293
2017	765,352	\$ 37,813,140	4.6%	626	3,322
2018	770,517	\$ 40,017,970	4.2%	632	3,463
2019	766,757	\$ 41,968,275	4.2%	645	3,348
2020	782,123	\$ 44,407,286	6.4%	675	3,488
2021	777,874	\$ 47,818,804	5.3%	648	3,507
2022	773,399	N/A	3.4%	674	3,589
2023	N/A	N/A	3.8%	696	3,607

¹Jefferson County, Kentucky, source: U.S. Census Bureau (<https://www.census.gov/quickfacts/fact/table/jeffersoncountykentucky/POP010220>)

²Jefferson County, Kentucky, source: Bureau of Economic Analysis website (www.bea.gov)

³Louisville Metropolitan Statistical Area, source: U.S. Bureau of Labor Statistics (https://www.bls.gov/eag/eag.ky_louisville_msa.htm)

Cover photo: Ohio River upstream of downtown Louisville, KY



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