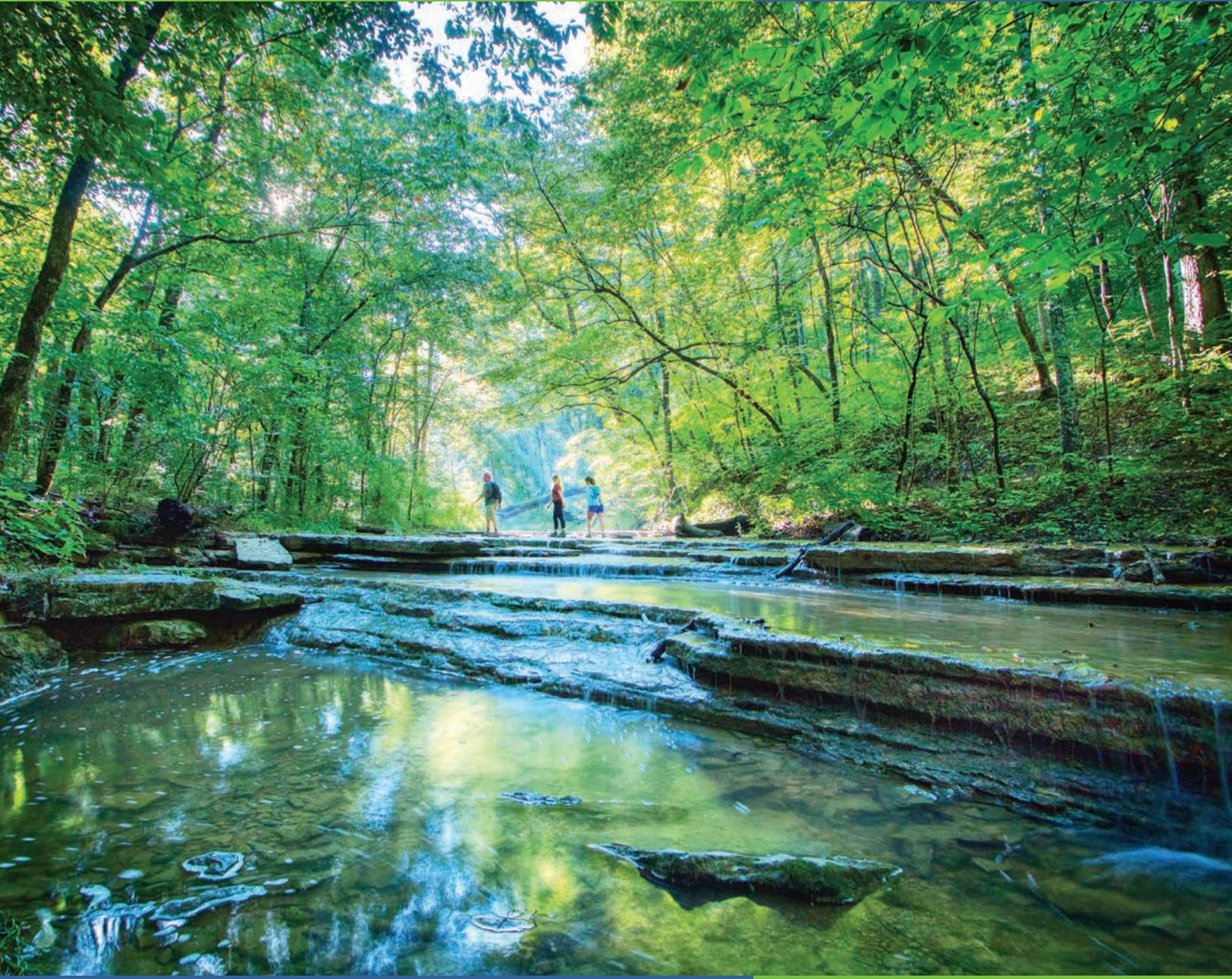


Louisville and Jefferson County
Metropolitan Sewer District

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Fiscal Years Ended June 30, 2022 and 2021



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, 2022 and 2021

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

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INTRODUCTORY SECTION
(Unaudited)



Community gardens sprout atop MSD-owned land, which holds vital infrastructure deep below the soil.



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

October 24, 2022

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, 2022. 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, 2022 and 2021 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 4. 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, 2022 and 2021. 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 2022 was \$6,796,857.

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 2022, 59% of MSD's wastewater service charge revenue came from residential customers, 32% came from commercial customers and 9% from industrial customers. MSD's top 10 wastewater customers remained stable from fiscal year 2021 to fiscal year 2022. The top 10 customers provided \$16,690,174, or 6.2%, of MSD's total wastewater revenue 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 2022, 37% of MSD's drainage service charge revenue came from residential customers, 56% came from commercial customers and 7% from industrial customers. MSD's top 10 drainage customers remained stable from fiscal year 2021 to fiscal year 2022. The top 10 customers provided \$6,293,747 or 7.3%, of MSD's total drainage revenue 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 771,874 residents in Louisville as of July 1, 2021. This is a decrease of 0.7% from the last estimate taken 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 662,503 jobs in June of 2022 compared to 636,202 jobs in June 2021, an increase of 4.13%. MSD's employment base has grown 4.0% over the last fiscal year with 674 full time employees at June 30, 2022 compared to 648 full time employees at June 30, 2021. Major employers in the Louisville metropolitan area include United Parcel Service, Jefferson County Public Schools, Norton Healthcare, Ford Motor Company, and Humana Inc.

Per capita personal income for Jefferson County, Kentucky was listed at \$57,863 for 2020 which is an increase of 3.6% over the prior year. The United States Department of Labor's Bureau of Labor Statistics listed the unemployment rate for Jefferson County, Kentucky, as 3.4% in June 2022 compared to 5.5% in June of 2021. 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 in order 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. Key long-term considerations are debt service coverage, maintaining level debt service payments, and maintaining adequate cash reserves.

Major Initiatives:

- *Waterway Protection Tunnel:* MSD's largest infrastructure project to date, the Waterway Protection Tunnel, was capped on May 16, 2022 and placed into service in early June. The Waterway Protection Tunnel stretches four miles from 11th and Rowan streets to Grinstead Drive and Lexington Road. The tunnel can store up to 55 million gallons of combined stormwater drainage and wastewater until sewage treatment capacity is available, preventing the water from passing

untreated into the Ohio River and Beargrass Creek. The Waterway Protection Tunnel will ultimately prevent 439 million gallons of a mixture of rainwater and wastewater from overflowing and polluting the Ohio River and Beargrass Creek in a typical rainfall year.

- *Bullitt County Sanitation District (BCSD) Acquisition:* MSD completed a multi-year effort to acquire the adjacent Bullitt County wastewater system on November 30, 2021. MSD now provides wastewater service to approximately 4,200 former customers of BSCD, Hunter's Hollow Treatment Plant and Big Valley Sewer Utility. Among the many benefits of the acquisition, MSD will begin to decommission some of Bullitt County's smaller treatment plants that have passed their useful life and manage that service through MSD's larger regional treatment facilities. One of MSD's first projects will divert wastewater flow from the former Hunters Hollow Treatment Plant and Big Wood Pump Station to MSD's recently constructed large sewer line in southern Jefferson County, the Mud Lane Interceptor. In addition, MSD will develop a long-term facility plan to identify capital improvements or elimination plans for all of the wastewater treatment plants within the Bullitt County service area.
- *Consent Decree Update:* MSD is making significant progress toward its amended consent decree requirements of mitigating sewer overflows that pollute the Ohio River and our streams. Through all of the consent decree work to date, including completing the required combined sewer overflow basins and the Waterway Protection Tunnel, overflows to local waterways have reduced from approximately 6.5 billion gallons to less than 650 million gallons in a typical rainfall year. The basins and tunnel hold the contents until system capacity is available for proper treatment and release to the Ohio River.

MSD proactively approached federal and state regulators in 2019 to renegotiate the timing for completing the remaining projects required by the amended consent decree in order to reprioritize capital dollars for rehabilitation of MSD's aging biosolids systems, failing sewer interceptors and flood protection system rehabilitation. MSD, along with the federal government and the Commonwealth of Kentucky, have negotiated the second amended consent decree which grants a time extension for completing the remaining projects to 2035. In exchange, MSD has 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.

- *Community Benefits Program:* MSD launched a community benefits program in 2019 to leverage economic, environmental and social impacts through the district's large-scale engineering, construction and professional service projects. The program focuses on MSD's construction contracts over \$2 million or professional service contracts over \$200,000. During the contractor proposal stage, MSD encourages contractors to voluntarily submit community benefit commitments they will pursue if awarded the project. These can include charitable contributions, volunteer hours, or in-kind services to area nonprofits or schools. In June of 2022 the program passed the \$2 million local impact threshold.
- *Climate Bonds:* On February 1, 2022, MSD issued its first certified climate bond to pay at maturity commercial paper notes previously issued to finance capital improvements to MSD's wastewater, drainage and flood protection systems. This \$225 million issuance was certified by an independent verifier. The issuance achieved its certification by financing projects that improve wastewater, drainage, flood protection systems, and mitigate overflows with green infrastructure. The climate bond certification allowed MSD to connect the programmatic work associated with its mission to the financings that support it.
- *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 2022. Strong credit ratings enable MSD to issue debt at lower interest rates which reduces ratepayer costs over the long term.
- *Rate Increase:* On August 1, 2021, MSD rates for wastewater and drainage service charges in Jefferson County increased by 6.9%. The average monthly residential wastewater bill (based on

4,000 gallons of water consumed per month) increased by \$3.54 from \$51.45 to \$54.99. The monthly residential drainage service charge increased by \$0.77 from \$11.11 to \$11.88.

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, 2021. 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 2022 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 2022 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,

A handwritten signature in black ink, appearing to read "Brad Good", is placed over a light gray rectangular background.

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, 2021

Christopher P. Morrill

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:

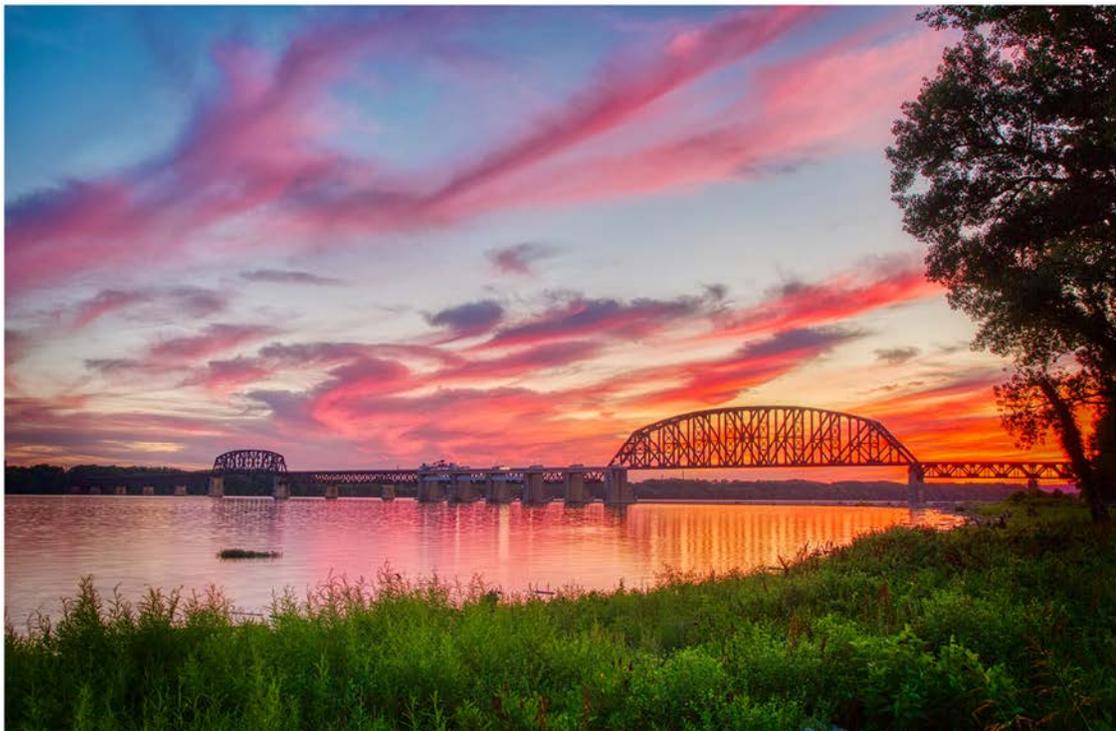
Attract, equip and retain an effective workforce, reflective and supportive of our community, which consistently delivers high-quality service to customers internally and externally.

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.



Sunset reflected in the water at the Falls of the Ohio.

Structure

MSD is governed by an eight-member Board of Directors appointed to serve our community by the Louisville Metro Mayor. Board members are residents of Louisville Metro and represent State Senatorial Districts in our city ensuring a broad-based representation for the entire community. No more than five members of the Board can be affiliated with one political party. The MSD Board meets monthly and has established the following standing committees who meet as needed: Audit Committee, Customer Service Committee, Finance Committee, Infrastructure Committee, and the Personnel Committee. The Board has delegated and placed the conduct of the day-to-day business affairs of the District under the direction of an Executive Director supported by administrative, engineering, legal and business staffs.

Fiscal Year 2022 Board of Directors

<u>Board Members</u>	<u>State Senate District</u>	<u>Political Party</u>	<u>Term Expires</u>
Marita Willis - Chair	20th	Democrat	June 30, 2025
Keith Jackson - Vice Chair	14th	Independent	August 31, 2023
Rebecca Cox	37th	Democrat	August 31, 2023
Gerald Joiner	33rd	Democrat	February 28, 2024
Ricky Mason	35th	Independent	July 31, 2022
Carmen Moreno-Rivera	19th	Democrat	June 30, 2024
John Selent	26th	Democrat	July 31, 2024
JT Sims	36th	Republican	August 31, 2022

Fiscal Year 2022 Principal Staff Members

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, Human Resources Director

Brad Good, Chief Financial Officer

David Johnson, Chief Engineer

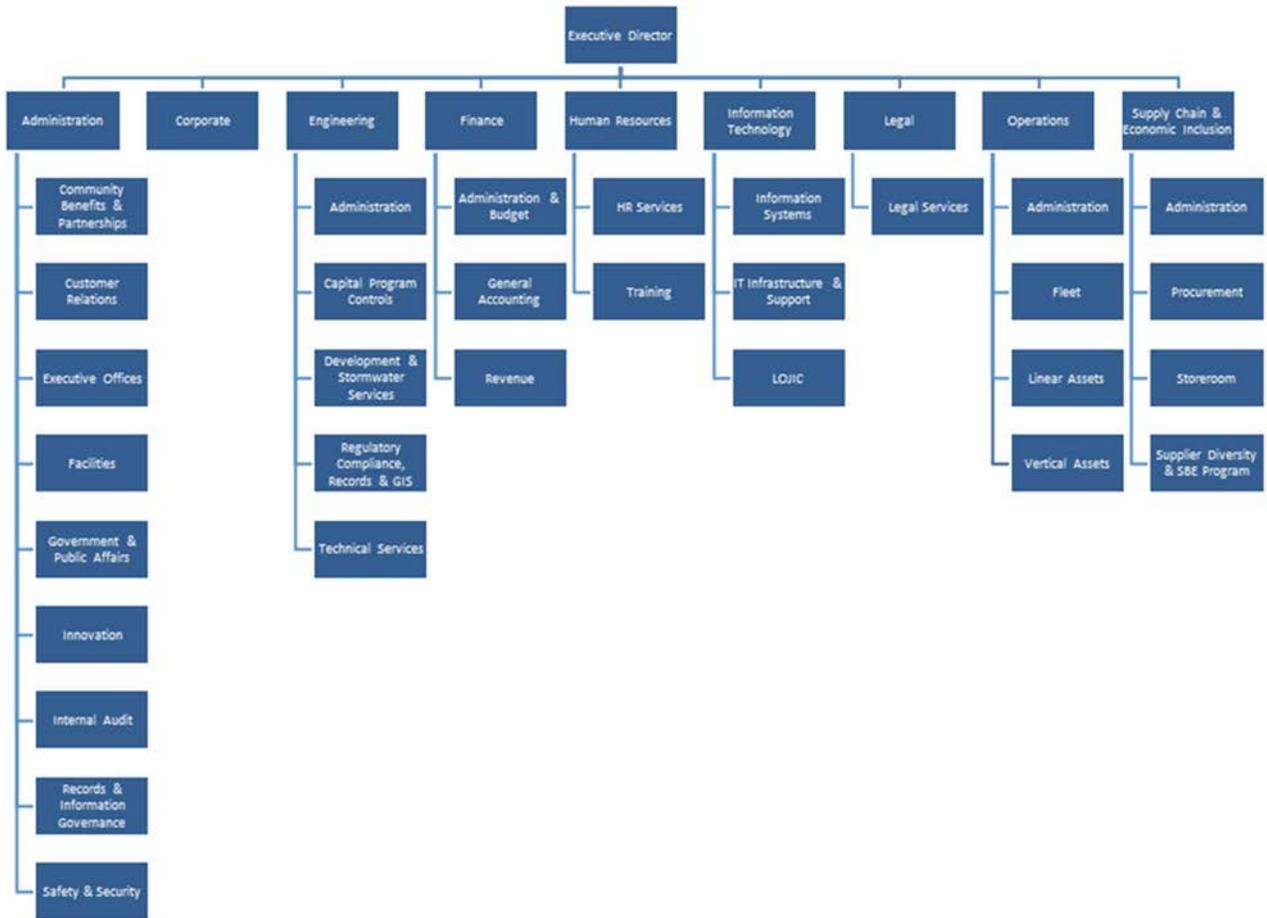
Rene Lindsay, One Water Chief Procurement Officer

Paula Middleton Purifoy, General Counsel and Legal Director

Kim Reed, Chief Innovation Officer

Wes Sydnor, Chief of Government and Public Affairs

Organizational Chart



Strategic Plan

MSD's Strategic Business Plan, branded as Blueprint 2025, now forms the foundational vision, mission, and critical success factors necessary for MSD's transformation into a Utility of the Future. Our aspirational vision under Blueprint 2025 is the driving force behind our mission to provide wastewater, stormwater, and flood protection to protect public health and safety through sustainable solutions, fiscal stewardship, and strategic partnerships. Blueprint 2025 desired outcomes are as follows:

- Guide alignment and allocation of organizational resources
- Deliver MSD's three core business functions in a collaborative, efficient and innovative manner to meet regulatory requirements and community level of service through a sustainable, purpose-driven, and appropriately-skilled workforce
- Be the trusted regional provider of wastewater, stormwater and flood protection services

Blueprint 2025 provides a structured approach for MSD's success, positioning the organization to deliver our three core business services to the community with confidence by providing clarity for every employee about our vision, mission, and critical success factors. It represents a plan designed to unite us and strengthen our bond as we target specific initiatives and metrics in support of the services we provide to the our customers.

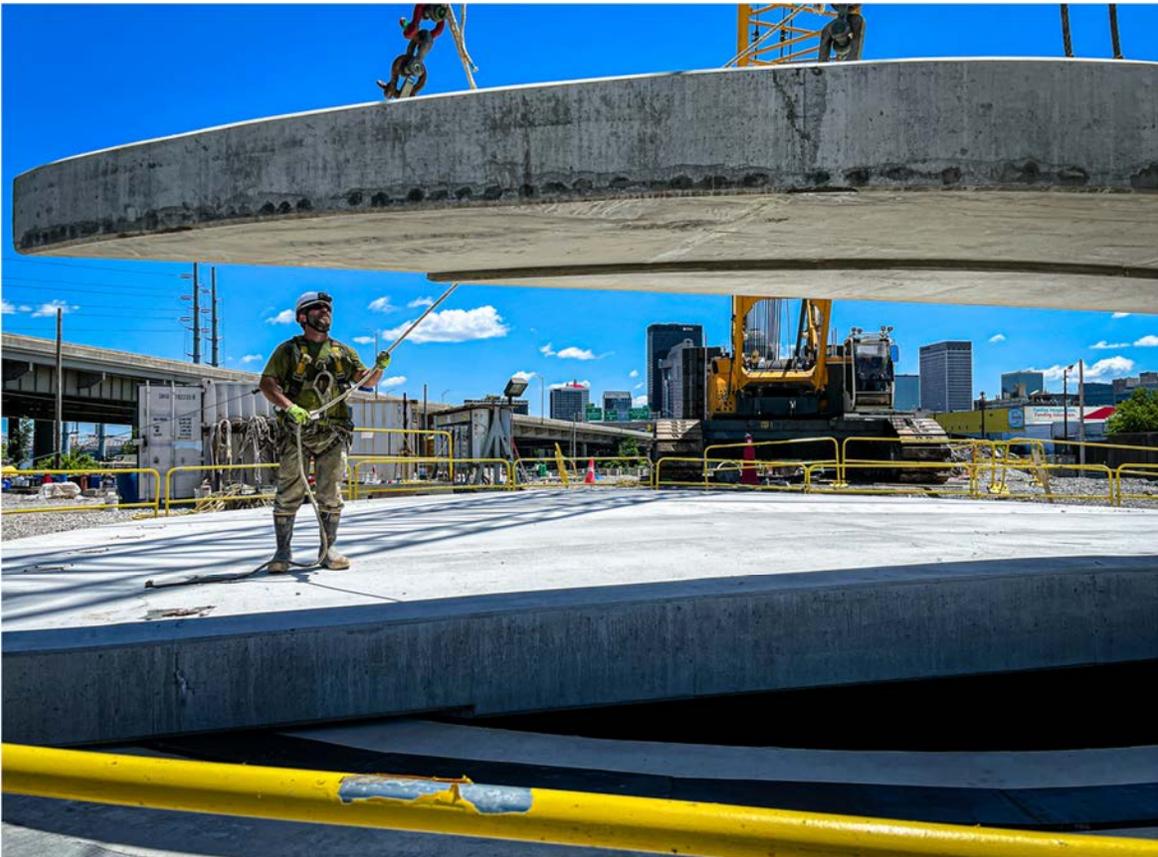
MSD establishes annual organizational performance goals that are in alignment with Blueprint 2025. Each goal category has two focus areas: (1) business activities critical to the attainment of the goal category desired outcome and (2) strategic transformational initiatives designed to enhance the attainment of each critical success factor. There are four overarching goal areas in our fiscal year 2022 organizational performance goals:

Goal Area 1: Sustain Quality & Compliant Wastewater, Stormwater and Flood Protection Services		
Component 1: Reclaimed Water Effluent Quality Flood Protection Readiness	Component 2: Infrastructure System Inspections Preventive Maintenance	Component 3: Completion of Strategic Business Plan Initiatives
Goal Area 2: Earn Community's Trust Daily as Leading Provider of Wastewater, Stormwater and Flood Protection Services		
Component 1: Responsiveness to Customers	Component 2: Responsiveness to Supply Chain Partners	Component 3: Completion of Strategic Business Plan Initiatives
Goal Area 3: Transform into an Employer of Purpose Where Employees Have the Opportunity to Thrive		
Component 1: Management Effectiveness	Component 2: Employee Training and Development	Component 3: Completion of Strategic Business Plan Initiatives
Goal Area 4: Ensure Financial Stewardship and Sustainability of Community Resources		
Component 1: Capital Budget Utilization	Component 2: Operating Budget Utilization	Component 3: Completion of Strategic Business Plan Initiatives

Strategic Business Plan Initiatives are developed for each goal area and assigned as team performance goals. These initiatives involve creating programs or processes that didn't previously exist and guide enhancement of existing programs, processes and tools to improve efficiencies within the organization. Blueprint 2025 includes a Blueprint for Organizational Performance Management Framework that ensures alignment of organizational goals, division/department goals, team goals and individual contributor goals. These goals are directly tied to annual performance evaluations for each employee.



FINANCIAL SECTION



Crews lower the cap on the working shaft of the Waterway Protection Tunnel, allowing the tunnel to begin service.

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 years ended June 30, 2022 and 2021, 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, 2022 and 2021, and the changes in financial position and its cash flows for the years 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.

Required Supplementary Information

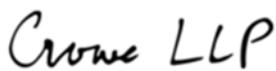
Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 4 through 16, the Schedule of Proportionate Share of the Net Pension Liability on page 68, the Schedule of Employer Contributions – Pension on page 70, the Schedule of Proportionate Share of the Net OPEB Liability on page 71, and the Schedule of Employer Contributions – OPEB on page 72 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 24, 2022 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

Louisville, Kentucky
October 24, 2022

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

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, 2022 and 2021. 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 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.

Fiscal Year 2021:

- Total net position increased from fiscal 2020 to fiscal 2021 by \$51.0 million, or 6.4%.
- Total assets and deferred outflows of resources increased \$167.8 million, or 4.6%, from fiscal 2020 to fiscal 2021.
- Operating revenues increased \$10.3 million, or 3.2%, from fiscal 2020 to fiscal 2021.
- Service and administrative costs decreased \$0.5 million, or 0.5%, from fiscal 2020 to fiscal 2021.
- MSD maintained unrestricted cash and investments totaling \$107.4 million as of June 30, 2021 compared to \$100 million as of June 30, 2020.
- MSD had 259 days cash on hand at June 30, 2021 compared to 242 days cash on hand at June 30, 2020.
- Senior debt coverage was 1.86x for fiscal 2021 compared to 1.88x for fiscal 2020.

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:

- *Statement 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.
- *Statement 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.

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

- *Statement 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.
- *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.

STATEMENT OF NET POSITION

MSD's total net position at June 30, 2022 was \$923.0 million, an increase of \$75.2, 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.

MSD's total net position at June 30, 2021 was \$847.7 million, an increase of \$51.0 or 6.4%, from June 30, 2020 (see Figure 1). Total assets and deferred outflows increased \$167.8 million, or 4.6%, to \$3.8 billion. Total liabilities and deferred inflows increased \$116.7 million, or 4.1%, to \$2.9 billion.

(amounts in thousands)	FY 2022	FY 2021	FY 2020	2022-2021		2021-2020	
				Increase (Decrease)	% Change	Increase (Decrease)	% Change
Unrestricted current assets	\$ 153,423	\$ 143,541	\$ 136,424	\$ 9,882	6.9%	\$ 7,117	5.2%
Restricted current assets	33,735	21,181	17,776	12,554	59.3%	3,405	19.2%
Capital assets	3,293,005	3,168,614	3,014,066	124,391	3.9%	154,548	5.1%
Unrestricted non-current assets	7,138	10,478	12,776	(3,340)	(31.9%)	(2,298)	(18.0%)
Restricted non-current assets	80,331	82,930	79,555	(2,599)	(3.1%)	3,375	4.2%
Other non-current assets	302,370	306,175	305,714	(3,805)	(1.2%)	461	0.2%
Total assets	3,870,002	3,732,919	3,566,311	137,083	3.7%	166,608	4.7%
Deferred outflows of resources	72,110	80,984	79,767	(8,874)	(11.0%)	1,217	1.5%
Total assets and deferred outflows	3,942,112	3,813,903	3,646,078	128,209	3.4%	167,825	4.6%
Current liabilities	20,395	29,099	24,176	(8,704)	(29.9%)	4,923	20.4%
Current liabilities from restricted assets	103,924	118,469	105,856	(14,545)	(12.3%)	12,613	11.9%
Non-current liabilities	2,846,272	2,808,293	2,702,796	37,979	1.4%	105,497	3.9%
Total liabilities	2,970,591	2,955,861	2,832,828	14,730	0.5%	123,033	4.3%
Deferred inflows of resources	48,489	10,277	16,520	38,212	371.8%	(6,243)	(37.8%)
Total liabilities and deferred inflows	3,019,080	2,966,138	2,849,348	52,942	1.8%	116,790	4.1%
Net investment in capital assets	850,316	762,848	684,412	87,468	11.5%	78,436	11.5%
Restricted, net	84,607	84,429	80,421	178	0.2%	4,008	5.0%
Unrestricted	(11,891)	488	31,897	(12,379)	(2536.7%)	(31,409)	(98.5%)
Total net position	923,032	847,765	796,730	75,267	8.9%	51,035	6.4%
Total liabilities, deferred inflows & net position	\$ 3,942,112	\$ 3,813,903	\$ 3,646,078	\$ 128,209	3.4%	\$ 167,825	4.6%

Following is a discussion of significant changes in assets, liabilities and net position between fiscal years 2022 and 2021, and between fiscal years 2021 and 2020, respectively.

Fiscal Year 2022: The largest portion of MSD's net position is its net investment in capital assets. Net investment in capital assets increased \$87.4 million, or 11.5%, in fiscal 2022. Capital asset construction

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

and acquisitions were funded in fiscal 2022 by \$135 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 General Bond 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 the lowest of these three with a combination of cash, investments and a \$75 million debt service reserve surety policy³. 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 decreased \$12.3 million from fiscal 2021 to fiscal 2022 primarily as the result of the increased net investment in capital assets.

Fiscal Year 2021: The largest portion of MSD's net position is its net investment in capital assets. Net investment in capital assets increased \$78.4 million in fiscal 2021. Capital asset construction and acquisitions were funded in fiscal 2021 by \$120 million of commercial paper notes⁴, a draw on a State Revolving Fund loan, cash generated from operations and contributions in aid of construction from developers.

The remaining balance of MSD's net position is unrestricted and may be used for any allowable purpose. Unrestricted net position decreased \$31.4 million from fiscal 2020 to fiscal 2021 primarily as the result of increases to the net pension and net OPEB liabilities.

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

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 increased by 10.9 % to \$365.3 million and total operating expenses increased by 2.4% to \$231.6 million.

The increase in net position at June 30, 2021 was \$38.5 million, or 310.2%, as compared with June 30, 2020 (see Figure 2). MSD's total operating revenues increased by 3.2% to \$329.4 million and total operating expenses decreased by 0.4 % to \$226.1 million.

¹ See Note 7 – Long-Term Debt.

² See Note 7 – Long-Term Debt.

³ See Note 3 – Restricted Cash, Cash Equivalents, and Investments.

⁴ See Note 7 – Long-Term Debt.

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

FIGURE 2 - CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION INFORMATION

<i>(amounts in thousands)</i>	FY 2022	FY 2021	FY 2020	2022-2021		2021-2020	
				Increase (Decrease)	% Change	Increase (Decrease)	% Change
Operating revenues							
Service charges	\$ 356,870	\$ 325,717	\$ 312,859	\$ 31,153	9.6%	\$ 12,858	4.1%
Other operating income	8,497	3,701	6,198	4,796	129.6%	(2,497)	(40.3%)
Total operating revenues	<u>365,367</u>	<u>329,418</u>	<u>319,057</u>	<u>35,949</u>	<u>10.9%</u>	<u>10,361</u>	<u>3.2%</u>
Non-operating revenues	9,001	12,154	592	(3,153)	(25.9%)	11,562	1953.0%
Total revenues	<u>374,368</u>	<u>341,572</u>	<u>319,649</u>	<u>32,796</u>	<u>9.6%</u>	<u>21,923</u>	<u>6.9%</u>
Operating expenses							
Service and administrative costs	118,978	109,741	110,302	9,237	8.4%	(561)	(0.5%)
GASB 68/75 pension expense	8,725	18,547	17,826	(9,822)	(53.0%)	721	4.0%
Depreciation & amortization expense	103,964	97,874	98,872	6,090	6.2%	(998)	(1.0%)
Total operating expenses	<u>231,667</u>	<u>226,162</u>	<u>227,000</u>	<u>5,505</u>	<u>2.4%</u>	<u>(838)</u>	<u>(0.4%)</u>
Non-operating expenses							
Interest expense	101,703	103,915	100,387	(2,212)	(2.1%)	3,528	3.5%
Amortization of debt discount/premium	(13,404)	(14,322)	(10,284)	918	(6.4%)	(4,038)	39.3%
Change in fair value - swaps	(11,293)	(8,796)	(812)	(2,497)	28.4%	(7,984)	983.3%
Total non-operating expenses	<u>77,006</u>	<u>80,797</u>	<u>89,291</u>	<u>(3,791)</u>	<u>(4.7%)</u>	<u>(8,494)</u>	<u>(9.5%)</u>
Total expenses	<u>308,673</u>	<u>306,959</u>	<u>316,291</u>	<u>1,714</u>	<u>0.6%</u>	<u>(9,332)</u>	<u>(3.0%)</u>
Income before capital contributions	65,695	34,613	3,358	31,082	89.8%	31,255	930.8%
Capital contributions	9,572	16,422	9,085	(6,850)	(41.7%)	7,337	80.8%
Increase (decrease) in net position	<u>75,267</u>	<u>51,035</u>	<u>12,443</u>	<u>24,232</u>	<u>47.5%</u>	<u>38,592</u>	<u>310.2%</u>
Net position - Beginning	847,765	796,730	770,552	51,035	6.4%	26,178	3.4%
Net position - OCEA Merger	-	-	13,735	-	0.0%	(13,735)	0.0%
Net position - Ending	<u>\$ 923,032</u>	<u>\$ 847,765</u>	<u>\$ 796,730</u>	<u>\$ 75,267</u>	<u>8.9%</u>	<u>\$ 51,035</u>	<u>6.4%</u>

Following is a discussion of the primary reasons for changes in MSD's revenues and expenses between fiscal years 2022 and 2021, and between fiscal years 2021 and 2020, respectively.

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.

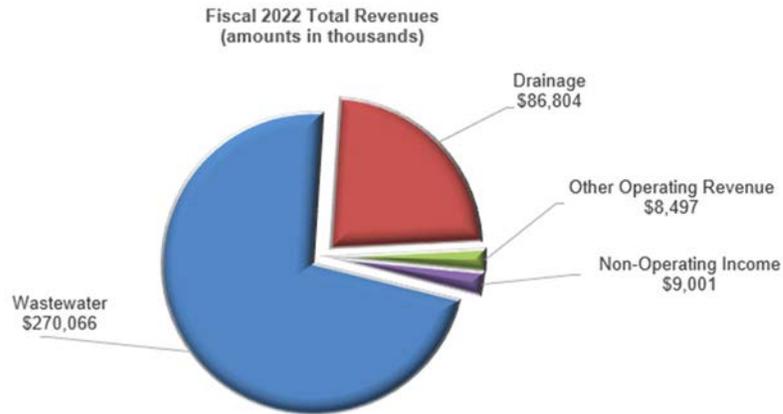
Operating expenses increased by \$5.5 million, or 2.4%, to \$231.6 million primarily due to higher insurance premiums, chemical cost and depreciation and amortization expense. These expenses were partially offset by a reduction in GASB 68 and GASB 75 pension expense.

Fiscal Year 2021: Operating revenues increased by \$10.3 million, or 3.2%, to \$329.4 million primarily due to a 5.0% rate increase effective August 1, 2020 to wastewater and drainage service charges.

Operating expenses decreased by \$838 thousand, or 0.4%, to \$226.1 million primarily due reductions in contractual services expenses and utility expenses. These reductions were partially offset by an increase in GASB 68 pension and GASB 75 OPEB expenses.

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

Fiscal 2022 Total Revenues:



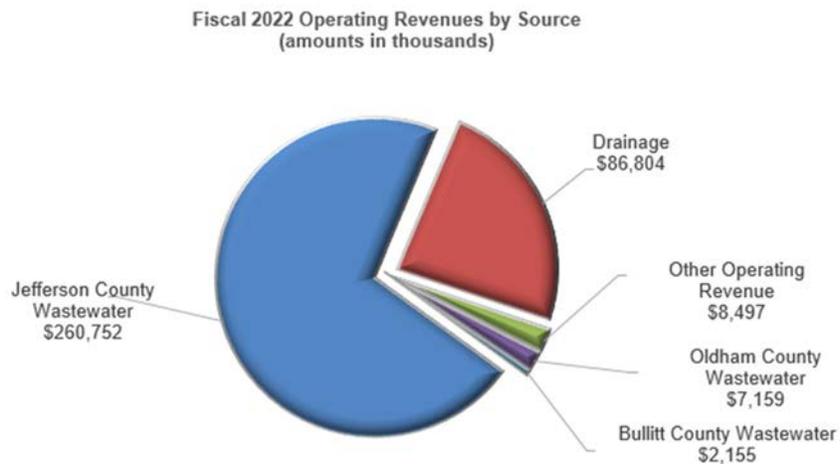
Wastewater service charges totaled \$270.0 million which is an increase of \$24.2 million, or 9.8%, from fiscal 2021. Wastewater service charge rates in Jefferson County increased 6.9% on August 1, 2021.

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 a 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 and 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

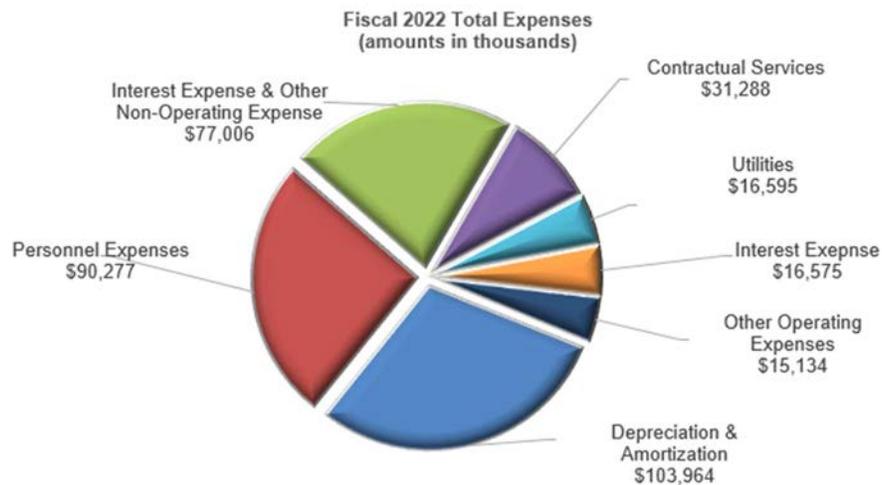
LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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County service area. Wastewater service charges were 59.5% Residential, 31.8% Commercial and 8.7% Industrial⁵.

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% Industrial⁶.

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 as a result of better investment performance in fiscal 2021⁷.

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 bonds⁸.

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

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.

⁵ See Top 10 Customers in the Statistical Section

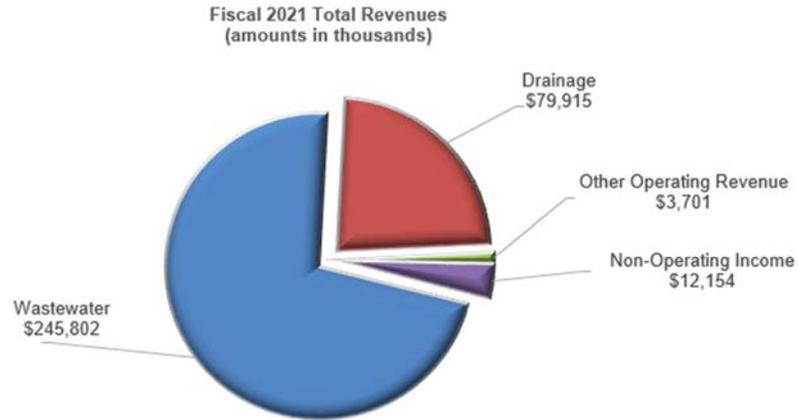
⁶ See Top 10 Customers in the Statistical Section

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

⁸ See Note 7 – Long Term Debt

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

Fiscal 2021 Total Revenues:



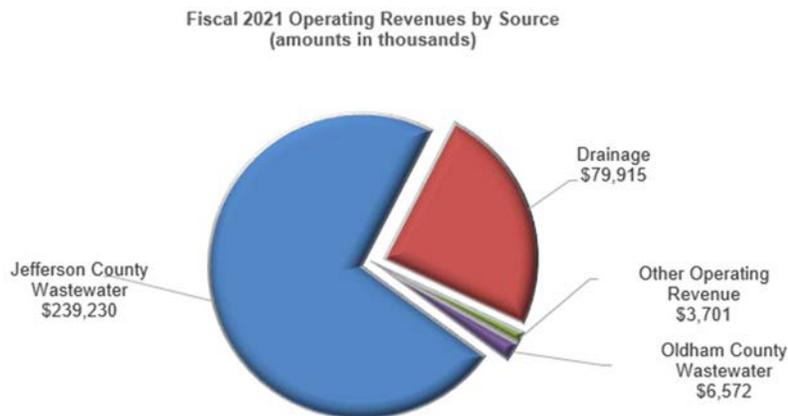
Wastewater service charges totaled \$245.8 million which is an increase of \$7.9 million, or 3.4%, from fiscal 2020. Wastewater service charge rates in Jefferson County increased 5.0% on August 1, 2020.

Drainage service charges totaled \$79.9 million which represents an increase of \$4.8 million, or 6.5%, from fiscal 2020. Drainage service charge rates in Jefferson County increased 5.0% on August 1, 2020.

Other operating income totaled \$3.7 million, which is a decrease of \$2.4 million, or 40.3%, from fiscal 2020. The decrease was driven primarily by lower capacity charges in fiscal 2021.

Non-operating revenues, which represent gain or loss on disposal of assets, interest income earned on investments and the federal interest subsidy on MSD's Build America Bonds totaled \$12.1 million, which is an increase of \$11.5 million, or 96.6%, from fiscal 2020. Non-operating revenues totaled \$592 thousand in fiscal 2020 due to a \$15 million loss on disposal of assets.

Fiscal 2021 Operating Revenues by Source:



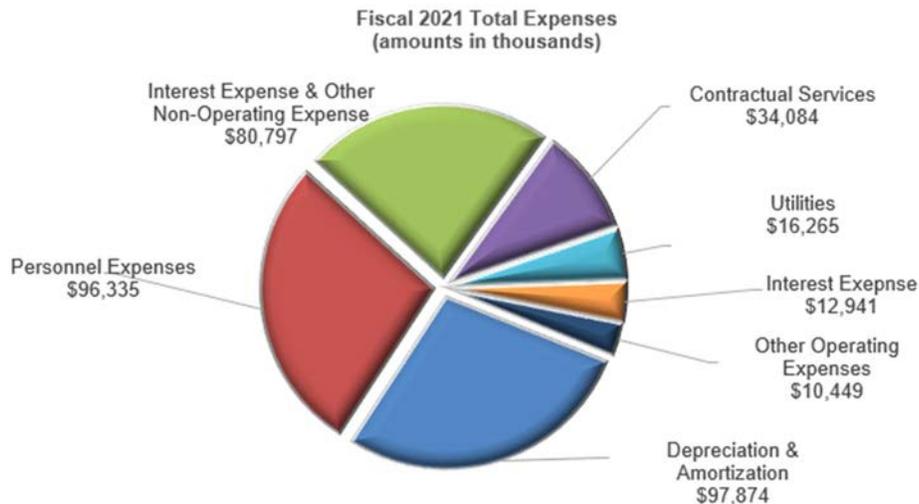
LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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Wastewater service charges totaled \$245.8 million and consisted of \$239.2 million for MSD's Jefferson County service area and \$6.6 million for MSD's Oldham County service area. Wastewater service charges were 60.3% Residential, 30.3% Commercial and 9.4% Industrial⁹.

Drainage service charges totaled \$79.9 million and consisted of MSD's Jefferson County drainage service area. Drainage service charges were 36.8% Residential, 56.6% Commercial and 6.6% Industrial¹⁰.

Other operating revenue totaled \$3.7 million and consisted of \$3.6 million for Jefferson County and \$102 thousand for Oldham County.

Fiscal 2021 Total Operating Expenses:



Personnel expenses increased \$5.0 million, or 6.3%, to \$96.3 million due primarily to increases in headcount, compensation and medical insurance premiums.

Contractual services decreased \$3.2 million, or 8.7% to \$34.0 million primarily due to lower expenditures for other contractual services.

Utility expenses decreased by \$1.6 million, or 9.3%, to \$16.2 million primarily due to lower electrical costs.

Interest expense and other non-operating expenses decreased by \$8.4 million, or 9.5% to \$80.7 million primarily due to changes in the fair value of MSD's swaps¹¹.

Depreciation and amortization decreased by \$998 thousand, or 1.0%, to \$97.8 million.

Total expenses in fiscal 2021 decreased \$7.1 million, or 2.0%, to \$348.7 million before capitalization. Capitalized overhead totaled \$41.8 million which brought net operating expenses to \$306.9 million.

⁹ See Top 10 Customers in the Statistical Section

¹⁰ See Top 10 Customers in the Statistical Section

¹¹ See Note 9 – Derivative Instruments

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

Capital Contributions: 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.

Capital contributions increased \$7.3 million, or 80.8%, to \$16.4 million in fiscal 2021 (see Figure 3). This increase is primarily attributable to an increase in wastewater infrastructure contributions from developers.

FIGURE 3 - CAPITAL CONTRIBUTIONS							
(amounts in thousands)	FY 2022	FY 2021	FY 2020	2022-2021		2021-2020	
				Increase (Decrease)	% Change	Increase (Decrease)	% Change
Cash flows from:							
Developer's capital - wastewater	\$ 3,068	\$ 9,810	\$ 2,474	\$ (6,742)	(68.7%)	\$ 7,336	296.5%
Developer's capital - drainage	3,841	4,646	4,826	(805)	100.0%	(180)	0.0%
Federal grants	2,611	963	937	1,648	171.1%	26	2.8%
Capital recovery	52	1,003	436	(951)	100.0%	567	0.0%
Miscellaneous claims recovery	-	-	412	-	100.0%	(412)	0.0%
Total capital contributions	<u>\$ 9,572</u>	<u>\$ 16,422</u>	<u>\$ 9,085</u>	<u>\$ (6,850)</u>	<u>(41.7%)</u>	<u>\$ 7,337</u>	<u>80.8%</u>

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)¹². Construction in progress was the driver for the growth in capital assets.

Total capital assets net of depreciation increased \$154.5 million, or 5.1%, to \$3.1 billion in fiscal 2021 (see Figure 4)¹³. Construction in progress was the driver for the growth in capital assets.

FIGURE 4 - CAPITAL ASSETS NET OF DEPRECIATION							
(amounts in thousands)	FY 2022	FY 2021	FY 2020	2022-2021		2021-2020	
				Increase (Decrease)	% Change	Increase (Decrease)	% Change
Sewer lines	\$ 1,638,136	\$ 1,355,258	\$ 1,363,408	\$ 282,878	20.9%	\$ (8,150)	-0.6%
Wastewater treatment facilities	242,875	208,553	215,163	34,322	16.5%	(6,610)	-3.1%
Drainage facilities	787,664	794,261	697,632	(6,597)	-0.8%	96,629	13.9%
Pumping and lift stations	160,774	147,917	157,849	12,857	8.7%	(9,932)	-6.3%
Administrative facilities	9,273	10,279	11,379	(1,006)	-9.8%	(1,100)	-9.7%
Maintenance facilities	6,851	6,941	5,419	(90)	-1.3%	1,522	28.1%
Machinery and equipment	23,625	18,490	23,722	5,135	27.8%	(5,232)	-22.1%
Miscellaneous	3,607	1,801	1,481	1,806	100.3%	320	21.6%
Construction in progress	<u>420,200</u>	<u>625,113</u>	<u>538,013</u>	<u>(204,913)</u>	<u>-32.8%</u>	<u>87,100</u>	<u>16.2%</u>
Total	<u>\$ 3,293,005</u>	<u>\$ 3,168,613</u>	<u>\$ 3,014,066</u>	<u>\$ 124,392</u>	<u>3.9%</u>	<u>\$ 154,547</u>	<u>5.1%</u>

DEBT ADMINISTRATION

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 2021¹⁴ (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 at the end of fiscal 2022 totaled \$55.4 million compared to \$49.3 million at the end of fiscal 2021.

¹² See Note 5 – Capital Assets – Plant, Lines and Other Facilities

¹³ See Note 5 – Capital Assets – Plant, Lines and Other Facilities

¹⁴ See Note 7 – Long-Term Debt.

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

MSD ended fiscal 2021 with \$2.5 billion in outstanding long-term debt compared to \$2.4 billion in outstanding long-term debt at the end of fiscal 2020 (see Figure 5)¹⁵. This is primarily due to the issuance of additional commercial paper to finance construction in progress. Short term debt outstanding payable from restricted assets at the end of fiscal 2021 totaled \$49.3 million compared to \$45.6 million at the end of fiscal 2020.

FIGURE 5 - SCHEDULE OF BONDS AND OTHER FINANCING

<i>(amounts in thousands)</i>	FY 2022	FY 2021	FY 2020	Increase (Decrease) 2022-2021	Increase (Decrease) 2021-2020
Senior Revenue Bonds					
Series 2009C	180,000	180,000	180,000	-	-
Series 2010A	330,000	330,000	330,000	-	-
Series 2011A	-	243,910	246,225	(243,910)	(2,315)
Series 2013A	115,790	115,790	115,790	-	-
Series 2013B	109,280	110,970	112,575	(1,690)	(1,605)
Series 2013C	125	250	99,250	(125)	(99,000)
Series 2014A	79,650	79,700	79,750	(50)	(50)
Series 2015A	171,395	172,175	173,160	(780)	(985)
Series 2015B	65,975	68,815	71,515	(2,840)	(2,700)
Series 2016A	147,500	148,415	149,290	(915)	(875)
Series 2016B	19,910	21,960	23,915	(2,050)	(1,955)
Series 2016C	12,995	32,305	50,515	(19,310)	(18,210)
Series 2017A	149,390	155,790	161,895	(6,400)	(6,105)
Series 2017B	31,210	32,055	32,885	(845)	(830)
Series 2018A	60,380	60,380	60,380	-	-
Series 2019A	8,845	17,065	24,770	(8,220)	(7,705)
Series 2020A	224,000	224,750	-	(750)	224,750
Series 2020C	109,605	110,790	-	(1,185)	110,790
Series 2021A	240,485	-	-	240,485	-
Series 2022A	224,750	-	-	224,750	-
Bond Anticipation Notes					
Series 2019A	-	-	226,340	-	(226,340)
Series 2020A	-	226,340	-	(226,340)	226,340
Series 2021A	226,340	-	-	226,340	-
Other Subordinate Debt					
General Obligation Bonds	10,774	11,629	12,453	(855)	(824)
Commercial Paper Notes	50,000	150,000	255,000	(100,000)	(105,000)
SRF Loans	39,998	32,462	15,818	7,536	16,644
KACO Lease	1,870	2,030	2,180	(160)	(150)
Notes Payable - LOC	-	-	100	-	(100)
	\$ 2,610,267	\$ 2,527,581	\$ 2,423,806	\$ 82,686	\$ 103,775

Excludes bond premiums/discounts

On March 25, 2020, MSD entered into a Forward Delivery Bond Purchase agreement to refund \$243,910,000 of the Series 2011A bonds. The Series 2021A bonds were dated and delivered on August

¹⁵ See Note 7 – Long-Term Debt.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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17, 2021 to complete the refunding which reduces debt service payments by \$56.5 million beginning in fiscal year 2022 through fiscal year 2034¹⁶.

On February 1, 2022, MSD issued \$225,000,000 of climate bond certified revenue bonds, Series 2022A. The proceeds of the Series 2022A bonds were used to refund commercial paper notes at maturity and to finance the ongoing costs of MSD's capital improvement program. The final maturity of Series 2022A bonds is May 15, 2052¹⁷.

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 General Bond 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 195% in 2022, 186% in 2021 and 188% in 2020 (see Figure 6).

FIGURE 6- DEBT SERVICE COVERAGE					
<i>(amounts in thousands)</i>	FY 2022	FY 2021	FY 2020	Increase (Decrease) 2022-2021	Increase (Decrease) 2021-2020
Total available revenues	\$ 374,827	\$ 342,392	\$ 335,566	9.5%	2.0%
Total net operating expenses	118,978	109,741	110,302	8.4%	(0.5%)
Net revenue	255,849	232,651	225,264	10.0%	3.3%
Aggregate net debt service	\$ 130,925	\$ 124,819	\$ 119,868	4.9%	4.1%
Debt service coverage ratio	195%	186%	188%	4.8%	(0.8%)

¹⁶ See Note 7 – Long-Term Debt

¹⁷ See Note 7 – Long-Term Debt

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

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 25, 2022, the MSD Board approved a 5.0% rate increase for wastewater and drainage service charges for the Jefferson County service area effective August 1, 2022. 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 25, 2022, the MSD Board approved a \$2 reduction in the wastewater volume charge for MSD's Oldham County service area effective August 1, 2022. Starting August 1, 2023, rate increases for wastewater service in Oldham County will not exceed 3% 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 20, 2021, the MSD Board approved a 12% rate increase for wastewater service charges in its Bullitt County service area effective January 1, 2022. 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 agreed to enter 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. To date, MSD has spent approximately \$1.1 billion developing and completing IOAP projects and compliance measures mandated by the consent decree.

After several months of negotiation, MSD, the Commonwealth of Kentucky and United States of America have reached an agreement on important modifications to the 2009 amended consent decree. The parties have agreed to enter into a second amended consent decree which will supersede and replace the 2009 amended consent decree and update the IOAP modification approved on June 19, 2014 with the 2021

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

IOAP modification. The United States District Court granted final approval of the second amended consent decree on September 14, 2022.¹⁹

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 – Consent Decree

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
 COMPARATIVE STATEMENT OF NET POSITION
 AS OF JUNE 30
 DOLLARS IN THOUSANDS

Assets and Deferred Outflows of Resources	2022	2021
Current Assets		
Unrestricted Current Assets		
Cash and cash equivalents	\$ 48,875	\$ 79,281
Investments	69,754	28,124
Accounts receivable, less allowance for doubtful accounts of \$4,271 (2022), \$4,946 (2021)	26,242	24,664
Inventories	5,262	5,086
Accrued interest receivable	341	231
Prepaid expenses and other current assets	2,949	6,155
Total unrestricted current assets	153,423	143,541
Restricted Current Assets		
Cash and cash equivalents	20,788	21,181
Investments	12,947	-
Total restricted current assets	33,735	21,181
Total Current Assets	187,158	164,722
Noncurrent Assets		
Unrestricted Noncurrent Assets		
Accounts receivable, non-current	7,138	10,478
Restricted Noncurrent Assets:		
Cash and cash equivalents	2,191	1,524
Investments	78,140	81,406
Total restricted noncurrent assets	80,331	82,930
Capital Assets		
Utility plant in service	4,269,739	3,849,048
Less accumulated depreciation	(1,396,934)	(1,305,547)
Net capital assets in service	2,872,805	2,543,501
Construction in progress	420,200	625,113
Net capital assets	3,293,005	3,168,614
Other Noncurrent Assets		
Prepaid regulatory assets	436,432	428,968
Less accumulated amortization	(149,411)	(138,676)
Net prepaid regulatory assets	287,021	290,292
Unamortized bond issuance costs	14,585	15,089
Unamortized reserve fund insurance	764	794
Total other noncurrent assets	302,370	306,175
Total Noncurrent Assets	3,682,844	3,568,197
Total Assets	3,870,002	3,732,919
Deferred Outflow of Resources		
Deferred outflow - pension	21,836	25,932
Deferred outflow - OPEB	23,447	21,962
Deferred outflow - derivative instruments	-	8,541
Deferred loss on refunding	26,827	24,549
Total deferred outflow of resources	72,110	80,984
Total Assets and Deferred Outflow of Resources	\$ 3,942,112	\$ 3,813,903

See the accompanying notes to the financial statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
 COMPARATIVE STATEMENT OF NET POSITION
 AS OF JUNE 30
 DOLLARS IN THOUSANDS

Liabilities, Deferred Inflow of Resources and Net Position	2022	2021
Current Liabilities		
Current Liabilities To Be Paid From Unrestricted Assets		
Accounts payable	\$ 9,807	\$ 18,345
Accrued salaries and related benefits	10,588	10,754
Total unrestricted current liabilities	20,395	29,099
Current Liabilities To Be Paid From Restricted Assets		
Accounts payable and accrued expenses (capital), includes contractor retainage of \$4,697 (2022), \$12,634 (2021)	30,464	46,237
Accrued interest payable	16,622	20,093
Refundable deposits	1,920	2,757
Revenue bonds payable	52,880	47,565
Other subordinate debt	2,038	1,817
Total restricted current liabilities	103,924	118,469
Total Current Liabilities	124,319	147,568
Noncurrent Liabilities		
Bonds payable, net of unamortized premiums and discounts	2,316,455	2,132,372
Bond anticipation note	226,340	226,340
Commercial paper notes	50,000	150,000
Other subordinate debt	50,604	44,304
Net pension liability	124,564	139,401
Net OPEB liability	37,395	43,904
Investment derivative asset liability	40,914	63,431
At-market derivative asset liability	-	8,541
Total Noncurrent Liabilities	2,846,272	2,808,293
Total Liabilities	2,970,591	2,955,861
Deferred Inflow of Resources		
Deferred inflow - pension	17,811	-
Deferred inflow - OPEB	17,068	7,420
Deferred inflow - derivative instruments	11,224	-
Other deferred inflows	2,386	2,857
Total deferred inflow of resources	48,489	10,277
Total Liabilities and Deferred Inflow of Resources	\$ 3,019,080	\$ 2,966,138
Net Position		
Net investment in capital assets	\$ 850,316	\$ 762,848
Restricted for debt service	84,607	84,429
Unrestricted	(11,891)	488
Total net position	923,032	847,765
Total Liabilities, Deferred Inflow of Resources and Net Position	\$ 3,942,112	\$ 3,813,903

See the accompanying notes to the financial statements.

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

	<u>2022</u>	<u>2021</u>
Operating Revenues		
Service charges	\$ 356,870	\$ 325,717
Other operating income	8,497	3,701
Total operating revenues	<u>365,367</u>	<u>329,418</u>
Operating Expenses		
Service and administrative costs	118,978	109,741
GASB 68 pension/GASB 75 OPEB actuarial expense	8,725	18,547
Depreciation and amortization	103,964	97,874
Total operating expenses	<u>231,667</u>	<u>226,162</u>
Income from Operations	<u>133,700</u>	<u>103,256</u>
Non-operating Revenue (Expenses)		
Gain/Loss disposal of assets	124	(21)
Investment income	(1,467)	1,777
Build America bond refund	10,344	10,398
Interest expense - bonds	(86,792)	(93,067)
Interest expense - swaps	(9,502)	(9,793)
Interest expense - other	(12,873)	(13,104)
Amortization of debt discount / premium	17,172	17,429
Amortization of loss on refunding	(3,768)	(3,107)
Capitalized interest	7,464	12,049
Change in fair value - derivative instruments	11,293	8,796
Total non-operating revenue (expenses) - net	<u>(68,005)</u>	<u>(68,643)</u>
Income before capital contributions	65,695	34,613
Capital contributions	<u>9,572</u>	<u>16,422</u>
Increase in net position	75,267	51,035
Net position, beginning	<u>847,765</u>	<u>796,730</u>
Net position, ending	<u>\$ 923,032</u>	<u>\$ 847,765</u>

See the accompanying notes to the financial statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
 COMPARATIVE STATEMENT OF CASH FLOWS
 AS OF JUNE 30
 DOLLARS IN THOUSANDS

	<u>2022</u>	<u>2021</u>
Cash Flows from Operating Activities		
Cash received from customers	\$ 362,992	\$ 331,767
Cash paid to suppliers	(70,302)	(55,030)
Cash paid to employees	(54,351)	(52,092)
Net Cash Provided by Operating Activities	238,339	224,645
 Cash Flows from Capital and Related Financing Activities		
Proceeds from issuance of revenue bonds	248,821	233,133
Proceeds from issuance of bond anticipation note	232,924	237,295
Proceeds from issuance of commercial paper	375,000	365,000
Proceeds from other subordinate debt	7,824	17,788
Payments for retirement of revenue bonds	(55,497)	(48,033)
Payments for retirement of bond anticipation note	(226,340)	(226,340)
Payments for retirement of commercial paper	(475,000)	(470,000)
Payments for retirement of notes	-	(100)
Payments for retirement of other subordinated debt	(1,926)	(2,119)
Payments for interest expense	(103,136)	(103,393)
Payments for interest on swaps	(9,502)	(9,793)
Build America bond interest subsidy	10,344	10,398
Proceeds from capital grants	2,662	1,914
Proceeds from sales of capital assets	124	(21)
Payments for capital assets	(224,712)	(219,888)
Proceeds from assessments	3,378	2,465
Net Cash Provided (Used) by Capital and Related Financing	(215,036)	(211,694)
 Cash Flows from Investing Activities		
Purchase of investments	(127,427)	(212,292)
Maturity of investments	71,789	157,087
Investment income	2,203	1,423
Net Cash Provided (Used) by Investing Activities	(53,435)	(53,782)
 Net Increase (Decrease) in Cash and Cash Equivalents	(30,132)	(40,831)
Cash and Cash Equivalents, Beginning of Year	101,986	142,817
Cash and Cash Equivalents, End of Year	\$ 71,854	\$ 101,986

See the accompanying notes to the financial statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
 COMPARATIVE STATEMENT OF CASH FLOWS
 AS OF JUNE 30
 DOLLARS IN THOUSANDS

	<u>2022</u>	<u>2021</u>
Reconciliation of Operating Income to Net Cash provided by Operating Activities		
Income from operations	\$ 133,700	\$ 103,256
Adjustments to reconcile operating income to net cash provided by operating activities		
Depreciation and amortization	103,964	97,874
Accounts receivable	(1,539)	2,546
Inventories	(176)	(109)
Prepaid expense	3,206	(2,194)
Accounts payable	(8,538)	3,656
Customer deposits	(837)	(198)
Accrued liabilities	(166)	1,267
Pension liability	7,071	15,807
OPEB liability	1,654	2,740
Net Cash Provided by Operating Activities	<u>\$ 238,339</u>	<u>\$ 224,645</u>
 Non-Cash Capital Financing and Investing Activities		
Contribution of plant, lines and other facilities by developers and property owners	\$ 6,909	\$ 14,456
Construction costs in accounts payable	30,464	46,237
Unrealized (gain)/loss on investments	3,587	(499)
Decrease in interest rate swap deferred revenue	497	497
Change in fair value - derivative instruments	11,293	8,796
Bonds issued for refunding of debt - Series 2011A	246,555	-
Bonds issued for refunding of debt - Series 2020C	-	112,065

See the accompanying notes to the financial statements.

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.

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 KRS 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. Subsequent to this change, MSD has reached four agreements extending its service area outside of Jefferson County. On May 31, 2019, MSD acquired the Crestwood wastewater collection system pursuant to the terms and conditions of an Interlocal Cooperation Agreement (ILA). On April 27, 2020, MSD entered into an ILA with Shelby County to own, maintain, and operate sewer and wastewater facilities and collections systems in a prescribed service area in the easternmost corner of Shelby County. On June 30, 2020, MSD completed a merger with the Oldham County Environmental Authority (OCEA) pursuant to the terms and conditions of an ILA. On November 30, 2021, MSD acquired the Bullitt County Sanitation District (BCSD) pursuant to the terms and conditions of an ILA.

MSD classified the ILA with BCSD as a government acquisition since significant consideration was exchanged. GASB Statement No. 69, Government Combinations and Disposals of Government Operations, requires that for government acquisitions, the acquiring government should recognize the assets, deferred outflows of resources, liabilities, or deferred inflows of resources acquired or assumed at the acquisition date, or November 30, 2021. Assets, deferred outflows of resources, liabilities, or deferred inflows of resources were measured at acquisition value. No significant adjustments were made to bring amounts into conformity with MSD's accounting policies or to adjust for impairment of capital assets resulting from the acquisition.

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

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 on the basis of actual costs incurred to collect and treat wastewater. Drainage service charges are distributed among customer classes on the basis of actual costs of drainage services per equivalent unit of impervious surface.

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 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 Statement 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 it is needed.

Investment Securities: Investments are stated at fair value. Investment income consists of interest income and the change in fair value of investments¹. Investment income is reduced by 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

¹ See Note 2 – Deposits and Investments

² See Note 7 – Long-Term Debt

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

and collection of these charges on behalf of MSD on a monthly basis. 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 derivatives, 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 current 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 was valued at June 30, 2022 and June 30, 2021 as \$4,270,981 and \$4,946,357, respectively.

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. Assessment receivables 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 was valued at June 30, 2022 and June 30, 2021 at \$5,140,847 and \$2,539,950, respectively. 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 \$5,262,281 at June 30, 2022 and \$5,086,088 at June 30, 2021.

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, 2022 and June 30, 2021 were \$2,662,193 and \$1,966,789, respectively. Contributed capital in the form of sewer and drainage infrastructure constructed by developers at June 30, 2022 and June 30, 2021 were \$6,909,247 and \$14,455,781, respectively.

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
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,

³ See Note 5 – Capital Assets – Plant, Lines, and Other Facilities

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

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.

Capitalized Interest: 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. Total interest cost of \$109,167,238 was incurred during the year, of which \$7,463,578 was capitalized as a regulatory asset.

Prepaid Regulatory Assets: Capitalized interest is presented as a prepaid regulatory asset. MSD depreciates capitalized interest over forty years. Prepaid regulatory assets have a historical cost of \$436,432,482. The carrying value, stated net of depreciation, was \$287,022,342 as of June 30, 2022.

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 2022 or 2021.

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 Statement 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 Statement 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.

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.

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

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, 2021 MSD adopted the following GASB pronouncements and implementation guide:

- Statement No. 87: *Leases*
- Statement No. 89: *Accounting for Interest Cost Incurred before the End of a Construction Period.*
- Statement No. 92: *Omnibus 2020*
- Statement No. 93: *Replacement of Interbank Offered Rates*
- Statement No. 97: *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32*
- Statement No. 98: *The Annual Comprehensive Financial Report*
- Implementation Guide No. 2019-3: *Leases*

GASB Statements No. 87, No. 89, No. 92, No. 93, No. 97, and No. 98 and Implementation Guide No. 2019-3 do not have a material impact on MSD's financial reporting.

Recent Accounting Pronouncements: GASB has issued additional guidance that is not yet effective. MSD is currently reviewing the provisions of the following GASB Statements and Implementation Guides to determine the impact of implementation in future periods.

- Statement No. 91: *Conduit Debt Obligations (fiscal 2023)*
- Statement No. 94: *Public-Private and Public-Public Partnerships and Availability Payment Arrangements (fiscal 2023)*
- Statement No. 96: *Subscription-based Information Technology Arrangements (fiscal 2023)*
- Statement No. 99: *Omnibus 2022*
- Statement No. 100: *Accounting Changes and Error Corrections—as an amendment of GASB Statement No. 62*
- Statement No. 101: *Compensated Absences*

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.

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

NOTE 2 - CASH DEPOSITS AND INVESTMENTS

A reconciliation of cash, cash equivalents and investments as shown on the Comparative Statement of Net Position for MSD follows:

(dollars in thousands)	June 30,	
	2022	2021
Reported in Statements of Net Position:		
Cash and cash equivalents		
Unrestricted	\$ 48,875	\$ 79,281
Restricted - current	20,788	21,181
Restricted - noncurrent	2,191	1,524
Total cash and cash equivalents	<u>71,854</u>	<u>101,986</u>
Investments		
Unrestricted	69,754	28,124
Restricted - current	12,947	-
Restricted - noncurrent	78,140	81,406
Total investments	<u>160,841</u>	<u>109,530</u>
Total Cash, Cash Equivalents and Investments	<u>\$ 232,695</u>	<u>\$ 211,516</u>

The following comparative schedule presents the cash, cash equivalents and investments in MSD's portfolio at fair value with investment maturities and credit risk ratings from Moody's Investors Service.

June 30, 2022 (dollars in thousands)			
	Reported Value	Weighted Average Maturity in Years	Credit Rating
Commercial paper	\$ 54,926	0.41	P-1
U.S. treasuries	67,533	0.43	Aaa
U.S. agency securities	16,594	1.41	Aaa
Municipal bonds	36,693	2.64	Aaa, Aa, A
Money market funds	23,252	0.07	Aaa
Repurchase agreement/cash	33,597	0.01	
Certificate of deposit	100	0.00	
Total cash, cash equivalents and investments	<u>\$ 232,695</u>	<u>4.27</u>	
Accrued interest	\$ 341		
June 30, 2021 (dollars in thousands)			
	Reported Value	Weighted Average Maturity in Years	Credit Rating
Commercial Paper	\$ 24,996	0.21	P-1
U.S. treasuries	22,746	0.38	Aaa
U.S. agency securities	36,003	1.19	Aaa
Municipal bonds	40,685	2.38	Aaa, Aa, A
Money market funds	30,254	0.06	Aaa
Repurchase agreement/cash	56,732		
Certificate of deposit	100	0.00	
Total cash, cash equivalents and investments	<u>\$ 211,516</u>	<u>4.27</u>	
Accrued interest	\$ 231		

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

Section 66.480 of the Kentucky Revised Statutes and MSD's bond resolutions authorize MSD to invest money subject to its control in, among other securities, (i) obligations of the United States and of its agencies and instrumentalities, including obligations subject to repurchase agreements, (ii) 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 or, to the extent not so insured, collateralized by obligations described in clause (i) above, (iii) securities issued by a state or local government, or any instrumentality or agency thereof, in the United States, and rated in either of the two highest categories by a nationally recognized rating agency, and (iv) money market mutual funds investing in any of the securities described above.

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.

Risks: *Concentration of Credit Risk:* MSD's Investment Policy (the Policy) requires that investments be diversified to eliminate the risk of loss resulting from over-concentration of assets in a specific maturity, a specific issuer, or a specific class of securities. Section 4.4.1 of the Policy limits the amount of money invested at any time in one or more categories of the investments authorized by KRS 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, 2022 and 2021.

Interest Rate Risk: 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.

Custodial Credit Risk: This 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.

Foreign Currency Risk: This risk relates to any potential adverse effects on the fair value of an investment from changes in exchange rates. MSD did not hold any foreign currency as of June 30, 2022 and 2021.

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. A comparative statement of investments subject to fair value measurements and valuation techniques follows:

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

June 30, 2022 (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:				
Commercial paper	\$ -	\$ 54,926	\$ -	\$ 54,926
U.S. treasuries	-	67,533	-	67,533
U.S. agencies	-	16,594	-	16,594
State and municipal obligations	-	36,693	-	36,693
Total investments by fair value level	<u>\$ -</u>	<u>\$ 175,746</u>	<u>\$ -</u>	<u>\$ 175,746</u>

June 30, 2021 (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:				
Commercial paper	\$ -	\$ 24,996	\$ -	\$ 24,996
U.S. treasuries	-	22,746	-	22,746
U.S. agencies	-	36,003	-	36,003
State and municipal obligations	-	40,685	-	40,685
Total investments by fair value level	<u>\$ -</u>	<u>\$ 124,430</u>	<u>\$ -</u>	<u>\$ 124,430</u>

NOTE 3 - RESTRICTED CASH, CASH EQUIVALENTS, AND INVESTMENTS

MSD's 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.

As of June 30, 2022, total assets restricted for debt service were \$100,907,023, which included the debt service reserve of \$80,320,673 and other debt service trust accounts of \$20,586,350. Total assets restricted for construction were \$13,158,729 which were comprised of unspent 2022A bond proceeds. Total assets restricted for the debt service reserve, together with the Reserve Policy, totaled \$155,330,673. The lesser of the three-prong test as of June 30, 2022 was 125% of MSD's average annual aggregate net debt service, or \$155,086,014.

As of June 30, 2021, total assets restricted for debt service were \$104,110,840, which included the debt service reserve of \$82,929,526 and other debt service trust accounts of \$21,181,314. Total assets restricted for the debt service reserve, together with the Reserve Policy, totaled \$157,929,526. The lesser of the three-prong test as of June 30, 2021 was 100% of the maximum aggregate net debt service in the current or any future fiscal year, or \$151,252,519.

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

NOTE 4 - SCHEDULE OF NET POSITION

A comparative Schedule of Net Position follows:

<i>(dollars in thousands)</i>	June 30,	
	2022	2021
Net investment in capital assets:		
Plant, lines and other facilities net of depreciation including capitalized interest	\$ 3,580,027	\$ 3,458,906
Outstanding debt that applies to plant, lines and other facilities	(2,739,232)	(2,674,370)
Unspent bond proceeds - construction	13,158	-
Accounts payable and accrued expenses (capital)	(30,464)	(46,237)
Deferred outflows and inflows of resources	26,827	24,549
Total	<u>850,316</u>	<u>762,848</u>
Restricted for:		
Assets restricted for debt service	100,907	104,111
Liabilities associated with restricted debt service	(16,300)	(19,682)
	<u>84,607</u>	<u>84,429</u>
Unrestricted net position	<u>(11,891)</u>	<u>488</u>
Total net position	<u>\$ 923,032</u>	<u>\$ 847,765</u>

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

NOTE 5 - CAPITAL ASSETS - PLANT, LINES AND OTHER FACILITIES

A comparative schedule of plant, lines and other facilities follows:

June 30, 2022 (dollars in thousands)	Beginning Balance	Transfers In/ Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	\$ 1,761,425	\$ 308,916	\$ -	\$ 2,070,341
Wastewater treatment facilities	641,414	55,486	-	696,900
Drainage facilities	997,461	14,218	-	1,011,679
Pumping and lift stations	260,231	26,743	-	286,974
Administrative facilities	52,348	123	-	52,471
Maintenance facilities	14,301	276	-	14,577
Machinery and equipment	88,493	13,072	(703)	100,862
Miscellaneous	33,375	2,560	-	35,935
Total capital assets	<u>3,849,048</u>	<u>421,394</u>	<u>(703)</u>	<u>4,269,739</u>
Less accumulated depreciation and amortization:				
Sewer lines	(406,166)	(26,039)	-	(432,205)
Wastewater treatment facilities	(432,861)	(21,164)	-	(454,025)
Drainage facilities	(203,200)	(20,815)	-	(224,015)
Pumping and lift stations	(112,314)	(13,886)	-	(126,200)
Administrative facilities	(42,069)	(1,129)	-	(43,198)
Maintenance facilities	(7,360)	(366)	-	(7,726)
Machinery and equipment	(70,003)	(7,927)	693	(77,237)
Miscellaneous	(31,574)	(754)	-	(32,328)
Total accumulated depreciation/amortization	<u>(1,305,547)</u>	<u>(92,080)</u>	<u>693</u>	<u>(1,396,934)</u>
Construction in progress	<u>625,113</u>	<u>136,301</u>	<u>(341,214)</u>	<u>420,200</u>
Net capital assets	<u>\$ 3,168,614</u>	<u>\$ 465,615</u>	<u>\$ (341,224)</u>	<u>\$ 3,293,005</u>

Capital assets include non-depreciable assets for land related to all facilities and pumping and lift stations. The carrying value was \$41,641,692 and \$38,161,779 at June 30, 2022 and 2021 respectively.

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

June 30, 2021 (dollars in thousands)	Beginning Balance	Transfers In/ Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	\$ 1,746,706	\$ 14,719	\$ -	\$ 1,761,425
Wastewater treatment facilities	627,902	13,512	-	641,414
Drainage facilities	880,863	116,598	-	997,461
Pumping and lift stations	256,229	4,207	(205)	260,231
Administrative facilities	52,297	51	-	52,348
Maintenance facilities	12,459	1,842	-	14,301
Machinery and equipment	89,137	1,652	(2,296)	88,493
Miscellaneous	32,129	1,246	-	33,375
Total capital assets	3,697,722	153,827	(2,501)	3,849,048
Less accumulated depreciation and amortization:				
Sewer lines	(383,297)	(22,869)	-	(406,166)
Wastewater treatment facilities	(412,741)	(20,120)	-	(432,861)
Drainage facilities	(183,231)	(19,969)	-	(203,200)
Pumping and lift stations	(98,378)	(13,936)	-	(112,314)
Administrative facilities	(40,918)	(1,151)	-	(42,069)
Maintenance facilities	(7,040)	(320)	-	(7,360)
Machinery and equipment	(65,414)	(6,884)	2,295	(70,003)
Miscellaneous	(30,649)	(925)	-	(31,574)
Total accumulated depreciation/amortization	(1,221,668)	(86,174)	2,295	(1,305,547)
Construction in progress	538,013	221,005	(133,905)	625,113
Net capital assets	\$ 3,014,067	\$ 288,658	\$ (134,111)	\$ 3,168,614

NOTE 6 - CAPITALIZED INTEREST

A comparative schedule of capitalized interest and net interest expense reported in non-operating expenses during the year:

(dollars in thousands)	June 30,	
	2022	2021
Interest incurred	\$ 95,764	\$ 101,642
Less interest capitalization	(7,464)	(12,049)
Interest expense, net	\$ 88,300	\$ 89,593

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

A roll forward of net prepaid regulatory assets follows:

<i>(dollars in thousands)</i>	2022	June 30, 2021	2020
Net prepaid regulatory assets - beginning of year	\$ 290,292	\$288,690	\$285,744
Additions	7,464	12,049	13,043
Amortization	<u>(10,735)</u>	<u>(10,447)</u>	<u>(10,097)</u>
Net prepaid regulatory assets - end of year	<u>\$ 287,021</u>	<u>\$290,292</u>	<u>\$288,690</u>

NOTE 7 - LONG-TERM DEBT

A schedule of long-term debt outstanding at June 30, 2022 and 2021 follows.

June 30, 2022 <i>(dollars in thousands)</i>					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
Revenue bonds	\$2,105,120	\$ 471,555	\$ 295,390	\$2,281,285	\$ 52,880
Unamortized premium/discount	74,817	30,454	17,221	88,050	-
Commercial paper notes	150,000	375,000	475,000	50,000	-
Bank notes	-	-	-	-	-
Other subordinate debt:					
General obligation bonds	11,629	-	855	10,774	880
SRF loans	32,462	8,448	912	39,998	988
Financing lease	<u>2,030</u>	<u>-</u>	<u>160</u>	<u>1,870</u>	<u>170</u>
Total	<u>\$2,376,058</u>	<u>\$ 885,457</u>	<u>\$ 789,538</u>	<u>\$2,471,977</u>	<u>\$ 54,918</u>

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

June 30, 2021 (dollars in thousands)					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
Revenue bonds	\$ 1,911,915	\$ 337,065	\$ 143,860	\$ 2,105,120	\$ 47,565
Unamortized premium/discount	74,458	18,072	17,713	74,817	-
Commercial paper notes	255,000	365,000	470,000	150,000	-
Bank notes	100	-	100	-	-
Other subordinate debt:					
General obligation bonds	12,453	-	824	11,629	855
SRF loans	15,818	17,860	1,216	32,462	802
Financing lease	2,180	-	150	2,030	160
Total	<u>\$ 2,271,924</u>	<u>\$ 737,997</u>	<u>\$ 633,863</u>	<u>\$ 2,376,058</u>	<u>\$ 49,382</u>

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 the Program Note Resolution adopted June 25, 2018. Prior to 2018, MSD publicly issued revenue bonds 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, 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 the 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 and 2021, MSD's accrued liability for arbitrage rebate was \$21,378 and \$773,553, respectively. During fiscal year 2022, MSD paid \$770,367 for arbitrage rebate related to the 2011A bond issue. There is currently no arbitrage rebate accruing in relation to the 2011A 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, 2022 and 2021.

Fiscal Year 2022 Significant Debt Transactions: On March 25, 2020, MSD entered into a Forward Delivery Bond Purchase agreement to refund \$243,910,000 of the Series 2011A bonds. Under the terms of the agreement, MSD authorized the issuance, on a direct placement, forward delivery basis, of its sewer and drainage system revenue refunding bonds, Series 2021A in the amount of \$246,555,000. The bonds were dated and delivered on August 17, 2021. Under the terms of a continuing covenant agreement for the 2021A bonds, if an event of default occurs the purchaser may declare the outstanding amount of principal and interest on the bonds to be immediately due and payable. The refunding reduces debt service payments by \$56,554,774 beginning in 2022 through 2034 which results in a net present value savings of \$45,575,104. The net loss on refunding was \$2,421,948. The final maturity of Series 2021A bonds is May 15, 2034.

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

On February 1, 2022, MSD issued \$225,000,000 of Climate Bond Certified revenue bonds, Series 2022A. The proceeds of the Series 2022A bonds were used: (i) together with other available funds of the District, to pay at maturity, redeem, and refund program notes issued and outstanding as senior subordinated debt under the resolution and MSD's program note resolution, the proceeds of which were used for the purpose of financing the cost of capital improvements and additions to MSD's sewer and drainage system and refinancing other program notes previously used under the program note resolution and (ii) to pay the costs of issuance of the Series 2022A bonds. The net premium received on the Series 2022A bonds was \$23,821,123. The final maturity of Series 2022A bonds is May 15, 2052.

Fiscal Year 2021 Significant Debt Transactions: On July 30, 2020, MSD issued \$225,000,000 of revenue bonds, Series 2020A. The proceeds of the Series 2020A bonds were used (i) to pay at maturity, redeem, and refund program notes issued and outstanding as senior subordinated debt under the resolution and MSD's program note resolution, the proceeds of which were used for the purpose of financing the cost of capital improvements and additions to MSD's sewer and drainage stem and refinancing other program notes previously used under the program note resolution and (ii) to pay the costs of issuance of the Series 2020A bonds. The final maturity of Series 2020A bonds is May 15, 2050.

On September 22, 2020 MSD sold \$112,065,000 of its taxable sewer and drainage system revenue refunding bonds Series 2020C. The proceeds of the Series 2020C bonds were used: (i) together with other available funds of the District, to advance refund and redeem on May 15, 2023, MSD's sewer and drainage system revenue refunding bonds, Series 2013C maturing on and after May 15, 2024 and (ii) to pay the costs of issuance of the Series 2020C 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 2020C bonds closed on October 15, 2020. The refunding reduces debt service payments over the next twenty four years by \$26,590,053 which is a net present value savings of \$18,675,198. The final maturity of Series 2020C bonds is May 15, 2044.

Proceeds of the Series 2020C bonds were deposited in an escrow account at the Bank of New York Mellon and will be used to redeem the Series 2013C bonds at maturity. As of June 30, 2022, the amount outstanding on the refunded portion of the Series 2013C bond is \$98,875,000 maturing on May 13, 2023. The refunded portion of the Series 2013C bonds is considered legally defeased. As such, the escrow accounts' assets and liabilities for the defeased bonds are not included in MSD's financial statements.

On March 15, 2021 MSD issued under the General Bond Resolution, to the United States Environmental Protection Agency (EPA), its sewer and drainage system revenue bonds, Series 2020B, in the principal amount of \$96,126,000. The Series 2020B bonds evidence a loan from the EPA to MSD under the federal Water Infrastructure Finance and Innovation Act (WIFIA) for the purpose of financing the costs of constructing the Morris Forman Water Quality Treatment Center Biosolids Processing project. MSD's loan agreement with the EPA prohibits MSD from incurring additional debt without the permission of the EPA if a payment default has occurred and is continuing under the WIFIA loan agreement. As of June 30, 2022, no draws on this loan have been made.

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

A comparative schedule of revenue bonds payable at June 30, 2022 and 2021 follows:

<i>(dollars in thousands)</i>					
Revenue Bonds	Original Issue Amount	Interest Rates	Final Payment In	Outstanding as of June 30:	
				2022	2021
2009C Series Revenue Bonds	180,000	5.98%	2040	180,000	180,000
2010A Series Revenue Bonds	330,000	6.25%	2043	330,000	330,000
2011A Series Revenue Bonds	263,360	3.00% - 5.00%	2034	-	243,910
2013A Series Revenue Bonds	115,790	4.00%	2036	115,790	115,790
2013B Series Revenue Bonds	119,515	4.00% - 5.00%	2038	109,280	110,970
2013C Series Revenue Bonds	100,000	3.00% - 5.00%	2023	125	250
2014A Series Revenue Bonds	80,000	4.00% - 5.00%	2045	79,650	79,700
2015A Series Revenue Bonds	175,000	3.125% - 5.00%	2046	171,395	172,175
2015B Series Revenue Bonds	81,750	2.63% - 5.00%	2038	65,975	68,815
2016A Series Revenue Bonds	150,000	3.00% - 5.00%	2047	147,500	148,415
2016B Series Revenue Bonds	28,315	2.00% - 5.00%	2036	19,910	21,960
2016C Series Revenue Bonds	67,685	5.00%	2023	12,995	32,305
2017A Series Revenue Bonds	175,000	3.00% - 5.00%	2048	149,390	155,790
2017B Series Revenue Bonds	35,725	5.00%	2025	31,210	32,055
2018A Series Revenue Bonds	60,380	4.00%	2038	60,380	60,380
2019A Series Revenue Bonds	30,910	5.00%	2023	8,845	17,065
2020A Series Revenue Bonds	225,000	2.00% - 5.00%	2050	224,000	224,750
2020C Series Revenue Bonds	112,065	0.29% - 2.65%	2044	109,605	110,790
2021A Series Revenue Bonds	246,555	2.22%	2034	240,485	-
2022A Series Revenue Bonds	225,000	2.63% - 5.00%	2052	224,750	-
Total revenue bonds				2,281,285	2,105,120
Add: unamortized premium/discount				88,050	74,817
Total bonds payable				2,369,335	2,179,937
Less: current maturities				(52,880)	(47,565)
Total bonds payable, long term portion				<u>\$ 2,316,455</u>	<u>\$ 2,132,372</u>

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A schedule of future revenue bond debt service requirements after June 30, 2022 follows:

<i>(dollars in thousands)</i>	Revenue Bonds		
	Principal	Interest	Total
Year Ending June 30,			
2023	52,880	91,740	144,620
2024	52,375	89,506	141,881
2025	55,670	87,391	143,061
2026	56,180	85,106	141,286
2027	74,465	82,901	157,366
2028-2032	278,240	382,689	660,929
2033-2037	454,560	339,689	794,249
2038-2042	611,780	231,098	842,878
2043-2047	565,440	80,150	645,590
2048-2052	79,695	15,471	95,166
	<u>\$ 2,281,285</u>	<u>\$ 1,485,741</u>	<u>\$ 3,767,026</u>

A comparative summary of current and long-term revenue bond activity follows:

<i>(dollars in thousands)</i>	June 30,	
	2022	2021
Revenue bonds - beginning of year	\$ 2,105,120	\$ 1,911,915
Bonds issued	471,555	337,065
Principal paid on bonds	(51,480)	(44,985)
Bond refunding	(243,910)	(98,875)
Revenue bonds - end of year	<u>\$ 2,281,285</u>	<u>\$ 2,105,120</u>

Commercial Paper and Bank Notes: 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. 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 2018A-1 with a maximum outstanding of \$250,000,000 and Series 2018A-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 30, 2023) 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

⁶ See Note 8 – Bond Anticipation Notes.

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notes, (ii) the proceeds of direct purchase notes or other loans used to refund outstanding commercial paper notes, and (iii) the proceeds of revenue bonds issued to pay outstanding commercial paper notes.

Liquidity support for the Commercial Paper Series 2018A-1 is provided by Bank of America, N.A (BANA) pursuant to a Revolving Credit Agreement dated July 1, 2018 and amended December 22, 2020. BANA has provided a commitment of \$250,000,000 for the payment of the principal of and interest on the Series 2018A-1 notes. MSD 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 limit the aggregate principal amount of commercial paper notes Series 2018A-1 and the BANA direct purchase notes to \$250,000,000. Merrill Lynch, Pierce, Fenner & Smith Inc. is acting as the dealer for Series 2018A-1 notes.

Liquidity support for the Commercial Paper Series 2018A-2 is provided by JPMorgan Chase Bank (JPMCB) pursuant to a revolving credit agreement dated July 1, 2018 and amended December 22, 2020. JPMCB has provided a commitment of \$250,000,000 for the payment of the principal of and interest on the Series 2018A-2 notes. 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 limit the aggregate principal amount of commercial paper notes Series 2018A-2 and the JPMCB direct purchase notes to \$250,000,000. J.P. Morgan Securities 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 29, 2018.

Commercial paper notes of \$50,000,000 were outstanding as of June 30, 2022 in accordance with the respective Revolving Credit Agreements. Interest rates on the notes outstanding ranged from 0.77% to 1.59% and maturities ranged from 14 to 95 days.

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The following tables summarize the outstanding and available balance of the commercial paper program for the years ended June 30, 2022 and 2021:

June 30, 2022 <i>(dollars in thousands)</i>			
Issue Description	Authorized Amount	Amount Outstanding	Unissued Portion
Series 2018A-1	\$ 250,000	\$ 20,000	\$ 230,000
Series 2018A-2	250,000	30,000	220,000
Total	\$ 500,000	\$ 50,000	\$ 450,000

June 30, 2021 <i>(dollars in thousands)</i>			
Issue Description	Authorized Amount	Amount Outstanding	Unissued Portion
Series 2018A-1	\$ 250,000	\$ 75,000	\$ 175,000
Series 2018A-2	250,000	75,000	175,000
Total	\$ 500,000	\$ 150,000	\$ 350,000

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 tables summarize transactions of the commercial paper program for the years ended June 30, 2022 and 2021:

June 30, 2022 <i>(dollars in thousands)</i>					
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	\$ 75,000	\$ 195,000	\$ 250,000	\$ 20,000	\$ -
Series 2018A-2	75,000	180,000	225,000	30,000	-
Total	\$ 150,000	\$ 375,000	\$ 475,000	\$ 50,000	\$ -

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June 30, 2021 (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	\$ 155,000	\$ 205,000	\$ 285,000	\$ 75,000	\$ -
Series 2018A-2	100,000	160,000	185,000	75,000	-
Total	\$ 255,000	\$ 365,000	\$ 470,000	\$ 150,000	\$ -

General Obligation Bonds: MSD merged with the OCEA on June 30, 2020. Oldham County previously issued its County of Oldham general obligation bonds Series 2009, 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 as of June 30, 2022 and June 30, 2021 was \$10,774,113 and \$11,628,805, respectively. 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 any and all remedies available at law or in equity.

A comparative summary of current and long-term general obligation bond activity follows:

(dollars in thousands)					
General Obligation Bonds	Original Issue Amount	Interest Rates	Final Payment In	Outstanding as of June 30:	
				2022	2021
2009 Series general obligation bonds	7,335	2.00% - 4.00%	2023	400	785
2017 Series general obligation bonds	3,750	2.08%	2030	3,364	3,399
2014 Series general obligation bonds	9,790	3.00% - 3.20%	2035	7,010	7,445
Total general obligation bonds				10,774	11,629
Less: current maturities				(880)	(855)
Total bonds payable, long term portion				\$ 9,894	\$ 10,774

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 into 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.

Fiscal Year 2022 Significant SRF Transactions: On July 1, 2021, the KIA approved an increase to loan A17-028 in the amount of \$1,100,000 to fund additional work eliminating a pump station and increasing pipe diameter to facilitate future regionalization opportunities in Oldham County. The new total loan amount is

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\$7,400,000. Interest is payable semiannually at a fixed rate of 1.75% 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. No draws were made in fiscal year 2022 or 2021.

On July 1, 2021, the KIA approved loan A20-040 for the lift station rehabilitation, renovation and replacement project. This project will rehabilitate or replace three lift stations at Club Drive, Cliffwood Drive and Cardinal Harbor in Oldham County. The total amount of the loan shall not exceed \$2,944,345. Interest is payable semiannually at a fixed rate of 1.0% 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. No draws have been made as of June 30, 2022.

MSD entered into an assistance agreement with the KIA on November 30, 2021, as part of its acquisition of BCSD, to assume three existing SRF loans, B10-01 in the amount of \$500,000, B10-04 in the amount of \$500,000, and B15-006 in the amount of \$87,000, extended to the BCSD with total outstanding principal in the amount of \$623,136. These loans financed various sewer system infrastructure projects in the BCSD service area. These loans are for completed projects and principal repayment has begun. Interest will be paid semiannually at fixed rates ranging from 1.75% to 3.00% per annum. The loans will be repaid according to the original amortization schedule with final maturity of the last loan being December 1, 2037.

MSD entered into an assistance agreement with the KIA on June 27, 2022 for SRF loan A21-022 in an amount not to exceed \$8,270,000 to finance the rehabilitation or replacement of several sewer pump stations. Interest will be payable semiannually at a fixed rate of 2.5% per annum commencing after funds are first drawn on the loan. The loan will be repaid over a period not to exceed 20 years from the date the project is placed in operation. No draws have been made as of June 30, 2022.

As of June 30, 2022, MSD has expended \$24,200,000 in eligible project costs for loan number A19-028. \$22,917,697 has been drawn and the remainder will be drawn in fiscal year 2023.

As of June 30, 2022, MSD has expended \$2,695,235 in eligible project costs for loan number A19-015. The project is complete.

Fiscal Year 2021 Significant SRF Transactions: On March 5, 2021, KIA approved loan number A21-022 for \$8,270,000 to rehabilitate or replace several sewer pump stations

As of June 30, 2021, MSD had expended \$24,200,000 in eligible project costs for loan number A19-028. \$17,788,487 has been drawn.

As of June 30, 2021, MSD had expended \$1,690,760 in eligible project costs for loan number A19-015.

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At June 30, 2022 and 2021 MSD had the following SRF direct placement debt outstanding:

June 30, 2022 (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	1,434
A10-04	2,843	2,843	2.00%	2033	1,702
A10-05	1,000	1,000	3.00%	2033	622
A10-06	121	121	2.00%	2033	70
A10-07	2,538	2,538	2.00%	2034	1,581
A11-15	671	671	2.00%	2033	402
A12-29	6,500	6,500	1.75%	2037	4,932
A17-028	7,400	2,013	1.75%	*	2,084
A18-010	1,116	1,116	1.75%	2040	1,045
A19-015	3,870	2,695	2.00%	2042	2,640
A19-028	24,200	22,918	2.00%	**	22,918
B10-01	500	500	3.00%	2030	236
B10-04	500	500	3.00%	2031	262
B15-006	87	87	1.75%	2038	70
Total loans payable					39,998
Less: current maturities					<u>(988)</u>
Total long-term loans payable, long term portion					<u><u>\$39,010</u></u>
* Loan is partially drawn. Final payment will be 20 years following project completion currently scheduled for FY23.					
**Loan is partially drawn. Final payment will be 20 years following project completion currently scheduled for FY23.					

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June 30, 2021 (dollars in thousands)					
Loan Number	Loan Amount	Drawn Amount	Interest Rate	Final Payment In	Outstanding at end of Year
A98-04	6,498	6,498	3.80%	2021	-
A09-41	2,395	2,395	3.00%	2033	1,548
A10-04	2,843	2,843	2.00%	2033	1,839
A10-05	1,000	1,000	3.00%	2033	670
A10-06	121	121	2.00%	2033	76
A10-07	2,538	2,538	2.00%	2034	1,703
A11-15	671	671	2.00%	2033	434
A12-29	6,500	6,500	1.75%	2037	5,228
A17-028	6,300	2,013	1.75%	*	2,084
A18-010	1,116	1,116	1.75%	2040	1,092
A19-028	24,200	17,788	2.00%	**	17,788
Total loans payable					32,462
Less: current maturities					<u>(802)</u>
Total long-term loans payable, long term portion					<u>\$31,660</u>
* Loan is partially drawn. Final payment will be 20 years following project completion currently scheduled for FY23.					
**Loan is partially drawn. Final payment will be 20 years following project completion currently scheduled for FY22.					

KACO Financing Lease: Oldham County Fiscal Court, on behalf of OCEA, previously entered into a lease financing obligation with the Kentucky Association of Counties Leasing Trust in the amount of \$4,000,000 at an interest rate of 4.94% to finance various treatment facilities. MSD entered into a sublease agreement with the County of Oldham Kentucky, as part of its merger with OCEA, on June 30, 2020 to make the remaining lease rental payments when due. In the event of default, the sublessor may by written notice, take possession of the project, sell or lease the project, or exercise any remedy available to it under applicable law. At June 30, 2022 and 2021, the remaining principal balance is \$1,870,000 and 2,030,000, respectively. Final maturity is in 2031.

Line of Credit: MSD secured an uncommitted \$25,000,000 line of credit in October 2015. As of June 30, 2022 and 2021 MSD does not owe anything on its line of credit. There was no activity on the line of credit in fiscal year 2022 or 2021.

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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 subordinate to bonds issued under the General Bond Resolution, at parity with revenue debt issued under the Program Note Resolution, and superior to all other revenue debt of the district. 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 2021 BAN with a new BAN in October 2022 which will extend the debt to October 2023. Total BAN outstanding at June 30, 2022 and June 30, 2021 was \$226,340,000 and \$226,340,000, respectively. MSD’s plan is to continue to reissue the BAN annually and amortize the BAN principal over the same period as Series 1999A bonds.

Fiscal Year 2022 Significant Debt Transactions: On September 30, 2021, MSD sold \$226,340,000 of sewer and drainage system subordinated BAN, Series 2021 with a coupon rate of 3.00% and an effective interest rate of 0.104%. The proceeds of the notes were used to (i) refund the 2020 notes at maturity on October 20, 2021 and (ii) to pay the costs of issuance of the Series 2021 notes. The 2021 notes closed on October 12, 2021 and mature on October 14, 2022.

Fiscal Year 2021 Significant Debt Transactions: On September 22, 2020, MSD sold \$226,340,000 of sewer and drainage system subordinated BAN, Series 2020 with a coupon rate of 5.00% and an effective interest rate of 0.228%. The proceeds of the notes were used to (i) refund the 2019 notes at maturity on October 23, 2020 and (ii) to pay the costs of issuance of the Series 2020 notes. The 2020 notes closed on October 14, 2020 and mature on October 20, 2021.

A summary of changes in the BAN in fiscal years 2022 and 2021 follows:

June 30, 2022 (dollars in thousands)					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
2020 Bond anticipation note	\$ 226,340	\$ -	\$ 226,340	\$ -	\$ -
2021 Bond anticipation note	-	226,340	-	226,340	226,340
Total	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 226,340</u>	<u>\$ 226,340</u>

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June 30, 2021 (dollars in thousands)					
Issue Description	Outstanding at Beginning of Year	Issued	Retired	Outstanding at End of Year	Payable Within One Year
2019 Bond anticipation note	\$ 226,340	\$ -	\$ 226,340	\$ -	\$ -
2020 Bond anticipation note	-	226,340	-	226,340	226,340
Total	\$ 226,340	\$ 226,340	\$ 226,340	\$ 226,340	\$ 226,340

NOTE 9 – DERIVATIVE INSTRUMENTS

At June 30, 2022, MSD had the following two interest rate derivative instruments outstanding:

(dollars in thousands)								
Derivative Instrument	Type	Objective	Counterparty	Original Notional	Notional Amount 6/30/2022	Effective Date	Termination Date	Terms
A	Pay-fixed interest rate swap	Hedge interest rate risk on Series 2020 BAN	Wells Fargo, N.A.	\$ 180,716	\$ 180,716	6/15/2013	5/15/2033	Pay 4.4125% Receive 67% USD- LIBOR -BBA
B	Pay-fixed interest rate swap	Hedge interest rate risk on Series 2020 BAN	Bank of America, N.A.	56,433	45,179	11/16/2009	5/15/2033	Pay 4.4125% Receive 67% USD- LIBOR -BBA
				<u>237,149</u>	<u>225,895</u>			

MSD originally entered into 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 BAN⁷. The hedgeable item is interest rate risk associated with the expected future issuance of fixed-rate BAN. The BAN are expected to be reissued every year. The swaps are structured so that the notional amounts of the swaps decrease over time corresponding with the planned 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, 2022, 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 Statement 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 Statement of Net Position. All changes in fair value of the derivatives are recorded as a separate component of non-operating revenue (expense).

⁷ See Note 8 – Bond Anticipation Notes

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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). A comparative summary of the change in fair value of the swaps for the years ended June 30, 2022 and 2021 follows:

<i>(dollars in thousands)</i>	June 30,	
	2022	2021
Fair value - beginning of year	\$ (72,384)	\$ (93,455)
Change in fair value	<u>31,151</u>	<u>21,071</u>
Fair value - end of year	<u>\$ (41,233)</u>	<u>\$ (72,384)</u>

Fair values at June 30, 2022 for the non-credit adjusted, at-market portion of the derivatives follows:

<i>(dollars in thousands)</i>	June 30, 2022	
	Clean	Accrued
Derivatives (at-market)		
1999-1 - \$180.7M 67% LIBOR fixed payer	\$ (8,980)	\$ (18)
1999-2 - \$56.4M 67% LIBOR fixed payer	<u>(2,244)</u>	<u>(5)</u>
Total	<u>\$ (11,224)</u>	<u>\$ (23)</u>

Classification at June 30, 2022 of the at-market portion and investment portion of the derivatives follows:

<i>(dollars in thousands)</i>	Changes in Fair Value		Fair Value as of June 30, 2022		
	Classification	Amount	Classification	Amount	Notional
<u>Governmental Activities</u>					
Cash flow hedges:					
Pay-fixed interest rate swaps	Deferred outflows	\$ -	Other liabilities	\$ (40,914)	\$ 225,895
			Accrued interest	<u>(319)</u>	
				<u>\$ (41,233)</u>	
Investment derivatives:					
Pay-fixed interest rate swaps	Non-operating expenses	<u>(40,914)</u>			
		<u>\$ (40,914)</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

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(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* - MSD has implemented steps to safeguard it against the risks associated with the aforementioned 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 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 credit ratings as of June 30th, 2022 for the swap counterparties are as follows:

	Credit Ratings	
	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 all of 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 \$11,224,465, \$319,756 and \$29,689,130, respectively, at June 30, 2022. The aggregate fair value is negative \$41,233,351 (gross of implied note outstanding balance as of June 30, 2022). 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 aforementioned 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, 2022 is approximately \$41,233,351. 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.

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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 the nature of the basis risk associated with the derivative instrument may change. As of June 30, 2022, 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 – 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 2022 and fiscal year 2021 were \$9,501,841 and \$9,792,937, respectively.

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 – MSD is exposed to interest rate risk on its interest rate derivative instruments. On its pay-fixed, receive-variable interest rate swaps, there may be either a net loss or net benefit to MSD depending upon decrease or increases in the USD-LIBOR-BBA yield curve.

Swap Terminations: MSD entered into swaps and other derivative contracts to lock in long term rates in advance of issuing long term debt to create and manage variable rate exposure in its debt portfolio and to take advantage of market opportunities to hedge embedded interest rate risk and tax regulation risk that exists on its Statement of Net Position.

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 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 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.

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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 of 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 the total assets of LAGIT and/or claims of other Members under the excess insurance policy.

No claims were paid in fiscal year 2022 that exceeded the \$300,000 deductible with LAGIT.

For fiscal year 2021, MSD exceeded its \$300,000 deductible on two LAGIT claims. In *Michael Drew v. MSD, et al*, MSD settled the plaintiff's case for \$100,000 at mediation in June 2020. MSD's fees and expenses to defense counsel totaled \$282,396. In total LAGIT paid \$82,396 towards MSD's defense fees and costs which were paid in fiscal year 21. MSD also resolved the matter of *Brenda Stotts-Young as Administrator of the Estate of Deidre Mengedoht, et al., v. Roger Burdette and MSD* in fiscal year 21. Specifically, MSD paid the Estate of Det. Mengedoht, \$10,000,000; Jason Mengedoht, as father, guardian and next of kin of P.M., a minor, \$3,650,000; and the "Brady" plaintiffs, the four occupants of the vehicle driven by Quentin Brady, a global \$250,000. Of this total settlement, LAGIT contributed the first \$7,000,000. MSD's excess liability policies that were in effect at the time of the accident contributed the remainder of the settlement with Nationwide making payment of \$5,000,000 and Gemini Berkley making payment of approximately \$1,900,000.

For fiscal year 2020, LAGIT provided, after a \$300,000 deductible, various liability coverages up to \$5,000,000 per occurrence. Excess insurance may provide an additional \$2,000,000 of coverage, above the LAGIT \$5,000,000, to MSD. The amount of coverage available to MSD could be limited by the total assets of LAGIT and/or claims of other Members under the excess insurance policy. For fiscal year 2021, LAGIT did not make any claim payments on behalf of MSD.

MSD maintained additional excess liability coverage for fiscal year 2022. 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 2022.

MSD maintained additional excess liability coverage for fiscal year 2021. Allied World National Assurance Company (A) provided \$10,000,000 of excess liability coverage beyond the \$7,000,000 provided through LAGIT. Gemini Insurance Company (A+) provided another \$10,000,000 of excess liability coverage beyond \$17,000,000. In total, MSD maintained liability coverage of \$27,000,000. No claims were made on either policy in fiscal year 2021.

MSD maintained additional excess liability coverage for fiscal year 2020. Scottsdale Insurance Company (A+) provided \$5,000,000 of excess liability coverage beyond the \$7,000,000 provided through LAGIT. Gemini Insurance Company (A+) provided another \$15,000,000 of excess liability coverage beyond \$12,000,000. In total, MSD maintained liability coverage of \$27,000,000.

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. A roll forward of worker's compensation claims follows:

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<i>(dollars in thousands)</i>	June 30,		
	2022	2021	2020
Liability - beginning of year	\$ 2,626	\$ 2,280	\$ 2,326
Claims and changes in estimates	353	1,143	775
Payments	(1,182)	(797)	(821)
Liability - end of year	<u>\$ 1,797</u>	<u>\$ 2,626</u>	<u>\$ 2,280</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 in excess of \$1,100,000.

No claims were made under the LAGGIT policy in fiscal year 2022, 2021, or 2020.

MSD’s facilities were affected by Ohio River flooding in February of 2018 and MSD made a claim on the LAGGIT policy. Payments on this claim totaled \$3,757,562. The final payment of \$637,408 on this claim was received in fiscal year 2020.

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 and maintains no custodial role for investments or investment transactions. 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 are 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.

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, 2022 and 2021 was \$221,885 and \$353,974, respectively.

Consent Decree: On August 12, 2005, MSD agreed to enter into 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

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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 into 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 timing for completing remaining LTCP and SSDP projects required by the amended consent decree in order 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, have 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.

Since the start of the consent decree, 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, 2022, capital expenditures related to the consent decree totaled approximately \$1.1 billion. MSD estimates that capital expenditures associated with the requirements of the consent decree, including the pending requirements of the second amended consent decree, could range from \$1.9 billion to \$2.0 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 material adverse effect on the financial statements of MSD. All material claims and litigation settlements that are both probable and reasonably measureable 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, 2022 and 2021 were \$172,476,352 and \$120,066,183, respectively. These commitments will be financed primarily with unspent 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 billing services through December 31, 2027. The projected cost of the contract through 2027 is \$40,783,649.

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NOTE 13 - SUBSEQUENT EVENTS

Rate Increase: On August 1, 2022, MSD's rates for wastewater and drainage service charges increased by 5.0% for Jefferson County customers. Wastewater volume rates decreased by 34.4% for Oldham County customers.

Series 2022 BAN: On September 14, 2022, MSD sold \$226,340,000 of sewer and drainage system subordinated BAN, Series 2022 with an average coupon rate of 4% and a true interest cost 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 Series 2022 notes closed on October 5, 2022 and mature on October 6, 2023.

Commercial Paper Program: Commercial paper notes of \$90,000,000 are outstanding as of October 24, 2022 in accordance with the respective Revolving Credit Agreements. Interest rates on the notes outstanding range from 1.87% to 3.05% and maturities range from 10 to 86 days. MSD intends to reissue maturing commercial paper in accordance with the refinancing terms of the Revolving Credit Agreements and periodically refund such maturities with proceeds from the issuance of long-term revenue bonds.

**NOTE 14 - DEFINED BENEFIT PENSION AND OTHER POSTEMPLOYMENT BENEFITS PLAN
- COST SHARING - CERS**

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.

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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.

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.

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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.

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 on the basis of 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 on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the KPPA Board.

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For the fiscal years ended June 30, 2022 and 2021, participating employers contributed 26.95% (21.17% allocated to pension and 5.78% allocated to OPEB) and 24.06% (19.3% allocated to pension and 4.76% allocated to OPEB), respectively, 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 years ended June 30, 2022 and 2021. Total current year contributions recognized by the Plan were \$14,015,093 (\$11,009,259 related to pension and \$3,005,834 related to OPEB) and \$12,279,191 (\$9,849,892 related to pension and \$2,429,300 related to OPEB) for the years ended June 30, 2022 and 2021, respectively. The OPEB contribution amounts do not include the implicit subsidies reported in the amount of \$1,230,443 and \$1,077,498 for the years ended June 30, 2022 and 2021 respectively.

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.

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 for June 30, 2022 Financial Statements:

Total Pension Liability: The total pension liability (TPL) was determined by an actuarial valuation as of June 30, 2021. An expected TPL was determined at June 30, 2021 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%, varies by service
Investment rate of return	6.25%, net of pension plan investment expense, including inflation

The mortality table used for active members was a Pub-2010 General Mortality table, for the Non-Hazardous System, and the Pub-2010 Public Safety Mortality table for the Hazardous System, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The mortality table used for healthy retired members is a system-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019. The mortality table used for the disabled members was 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.

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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 2008 through 2013 is outlined in a report dated April 30, 2014. 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 does not use a municipal bond rate.
- (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
U.S. equity	21.75%	5.70%
Non-US equity	21.75%	6.35%
Private equity	10.00%	9.70%
Specialty credit/high yield	15.00%	2.80%
Core bonds	10.00%	0.00%
Cash	1.50%	(0.60%)
Real estate	10.00%	5.40%
Opportunistic	0.00%	0.00%
Real return	10.00%	4.55%
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 presents MSD's allocated portion of the NPL of the System, calculated using the current 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:

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<i>(dollars in thousands)</i>	1% Decrease (5.25%)	Current Discount Rate (6.25%)	1% Increase (7.25%)
MSD's net pension liability	\$ 159,760	\$ 124,564	\$ 95,441

Employer's Portion of the Collective NPL: MSD's proportionate share of the NPL, as indicated in the prior table, is \$124,564,401, or approximately 1.95%. This is an increase of 0.14% from fiscal year 2021. The NPL was distributed based on 2021 actual employer contributions to the plan.

Measurement Date: The total pension liability, NPL 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, 2021 using generally accepted actuarial principles.

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 \$7,070,825 related to the CERS for the year ending June 30, 2022.

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	\$ 1,431	\$ 1,209
Change of assumptions	1,672	-
Changes in proportion and differences between employer contributions and proportionate shares of contributions	-	16,602
Differences between expected and actual investment earning on plan investments	7,724	-
	<u>10,827</u>	<u>17,811</u>
Contributions subsequent to the measurement date	11,009	-
Total	<u>\$ 21,836</u>	<u>\$ 17,811</u>

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$11,009,259 will be recognized as a reduction of NPL in the year ending June 30, 2023. The remainder of the deferred outflows and deferred inflows of resources are amortized over three to five years with remaining amortization as follows:

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<i>(dollars in thousands)</i>	
Year Ending June 30:	
2022	\$ 2,405
2023	(683)
2024	(3,508)
2025	(5,199)
	<u>\$ (6,985)</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.

OPEB Information for June 30, 2022 Financial Statements:

Total OPEB Liability: The total other post-employment benefits plan (OPEB) was determined by an actuarial valuation as of June 30, 2021. An expected total OPEB liability was determined at June 30, 2021 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 6.30 % at January 1, 2023 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 13 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.

Mortality:

Pre-retirement	PUB-2010 General Mortality table, for the Non-Hazardous Systems, and the PUB-2010 Public Safety Mortality table for the Hazardous Systems, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010
Post-retirement (non-disabled)	System-specific mortality table based on mortality experience from 2013-2018 projected with the ultimate rates form MP-2104 mortality improvement scale using a base year of 2019
Post-retirement (disabled)	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

Discount rate assumptions:

- (a) Discount Rate: The discount rate used to measure the total OPEB liability was 5.20%, which decreased from the prior year rate of 5.34%.

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- (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 over the remaining 24-year 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.
- (d) **Municipal Bond Rate:** The discount rate determination used a municipal bond rate of 1.92% as reported in Fidelity Index's "20 – Year Municipal GO AA Index" as of June 30, 2021.
- (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
U.S. equity	21.75%	5.70%
Non-US equity	21.75%	6.35%
Private equity	10.00%	9.70%
Specialty credit/high yield	15.00%	2.80%
Core bonds	10.00%	0.00%
Cash	1.50%	(0.60%)
Real estate	10.00%	5.40%
Opportunistic	0.00%	0.00%
Real return	10.00%	4.55%
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 current discount rate and changes in the current healthcare cost trend rate. The following presents MSD's allocated portion of the net OPEB liability of the System, calculated using the discount rate of 5.20%, 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 (4.20%) or 1-percentage-point higher (6.20%) than the current rate for Nonhazardous:

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<i>(dollars in thousands)</i>	1% Decrease (4.20%)	Current Discount Rate (5.20%)	1% Increase (6.20%)
MSD's net OPEB liability	\$ 51,343	\$ 37,395	\$ 25,948

The following presents MSD's allocated portion of the net OPEB liability of the System, calculated using the current healthcare cost trend rate, as well as what 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	\$ 26,920	\$ 37,935	\$ 50,038

Employer's Portion of the Collective OPEB Liability: MSD's proportionate share of the net OPEB liability, as indicated in the prior table, is \$37,394,836, or approximately 1.95%. This is an increase of 0.14% from fiscal year 2021. The net OPEB liability was distributed based on 2021 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, 2021 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 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 increase in the medical costs.

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 \$1,635,851 related to the CERS for the year ending June 30, 2022.

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 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:

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<i>(dollars in thousands)</i>	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	\$ 5,880	\$ 11,165
Change of assumptions	9,914	35
Changes in proportion and differences between employer contributions and proportionate shares of contributions	-	5,850
Differences between expected and actual investment earning on plan investments	3,417	18
	<u>19,211</u>	<u>17,068</u>
Contributions subsequent to the measurement date	4,236	-
	<u>4,236</u>	<u>-</u>
Total	<u>\$ 23,447</u>	<u>\$ 17,068</u>

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$4,236,277, which include the implicit subsidy reported of \$1,230,443, will be recognized as a reduction of net OPEB liability in the year ending June 30, 2023. The remainder of the deferred outflows and deferred inflows of resources are amortized over three to five years with remaining amortization as follows:

<i>(dollars in thousands)</i>	
Year Ending June 30:	
2022	\$ 1,970
2023	1,080
2024	774
2025	<u>(1,681)</u>
	<u>\$ 2,143</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.

Pension Plan Information for June 30, 2021 Financial Statements:

Total Pension Liability: The total pension liability (TPL) was determined by an actuarial valuation as of June 30, 2020. An expected TPL was determined at June 30, 2020 using standard roll-forward techniques. The following actuarial assumptions were applied to all period included in the measurement:

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

The mortality table used for active members was a Pub-2010 General Mortality table, for the Non-Hazardous System, and the Pub-2010 Public Safety Mortality table for the Hazardous System, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010. The mortality table used for healthy retired members is a system-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2020. The mortality table used for the disabled members was 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.

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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 assumed the local employers and plan members would contribute the statutorily determined contribution rate of projected compensation over the remaining 24-year amortization period of the unfunded actuarial accrued liability. The actuarial determined contribution rate is adjusted to reflect the phase-in of anticipated gains on the actuarial value of assets over the first four years of the projection period.
- (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 2008 through 2013 is outlined in a report dated April 30, 2014. 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 does not use a municipal bond rate.
- (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 total pension liability.
- (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
U.S. equity	18.75%	4.50%
Non-US equity	18.75%	5.25%
Private equity	10.00%	6.65%
Specialty credit/high yield	15.00%	3.90%
Core bonds	13.50%	-0.25%
Cash	1.00%	-0.75%
Real estate	5.00%	5.30%
Opportunistic	3.00%	2.25%
Real return	15.00%	3.95%
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 NPL to changes in the current discount rate. The following 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:

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<i>(dollars in thousands)</i>	1% Decrease (5.25%)	Current Discount Rate (6.25%)	1% Increase (7.25%)
MSD's net pension liability	\$ 171,912	\$ 139,401	\$ 112,481

Employer's Portion of the Collective NPL: MSD's proportionate share of the NPL, as indicated in the prior table, is \$139,400,975, or approximately 1.82%. This is an increase of 0.02% from fiscal year 2020. The NPL was distributed based on 2020 actual employer contributions to the plan.

Measurement Date: The total pension liability, NPL and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2019. The total pension liability was rolled forward from the valuation date to the plan's fiscal year ending June 30, 2020 using generally accepted actuarial principles.

Changes in Assumptions and Benefit Terms: 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 duly-related injury upon remarriage of the spouse was reduced.
- Benefits were increased for a small number of beneficiaries.

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 \$21,408,455 related to the CERS for the year ending June 30, 2021.

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	\$ 3,477	\$ -
Change of assumptions	5,443	-
Changes in proportion and differences between employer contributions and proportionate shares of contributions	3,488	-
Differences between expected and actual investment earning on plan investments	3,674	-
	<u>16,082</u>	<u>-</u>
Contributions subsequent to the measurement date	9,850	-
Total	<u>\$ 25,932</u>	<u>\$ -</u>

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Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$9,849,892 will be recognized as a reduction of NPL in the year ending June 30, 2022. The remainder of the deferred outflows and deferred inflows of resources are amortized over three to five years with remaining amortization as follows:

<i>(dollars in thousands)</i>	
Year Ending June 30:	
2021	\$ 8,261
2022	4,678
2023	1,741
2024	1,401
	<u>\$ 16,081</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.

OPEB Information for June 30, 2021 Financial Statements:

Total OPEB Liability: The total other post-employment benefits plan (OPEB) was determined by an actuarial valuation as of June 30, 2020. An expected total OPEB liability was determined at June 30, 2020 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 7.00 % at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 12 years.
Post-65	Initial trend starting at 5.00% at January 1, 2020 and gradually decreasing to an ultimate trend rate of 4.05% over a period of 10 years.

Mortality:

Pre-retirement	PUB-2010 General Mortality table, for the Non-Hazardous Systems, and the PUB-2010 Public Safety Mortality table for the Hazardous Systems, projected with the ultimate rates from the MP-2014 mortality improvement scale using a base year of 2010
Post-retirement (non-disabled)	System-specific mortality table based on mortality experience from 2013-2018 projected with the ultimate rates from MP-2104 mortality improvement scale using a base year of 2019
Post-retirement (disabled)	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

Discount rate assumptions:

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- (a) **Discount Rate:** The discount rate used to measure the total OPEB liability was 5.34%, which decreased from the prior year rate of 5.68%.
- (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 over the remaining 23-year 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.
- (d) **Municipal Bond Rate:** The discount rate determination used a municipal bond rate of 2.45% as reported in Fidelity Index's "20 – Year Municipal GO AA Index" as of June 30, 2020.
- (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
U.S. equity	18.75%	4.50%
Non-US equity	18.75%	5.25%
Private equity	10.00%	6.65%
Specialty credit/high yield	15.00%	3.90%
Core bonds	13.50%	-0.25%
Cash	1.00%	-0.75%
Real estate	5.00%	5.30%
Opportunistic	3.00%	2.25%
Real return	15.00%	3.95%
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.

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- (g) Sensitivity Analysis: This paragraph requires disclosure of the sensitivity of the net OPEB liability to changes in the current discount rate and changes in the current healthcare cost trend rate. The following presents MSD's allocated portion of the net OPEB liability of the System, calculated using the current discount rate of 5.34%, 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 (4.34%) or 1-percentage-point higher (6.34%) than the current rate for Nonhazardous:

<i>(dollars in thousands)</i>	1% Decrease (4.34%)	Current Discount Rate (5.34%)	1% Increase (6.34%)
MSD's net OPEB liability	\$ 56,404	\$ 43,904	\$ 33,638

The following presents the MSD's allocated portion of the net OPEB liability of the System, calculated using the current healthcare cost trend rate, 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	\$ 33,993	\$ 43,904	\$ 55,932

Employer's Portion of the Collective OPEB Liability: MSD's proportionate share of the net OPEB liability, as indicated in the prior table, is \$43,904,049 or approximately 1.82%, or an increase of 0.02% from fiscal year 2020. The net OPEB liability was distributed based on 2020 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, 2019. The total OPEB liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2020 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 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 increase 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.

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 \$5,946,362 related to the CERS for the year ending June 30, 2021.

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 deferred

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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	\$ 7,335	\$ 7,342
Change of assumptions	7,637	46
Changes in proportion and differences between employer contributions and proportionate shares of contributions	1,459	-
Differences between expected and actual investment earning on plan investments	2,024	32
	<u>18,455</u>	<u>7,420</u>
Contributions subsequent to the measurement date	3,507	-
	<u>21,962</u>	<u>7,420</u>
Total	<u>\$ 21,962</u>	<u>\$ 7,420</u>

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date of \$3,506,798 which include the implicit subsidy reported of \$1,077,498, will be recognized as a reduction of net OPEB liability in the year ending June 30, 2022. The remainder of the deferred outflows and deferred inflows of resources are amortized over three to five years with remaining amortization as follows:

<i>(dollars in thousands)</i>	
Year Ending June 30:	
2021	\$ 2,935
2022	3,367
2023	2,539
2024	2,240
2025	(45)
	<u>\$ 11,036</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)								
	2022	2021	2020	2019	2018	2017	2016	2015
MSD's proportion of the net pension liability	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	\$124,564	\$139,401	\$126,866	\$104,511	\$93,517	\$74,132	\$68,653	\$51,988
MSD's covered payroll	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	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	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.
- 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

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
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.

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)								
	2022	2021	2020	2019	2018	2017	2016	2015
Statutorily required contribution for pension	\$ 11,009	\$ 9,850	\$ 9,133	\$ 7,534	\$ 6,196	\$ 5,279	\$ 4,767	\$ 4,576
Contribution in relation to the statutorily required contribution	(11,009)	(9,850)	(9,133)	(7,534)	(6,196)	(5,279)	(4,767)	(4,576)
Annual contribution deficiency (excess)	<u>\$ -</u>							
MSD contributions as a percentage of statutorily required contribution for pension	100%	100%	100%	100%	100%	100%	100%	100%
MSD covered payroll	\$ 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	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)					
	2022	2021	2020	2019	2018
MSD's proportion of the net OPEB liability	1.95%	1.82%	1.80%	1.72%	1.60%
MSD's proportionate share of the net OPEB liability	\$37,395	\$43,904	\$30,343	\$30,470	\$32,119
MSD's covered payroll	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	70.79%	88.15%	62.70%	66.44%	74.55%
Plan fiduciary net position as a percentage of the total OPEB liability	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:

- 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.

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, (dollars in thousands)					
	2022	2021	2020	2019	2018
Statutorily required contribution	\$ 3,006	\$ 2,429	\$ 2,252	\$ 2,443	\$ 2,011
Contributions in relation to the statutorily required contribution	<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>				
MSD contributions as a percentage of statutorily required contribution for OPEB	100%	100%	100%	100%	100%
MSD covered payroll	\$54,678	\$52,828	\$49,808	\$48,391	\$45,859
Contributions as a percentage of MSD's covered payroll	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)



Floyds Fork, which runs through The Parklands of Floyds Fork in eastern Jefferson County, is the receiving stream for MSD's award-winning Floyds Fork Water Quality Treatment Center.

STATISTICAL SECTION

This section of the Louisville & Jefferson County Metropolitan Sewer District's (MSD) 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..... 73

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, changes in net liabilities, an analysis of revenues and expenses and a comparative statement of cash flows.

Revenue Capacity 77

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

Debt Capacity..... 80

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

Operating Information 82

These schedules contain information to help readers understand MSD's operations. The information presented includes a schedule of assets, service and administrative costs, 2022 budget to actual results, miscellaneous operating indicators and MSD's current wastewater treatment plant capacity.

Demographic and Economic Information 87

These schedules contain Louisville area employers of 1,000 or more and 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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Current assets:										
Unrestricted cash and cash equivalents	\$ 48,875	\$ 79,281	\$ 99,973	\$ 43,728	\$ 50,276	\$ 42,449	\$ 69,481	\$ 63,013	\$ 84,780	\$ 66,376
Unrestricted investments	69,754	28,124	100	36,744	25,080	10,095	100	100	100	100
Restricted cash and cash equivalents	20,788	21,181	17,776	22,348	29,987	19,454	5,379	16,342	39,507	62,249
Restricted investments	12,947	-	-	30,172	-	22,675	14,999	-	-	-
Accounts receivable	26,242	24,664	27,227	27,915	26,332	23,480	26,696	23,787	21,809	18,465
Inventories	5,262	5,086	4,977	4,623	4,407	4,184	4,210	3,981	3,808	3,579
Prepaid expenses and other current assets	3,290	6,386	4,147	3,918	3,845	2,877	3,184	2,880	2,636	2,110
Total current assets	187,158	164,722	154,200	169,448	139,927	125,214	124,049	110,103	152,640	152,879
Noncurrent assets:										
Unrestricted noncurrent assets	7,138	10,478	12,776	13,730	1,399	37,642	29,235	18,615	-	-
Restricted noncurrent assets	80,331	82,930	79,555	76,678	151,039	86,550	120,212	120,165	121,216	90,574
Plant, lines and other facilities:										
Utility plant in service	4,269,739	3,849,047	3,697,720	3,580,741	3,047,458	2,943,414	2,812,333	2,455,476	2,451,961	2,419,751
Less: accumulated depreciation	(1,396,934)	(1,305,547)	(1,221,668)	(1,208,329)	(1,109,966)	(1,046,707)	(979,405)	(925,901)	(871,412)	(816,291)
Net capital assets in service	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	1,603,460
Construction in progress	420,200	625,113	538,013	460,501	711,655	581,222	487,674	623,181	463,167	371,816
Net capital assets	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	1,975,276
Other noncurrent assets	302,370	306,176	305,715	303,660	309,056	296,876	281,975	270,517	260,287	251,051
Total noncurrent assets	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	2,316,901
Total assets	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	2,469,780
Deferred outflow of resources	72,110	80,984	79,767	52,018	54,267	35,911	23,708	20,407	22,862	13,511
Total assets and deferred outflows	\$ 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	\$ 2,483,291

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Liabilities:										
Current liabilities (payable from current assets):										
Accounts payable and accrued expenses	\$ 20,395	\$ 29,099	\$ 24,176	\$ 18,168	\$ 16,342	\$ 16,550	\$ 17,420	\$ 14,936	\$ 13,653	\$ 12,693
Total current liabilities (payable from current assets)	20,395	29,099	24,176	18,168	16,342	16,550	17,420	14,936	13,653	12,693
Current liabilities (payable from restricted assets):										
Accounts payable and accrued expenses	30,464	46,237	39,860	31,945	47,472	30,764	33,271	30,607	14,712	16,168
Accrued interest	16,622	20,093	17,315	17,819	18,455	15,935	17,533	13,036	12,834	12,458
Revenue bonds payable	52,880	47,565	43,460	42,200	40,190	33,655	31,825	29,415	28,525	27,035
Bank notes	-	-	100	100	-	-	-	-	-	-
Other subordinate debt	2,038	1,817	2,167	545	105	-	-	-	-	-
Refundable deposits	1,920	2,757	2,954	2,928	2,861	2,300	2,557	1,639	1,568	1,137
Total current liabilities (payable from restricted assets)	103,924	118,469	105,856	95,537	109,083	82,654	85,186	74,697	57,639	56,798
Noncurrent liabilities:										
Bonds payable	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	1,478,225
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 notes	50,000	150,000	255,000	120,000	-	-	-	-	-	-
Other subordinated debt	50,604	44,304	28,284	2,113	1,766	1,973	2,072	2,168	2,261	2,351
Unamortized debt premium/discount	88,050	74,817	74,458	80,421	90,628	74,328	67,462	60,797	60,263	56,764
Investment derivative asset liability	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	161,959	183,305	157,209	134,981	125,636	74,132	68,653	51,988	58,825	-
Other long-term liabilities	-	-	-	-	-	-	690	944	761	973
Total long-term debt	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	1,764,653
Total liabilities	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	1,834,144
Deferred inflow of resources	48,489	10,277	16,520	12,955	10,383	84,052	108,633	92,233	82,293	82,233
Net position:										
Net investment in capital assets	850,316	762,848	684,412	672,304	528,377	562,784	501,675	506,187	418,784	365,225
Restricted	84,607	84,429	80,421	81,207	156,425	150,386	84,639	80,424	148,451	136,939
Unrestricted	(11,891)	488	31,897	17,041	23,872	(44,682)	14,266	(1,541)	(18,249)	64,750
Total net position	923,032	847,765	796,730	770,552	708,674	668,488	600,580	585,070	548,986	566,914
Total liabilities, deferred inflows and net position	\$ 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	\$ 2,483,291

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Operating revenue:										
Wastewater service charges	\$ 270,066	\$ 245,802	\$ 237,807	\$ 219,467	\$ 210,636	\$ 194,965	\$ 183,592	\$ 173,895	\$ 165,599	\$ 159,791
Drainage service charges	86,804	79,915	75,052	69,706	63,868	58,978	54,888	51,567	48,457	45,431
Other operating income	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576	4,823
Total operating revenue	365,367	329,418	319,057	294,368	279,149	259,634	243,290	229,869	216,632	210,045
Operating expenses:										
Service and administrative costs	169,869	170,073	167,771	154,325	142,711	122,098	121,674	106,174	108,814	108,041
Capitalization/recovery of cost	(42,166)	(41,785)	(39,643)	(38,383)	(38,147)	(31,949)	(30,516)	(30,056)	(33,568)	(32,200)
Capitalized overhead (over) under applied	-	-	-	-	88	-	-	-	-	(910)
Depreciation and amortization	103,964	97,874	98,872	87,882	77,954	77,156	62,820	63,321	63,516	60,335
Total operating expenses	231,667	226,162	227,000	203,824	182,606	167,305	153,978	139,439	138,762	135,266
Income (loss) from operations	133,700	103,256	92,057	90,544	96,543	92,329	89,312	90,430	77,870	74,779
Non-operating revenue (expense):										
Gain/loss disposal of assets	124	(21)	(15,008)	15	-	-	-	-	-	-
Investment income	(1,467)	1,777	5,275	8,338	6,280	4,047	7,559	7,527	10,234	3,695
Build America bond refund	10,344	10,398	10,325	10,339	10,249	10,226	10,332	10,096	10,096	10,986
Interest expense - bonds	(86,792)	(93,067)	(92,274)	(94,831)	(95,041)	(90,117)	(86,818)	(83,404)	(80,613)	(92,616)
Interest expense - swaps	(9,502)	(9,793)	(8,027)	(6,468)	(7,724)	(8,926)	(9,514)	(9,737)	(9,733)	(10,200)
Interest expense - other	(12,873)	(13,104)	(13,129)	(13,497)	(9,873)	(9,317)	(8,601)	(4,611)	(4,629)	(4,829)
Amortization of debt discount/premium	17,172	17,429	12,688	14,344	15,198	13,701	12,052	7,887	7,296	6,735
Amortization of loss on refunding	(3,768)	(3,107)	(2,404)	(2,817)	(3,147)	(3,070)	(1,949)	(1,980)	(2,552)	-
Capitalized interest	7,464	12,049	13,043	18,582	21,859	20,074	21,051	20,511	19,103	26,358
Change in fair values - swaps	11,293	8,796	812	(13,597)	16,317	26,072	(22,951)	(5,240)	(1,222)	36,286
Total non-operating revenue (expenses), net	(68,005)	(68,643)	(88,699)	(79,592)	(45,882)	(37,310)	(78,839)	(58,951)	(52,020)	(23,585)
Net income / (loss) before contributions	65,695	34,613	3,358	10,952	50,661	55,019	10,473	31,479	25,850	51,194
Contributions										
Property owner assessments	-	-	-	-	-	2,376	-	-	-	-
All other	9,572	16,422	9,085	50,926	12,726	10,513	5,037	4,605	8,103	7,134
Increase (decrease) in net position	75,267	51,035	12,443	61,878	63,387	67,908	15,510	36,084	33,953	58,328
Net position, beginning of year	847,765	796,730	770,552	708,674	668,488	600,580	585,070	548,986	566,914	508,586
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	847,765	796,730	784,287	708,674	645,287	600,580	585,070	548,986	515,033	508,586
Net position, end of year	\$ 923,032	\$ 847,765	\$ 796,730	\$ 770,552	\$ 708,674	\$ 668,488	\$ 600,580	\$ 585,070	\$ 548,986	\$ 566,914

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Cash flows from operating activities:										
Cash received from customers	\$ 362,992	\$ 331,767	\$ 319,701	\$ 292,791	\$ 276,711	\$ 262,055	\$ 240,202	\$ 227,976	\$ 213,215	\$ 207,905
Cash paid to suppliers and employees	(124,653)	(107,122)	(105,649)	(103,173)	(95,150)	(88,300)	(85,202)	(75,258)	(73,175)	(79,926)
Net cash provided by operating activities	238,339	224,645	214,052	189,618	181,561	173,755	155,000	152,718	140,040	127,979
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	115,790
Proceeds from issuance of bond anticipation note	232,924	237,295	230,079	230,334	226,340	226,340	226,340	226,340	226,340	228,735
Proceeds from issuance of commercial paper	375,000	365,000	770,000	319,112	-	-	-	-	-	-
Proceeds from issuance of notes	-	-	90,200	100	-	-	-	-	-	-
Proceeds from issuance of other subordinate debt	7,824	17,788	-	-	-	-	-	-	-	-
Premium from sale of bonds	-	-	-	-	21,894	15,715	16,887	-	-	-
Payments for retirement of revenue bonds	(55,497)	(48,033)	(43,120)	(40,190)	-	-	-	-	-	-
Payments for retirement of bond anticipation note	(226,340)	(226,340)	(226,340)	(226,340)	-	-	-	-	-	-
Payments for retirement of commercial paper	(475,000)	(470,000)	(635,000)	(200,000)	-	-	-	-	-	-
Payments for retirement of notes	-	(100)	(90,200)	-	-	-	-	-	-	-
Payments for retirement of other subordinate debt	(1,926)	(2,119)	(2,120)	(317)	-	-	-	-	-	-
Principal paid on debt	-	-	-	-	(263,395)	(271,064)	(255,291)	(271,853)	(253,465)	(399,424)
Payments for interest expense	(103,136)	(103,393)	(106,312)	(108,511)	(102,394)	(103,919)	(92,246)	-	-	-
Payments for interest on swaps	(9,502)	(9,793)	(7,622)	(6,468)	(7,724)	(8,926)	(9,514)	(9,737)	(9,733)	(10,200)
Build America bond refund	10,344	10,398	10,325	10,339	10,248	10,226	10,332	10,096	10,096	10,986
Proceeds from capital grants	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	(224,660)	(219,909)	(224,418)	(233,360)	(216,503)	(220,892)	(213,996)	-	-	-
Proceeds from assessments	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	7,134
Assessments receivable	-	-	-	-	-	-	-	2,050	1,695	1,833
Interest income - assessments	-	-	-	-	-	-	-	340	687	731
Interest paid on revenue bonds	-	-	-	-	-	-	-	(87,813)	(91,719)	(98,944)
Acquisition and construction of capital assets	-	-	-	-	-	-	-	(147,842)	(121,237)	(113,144)
Acquisition of non-operating property	-	-	-	-	-	-	-	(247)	(211)	(223)
Net cash provided (used) by capital and related financing activities	(215,036)	(211,694)	(231,573)	(245,133)	(147,727)	(197,246)	(139,454)	(194,061)	(129,444)	(256,726)
Cash flows from investing activities:										
Change in investments	(55,638)	(55,205)	86,661	34,428	(56,798)	15,990	(15,047)	1,052	(30,642)	4,064
Investment income	2,203	1,423	6,864	6,238	5,081	2,951	5,626	13,974	15,708	13,941
Net cash provided (used) by investing activities	(53,435)	(53,782)	93,525	40,666	(51,717)	18,941	(9,421)	15,026	(14,934)	18,005
Net increase (decrease) in cash and cash equivalents	(30,132)	(40,831)	76,004	(14,849)	(17,883)	(4,550)	6,125	(26,317)	(4,338)	(110,742)
Cash and cash equivalents, beginning of year	101,986	142,817	66,813	81,662	99,545	104,095	97,970	124,287	128,625	239,367
Cash and cash equivalents, end of year	\$ 71,854	\$ 101,986	\$ 142,817	\$ 66,813	\$ 81,662	\$ 99,545	\$ 104,095	\$ 97,970	\$ 124,287	\$ 128,625

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Service charges:										
Wastewater service charges:										
Residential	\$ 156,764	\$ 148,091	\$ 140,125	\$ 122,830	\$ 116,458	\$ 108,809	\$ 101,405	\$ 96,563	\$ 89,691	\$ 86,409
Commercial	86,009	74,459	74,134	71,054	66,651	61,860	58,343	62,257	58,812	57,192
Industrial	23,558	23,080	21,758	23,171	24,439	21,218	19,878	17,605	19,738	19,536
Other - net	7,840	2,588	5,997	6,803	7,517	6,853	8,186	2,806	2,611	2,267
Free wastewater to Metro Government	(4,105)	(2,416)	(4,207)	(4,391)	(4,429)	(3,775)	(4,220)	(5,336)	(5,253)	(5,613)
Total wastewater service charges	270,066	245,802	237,807	219,467	210,636	194,965	183,592	173,895	165,599	159,791
Drainage service charges:										
Residential	31,497	29,413	27,684	25,716	23,811	22,111	20,439	20,090	18,522	17,372
Commercial	48,525	45,220	41,960	38,775	35,778	35,372	32,971	28,936	27,910	26,123
Industrial	5,671	5,239	4,815	4,373	3,864	3,445	3,219	3,030	3,112	2,956
Other - net	3,802	2,576	2,999	2,834	2,533	-	-	-	-	-
Free drainage to Metro Government	(2,691)	(2,533)	(2,406)	(1,992)	(2,118)	(1,950)	(1,741)	(489)	(1,087)	(1,020)
Total stormwater service charges	86,804	79,915	75,052	69,706	63,868	58,978	54,888	51,567	48,457	45,431
Total service charges	356,870	325,717	312,859	289,173	274,504	253,943	238,480	225,462	214,056	205,222
Other operating income:										
Capacity charges	5,072	2,309	4,151	3,552	3,132	3,318	2,087	2,667	1,620	1,624
Connection fees	151	135	363	14	76	(723)	1,118	379	133	93
Inflow & infiltration fees	1,610	628	1,155	1,162	-	-	-	-	-	-
Regional facilities fees	-	-	-	-	-	-	16	34	-	-
Reserve capacity charges	-	-	-	-	-	-	-	-	-	64
Wastewater miscellaneous	1,664	629	529	467	1,437	3,096	1,589	1,327	823	2,984
Drainage miscellaneous	-	-	-	-	-	-	-	-	-	58
Total other operating income	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576	4,823
Total operating revenue	\$ 365,367	\$ 329,418	\$ 319,057	\$ 294,368	\$ 279,149	\$ 259,634	\$ 243,290	\$ 229,869	\$ 216,632	\$ 210,045

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Jefferson County:										
Wastewater service charges:										
Service charge	\$ 18.90	\$ 17.68	\$ 16.83	\$ 15.75	\$ 14.73	\$ 13.78	\$ 12.89	\$ 12.22	\$ 11.59	\$ 10.95
Volume charge ¹	20.64	19.32	18.40	17.20	16.08	15.04	14.08	13.36	12.68	12.00
Consent decree charge	15.45	14.45	13.76	12.87	12.04	11.26	10.53	9.98	9.46	8.94
Total wastewater service charges	54.99	51.45	48.99	45.82	42.85	40.08	37.50	35.56	33.73	31.89
Drainage service charges:										
Residential	11.88	11.11	10.58	9.90	9.26	8.66	8.10	7.68	7.28	6.88
Total drainage service charges	11.88	11.11	10.58	9.90	9.26	8.66	8.10	7.68	7.28	6.88
Total MSD bill	\$ 66.87	\$ 62.56	\$ 59.57	\$ 55.72	\$ 52.11	\$ 48.74	\$ 45.60	\$ 43.24	\$ 41.01	\$ 38.77
Oldham County:										
Wastewater service charges:										
Service charge	\$ 47.92	\$ 47.92	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	31.20	31.20	-	-	-	-	-	-	-	-
Total MSD bill	\$ 79.12	\$ 79.12	\$ -							
Bullitt County (former BCSD):										
Wastewater service charges:										
Service charge	\$ 35.58	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	20.70	-	-	-	-	-	-	-	-	-
Total MSD bill	\$ 56.28	\$ -								
Bullitt County (former Hunter's Hollow & Big Valley):										
Wastewater service charges:										
Service charge	\$ 26.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Volume charge ¹	8.00	-	-	-	-	-	-	-	-	-
Total MSD bill	\$ 34.83	\$ -								

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

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

Rank	Customer Name	FY 22 Wastewater Billed	Percent Total Wastewater Revenue
1	Heaven Hill Distilleries	\$ 4,219,789	1.56%
2	Lubrizol Advanced Material	2,751,255	1.02%
3	The Chemours Company FC LLC	1,723,158	0.64%
4	Swift Pork Co.	1,461,306	0.54%
5	Clariant Corporation	1,437,880	0.53%
6	Early Times Distillery	1,420,078	0.53%
7	Ford Motor Co.	1,193,083	0.44%
8	Haier US Appliance Solutions	955,585	0.35%
9	Rohm & Haas	783,570	0.29%
10	Ford Motor Co.	744,470	0.28%
Total		16,690,174	6.18%
Total FY 22 Wastewater Revenue:		\$ 270,066,040	

Rank	Customer Name	FY 21 Wastewater Billed	Percent Total Wastewater Revenue
1	Heaven Hill Distilleries	\$ 3,715,684	1.51%
2	Lubrizol Advanced Material	2,071,550	0.84%
3	Swift Pork Co.	2,053,342	0.84%
4	The Chemours Company FC LLC	1,388,385	0.56%
5	Early Times Distillery	1,373,275	0.56%
6	Ford Motor Co.	1,124,209	0.46%
7	Haier US Appliance Solutions	778,537	0.32%
8	Rohm & Haas	739,411	0.30%
9	Ford Motor Co.	717,704	0.29%
10	Clariant Corporation	590,926	0.24%
Total		14,553,023	5.92%
Total FY 21 Wastewater Revenue:		\$ 245,801,703	

Rank	Customer Name	FY 22 Drainage Billed	Percent Total Drainage Revenue
1	Regional Airport Authority	\$ 1,645,863	1.90%
2	United Parcel Service	1,456,321	1.68%
3	Jeff Co Bd Of Ed	865,812	1.00%
4	Ford Motor Co.	456,942	0.53%
5	LIT Industrial Limited Partner	346,273	0.40%
6	Kentucky State Fair	321,966	0.37%
7	Regional Airport Authority	320,679	0.37%
8	The University of Louisville Campus	308,517	0.36%
9	Churchill Downs Inc	298,224	0.34%
10	Seaboard System RR-00822	273,149	0.31%
Total		6,293,746	7.25%
Total FY 22 Drainage Revenue:		\$ 86,804,258	

Rank	Customer Name	FY 21 Drainage Billed	Percent Total Drainage Revenue
1	Regional Airport Authority	\$ 1,546,213	1.93%
2	United Parcel Service	1,358,550	1.70%
3	Jeff Co Bd of Ed	855,119	1.07%
4	Ford Motor Co.	428,087	0.54%
5	LIT Industrial Limited Partner	320,852	0.40%
6	Regional Airport Authority	305,126	0.38%
7	Kentucky State Fair	300,720	0.38%
8	Churchill Downs Inc	278,017	0.35%
9	The University of Louisville Campus	275,408	0.34%
10	Seaboard System RR-00822	260,138	0.33%
Total		5,928,230	7.42%
Total FY 21 Drainage Revenue:		\$ 79,915,505	

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Revenues:										
Service charges	\$ 356,870	\$ 325,717	\$ 312,859	\$ 289,173	\$ 274,504	\$ 253,943	\$ 238,480	\$ 225,462	\$ 214,056	\$ 205,222
Other operating income	8,497	3,701	6,198	5,195	4,645	5,691	4,810	4,407	2,576	4,823
Assessments	583	799	909	1,258	1,232	1,375	9,457	1,901	2,129	2,392
Investment income	8,877	12,175	15,600	18,692	16,531	14,273	17,278	17,623	20,330	20,119
Less: capitalized investment income	-	-	-	-	-	-	-	-	-	(3,817)
Total revenues	374,827	342,392	335,566	314,318	296,912	275,282	270,025	249,393	239,091	228,739
Operating expenses:										
Service and administrative costs ¹	161,144	151,527	149,945	142,082	131,948	119,586	117,671	106,301	108,814	108,041
Less: capitalized overhead	(42,166)	(41,785)	(39,643)	(38,383)	(38,148)	(31,949)	(30,516)	(30,056)	(33,568)	(33,110)
Capitalization Rate	26%	28%	26%	27%	29%	27%	26%	28%	31%	31%
Total operating expenses	118,978	109,742	110,302	103,699	93,800	87,637	87,155	76,245	75,246	74,931
Net revenues	255,849	232,650	225,264	210,619	203,112	187,645	182,870	173,148	163,845	153,808
Aggregate debt service:										
Current maturities of long-term debt	51,597	43,802	40,637	40,358	33,906	33,655	31,825	29,415	28,525	27,035
Interest expense - senior lien	86,792	93,067	92,274	94,831	95,041	90,117	86,818	83,404	80,613	92,616
Less: capitalized interest expense	(7,464)	(12,050)	(13,043)	(18,582)	(21,859)	(20,074)	(21,051)	(20,511)	(19,103)	(26,358)
Aggregate net debt service	\$ 130,925	\$ 124,819	\$ 119,868	\$ 116,607	\$ 107,088	\$ 103,698	\$ 97,592	\$ 92,308	\$ 90,035	\$ 93,293
Debt service coverage ratio²	195%	186%	188%	181%	190%	181%	187%	188%	182%	165%

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)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Senior debt:										
Series 2005A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,820	\$ 20,770
Series 2006A	-	-	-	-	-	-	-	87,290	89,325	91,280
Series 2007A	-	-	-	-	-	42,965	44,425	45,815	48,080	50,240
Series 2008A	-	-	-	-	-	65,520	97,860	99,850	100,860	101,810
Series 2009A	-	-	-	-	6,640	13,040	41,485	47,280	52,720	57,945
Series 2009B	-	-	-	35,155	52,975	69,725	136,115	150,900	164,785	177,785
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	260,125
Series 2013A	115,790	117,480	115,790	115,790	115,790	115,790	115,790	115,790	115,790	115,790
Series 2013B	109,280	109,280	112,575	114,100	115,550	116,940	118,255	119,515	119,515	119,515
Series 2013C	125	250	99,250	99,375	99,500	99,625	99,750	99,875	100,000	-
Series 2014A	79,650	79,700	79,750	79,800	79,850	79,900	79,950	80,000	-	-
Series 2015A	171,395	172,175	173,160	173,360	173,735	174,280	175,000	-	-	-
Series 2015B	65,975	68,815	71,515	74,160	76,685	79,085	81,350	-	-	-
Series 2016A	147,500	148,415	149,290	149,530	149,760	150,000	-	-	-	-
Series 2016B	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	149,390	155,790	161,895	169,270	169,270	-	-	-	-	-
Series 2017B	31,210	32,055	32,885	33,670	34,520	-	-	-	-	-
Series 2018A	60,380	60,380	60,380	60,380	60,380	-	-	-	-	-
Series 2019A	8,845	17,065	24,770	-	-	-	-	-	-	-
Series 2020A	224,000	224,750	-	-	-	-	-	-	-	-
Series 2020C	109,605	110,790	-	-	-	-	-	-	-	-
Series 2021A	240,485	-	-	-	-	-	-	-	-	-
Series 2022A	224,750	-	-	-	-	-	-	-	-	-
Total senior debt	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	1,505,260
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	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	7,010	7,445	7,865	-	-	-	-	-	-	-
Series 2017 general obligation bonds	3,364	3,399	3,433	-	-	-	-	-	-	-
Financing lease	1,870	2,030	2,180	-	-	-	-	-	-	-
Loan A09-41	1,433	1,548	1,659	1,767	1,871	1,973	2,072	2,168	2,261	2,351
Loan A10-04	1,702	1,840	1,974	-	-	-	-	-	-	-
Loan A10-05	622	670	715	-	-	-	-	-	-	-
Loan A10-06	70	76	81	-	-	-	-	-	-	-
Loan A10-07	1,581	1,703	1,821	-	-	-	-	-	-	-
Loan A11-15	402	434	466	-	-	-	-	-	-	-
Loan A12-29	4,932	5,228	5,520	-	-	-	-	-	-	-
Loan A17-028	2,084	2,084	2,013	-	-	-	-	-	-	-
Loan A18-010	1,045	1,092	1,116	-	-	-	-	-	-	-
Loan A98-04	-	-	454	891	-	-	-	-	-	-
Loan A19-015	2,640	-	-	-	-	-	-	-	-	-
Loan A19-028	22,918	17,788	-	-	-	-	-	-	-	-
Loan B10-01	236	-	-	-	-	-	-	-	-	-
Loan B10-04	262	-	-	-	-	-	-	-	-	-
Loan B15-006	70	-	-	-	-	-	-	-	-	-
Total subordinate debt	328,982	422,461	511,891	349,098	228,211	228,313	228,412	228,508	228,601	228,691
Total senior and subordinate debt	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	1,733,951
Unamortized bond premiums	(1,052)	(1,101)	(868)	(916)	(963)	(1,011)	(1,431)	(1,495)	(1,560)	(7,562)
Unamortized bond discounts	89,102	75,918	75,326	81,337	91,591	75,339	68,893	62,292	61,823	64,326
Total debt	\$ 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	\$ 1,790,715
Debt per capita ¹	NA	\$ 3,346	\$ 3,194	\$ 3,112	\$ 3,005	\$ 2,833	\$ 2,682	\$ 2,491	\$ 2,457	\$ 2,366
Debt - percentage of personal income ¹	NA	NA	1.78%	1.76%	1.73%	1.74%	1.78%	1.82%	1.85%	1.86%

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Completed projects										
Sewer lines	\$ 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	\$ 1,265,437
Wastewater treatment facilities	696,900	641,414	627,903	669,041	648,503	637,166	629,083	489,292	489,289	479,998
Drainage facilities	1,011,678	997,461	880,863	839,159	561,341	542,271	515,898	448,853	448,899	443,577
Pumping and lift stations	286,975	260,231	256,228	240,963	183,795	166,158	139,651	96,812	96,819	89,503
Administrative facilities	52,471	52,348	52,297	51,734	50,818	50,817	49,342	49,342	49,342	49,317
Maintenance facilities	14,576	14,301	12,459	12,074	8,504	8,504	8,504	8,037	8,037	8,037
Machinery, equipment and other	136,797	121,868	121,265	118,879	97,407	98,138	90,702	85,395	85,395	83,882
Total completed projects	4,269,739	3,849,048	3,697,720	3,580,741	3,047,458	2,943,414	2,812,333	2,455,476	2,451,961	2,419,751
Less accumulated depreciation	(1,396,934)	(1,305,547)	(1,221,668)	(1,208,329)	(1,109,966)	(1,046,707)	(979,405)	(925,901)	(871,412)	(816,291)
Total completed projects - net	2,872,805	2,543,501	2,476,052	2,372,412	1,937,492	1,896,707	1,832,928	1,529,575	1,580,549	1,603,460
Total construction in progress	420,200	625,113	538,013	460,501	711,655	581,222	487,674	623,181	463,167	371,816
Total net plant, lines and other facilities	\$ 3,293,005	\$ 3,168,614	\$ 3,014,065	\$ 2,832,913	\$ 2,649,147	\$ 2,477,929	\$ 2,320,602	\$ 2,152,756	\$ 2,043,716	\$ 1,975,276

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Service and administrative costs:										
Labor ¹	\$ 81,552	\$ 77,789	\$ 73,476	\$ 71,379	\$ 64,718	\$ 59,183	\$ 55,229	\$ 54,378	\$ 55,356	\$ 55,028
Utilities	16,595	16,265	17,923	19,520	16,640	14,427	18,256	13,817	14,563	12,821
Materials & supplies	8,012	6,840	7,591	8,639	8,647	7,976	4,183	9,706	8,151	8,990
Contractual services	31,288	34,084	37,326	28,604	27,864	25,021	27,448	20,478	19,036	20,540
Chemicals	6,905	5,017	4,649	4,761	4,429	5,298	4,372	3,681	3,306	4,082
Fuel	1,658	1,083	1,069	1,393	1,276	1,077	1,326	1,616	1,837	1,825
Insurance premiums & claims	7,216	3,624	2,249	2,057	2,423	1,669	1,316	1,505	1,948	1,968
Bad debt	6,422	5,501	4,009	3,748	3,938	3,495	2,603	2,068	1,781	2,050
Other operating expense	1,496	1,323	1,654	1,981	2,012	1,440	2,939	1,052	943	737
Service and administrative costs	161,144	151,526	149,945	142,082	131,947	119,586	117,671	108,301	106,921	108,536
Less: capitalized overhead										
Capitalized project cost	(42,166)	(41,785)	(39,643)	(38,383)	(38,147)	(31,949)	(30,516)	(30,056)	(33,568)	(33,110)
Net service and administrative costs	\$ 118,978	\$ 109,741	\$ 110,302	\$ 103,699	\$ 93,800	\$ 87,637	\$ 87,155	\$ 78,245	\$ 73,353	\$ 75,426

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

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
 BUDGETARY COMPARISON SCHEDULE
 FOR FISCAL YEAR 2022
 DOLLARS IN THOUSANDS

Expenditures	<u>Approved Budget</u>	<u>Actual Expenditures</u>	<u>Variance</u>
Salaries & wages	56,398	55,014	1,384
Labor related overhead	27,012	26,538	474
Utilities	18,277	16,595	1,682
Materials & supplies	7,314	8,012	(698)
Contractual services	35,733	31,288	4,445
Chemicals	6,708	6,905	(197)
Fuel	1,356	1,658	(302)
Insurance premiums & claims	3,803	7,216	(3,413)
Bad debt	3,516	6,422	(2,906)
Other operating expense	2,086	1,496	590
Interest expense	114,261	95,763	18,498
	<u>276,464</u>	<u>256,907</u>	<u>19,557</u>

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

Actual budget expenditures	256,907
Capitalized overhead	(42,166)
Depreciation and amortization expense	103,964
GASB 68 pension expense	7,071
GASB 75 OPEB expense	1,654
Capitalized interest	(7,464)
Change in fair value - derivative instruments	(11,293)
Total expenses reported in statements of revenues, expenses and changes in net position	<u>308,673</u>

Expenses reported in statements of revenues, expenses and changes in net position:4

Total operating expenses	231,667
Interest expense - bonds	86,792
Interest expense - swaps	9,502
Interest expense - other	12,873
Amortization of debt discount / premium	(17,172)
Amortization of loss on refunding	3,768
Capitalized interest	(7,464)
Change in fair value - derivative instruments	(11,293)
Total expenses reported in statements of revenues, expenses and changes in net position	<u>308,673</u>

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

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Miscellaneous Operating Indicators											
Jefferson County											
Miles of sewers	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*	1,175	1,160	-	-	-	-	-	-	-	-	-
Number of treatment plants	5	5	5	5	5	5	5	16	19	19	20
Daily average treatment (MGD)	153	157	164	173	150	112	139	143	141	131	145
Daily treatment capacity (MGD)	200	200	200	200	200	170	170	177	177	177	173
Oldham County											
Miles of sewers	145	135	-	-	-	-	-	-	-	-	-
Number of treatment plants	8	8	-	-	-	-	-	-	-	-	-
Daily average treatment (MGD)	2	2	-	-	-	-	-	-	-	-	-
Daily treatment capacity (MGD)	4	4	-	-	-	-	-	-	-	-	-
Bullitt County											
Miles of sewers	54	-	-	-	-	-	-	-	-	-	-
Number of treatment plants	7	-	-	-	-	-	-	-	-	-	-
Daily average treatment (MGD)	1	-	-	-	-	-	-	-	-	-	-
Daily treatment capacity (MGD)	2	-	-	-	-	-	-	-	-	-	-

MGD - millions of gallons per day

*Historical data not available

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
WASTEWATER TREATMENT PLANT CAPACITY
2022

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	119,846	13,826	306	133,978	1958	Secondary added in 1976.
Derek R. Guthrie	60.0	37.6	60.0	64,330	3,786	38	68,154	1986	Secondary
Cedar Creek	7.5	6.9	11.3	19,075	1,105	12	20,192	1995	Tertiary: sand filter
Floyd's Fork	6.5	3.8	9.8	10,476	572	5	11,053	2001	Tertiary: sand filter
Hite Creek	6.0	4.3	9.0	11,215	673	9	11,897	1970	Tertiary: sand filter
Oldham County plants (combined)	4.3	2.1	4.3	6,379	216	1	6,596	Varies	
Bullitt County plants (combined)	1.7	1.2	1.7	3,896	115	1	4,012	Varies	
Total wastewater treatment system	206.0	156.2	216.0	235,217	20,293	372	245,274		

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
GREATER LOUISVILLE, KENTUCKY / INDIANA
EMPLOYERS OF 1,000 EMPLOYEES OR MORE

Employers	2022		2021		2020		2019		2018		2017		2016		2015		2014		2013		Type of business	
	Rank	Employees																				
United Parcel Service, Inc.	1	25,169	1	24,110	1	23,090	1	23,533	1	21,233	1	22,354	1	22,080	1	22,189	1	20,931	1	20,047	P Air cargo transport and distribution	
Norton Healthcare (formerly Alliant Health)	2	14,413	3	14,403	3	13,828	4	12,579	4	12,247	5	11,944	5	11,389	4	10,739	4	10,245	4	9,666	N Hospital and health care facilities	
Jefferson County, KY Public Schools	3	13,586	2	14,484	2	14,484	2	14,250	2	14,476	2	14,553	2	14,739	2	14,719	2	14,676	2	14,269	G Primary and secondary education	
UofL Health Inc.	4	13,111	5	12,568	6	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N Hospital and health care facilities	
Ford Motor Company	5	13,020	4	13,020	4	13,020	3	13,042	3	12,600	3	12,600	3	12,990	5	9,028	5	8,987	6	8,512	P Vehicle manufacturing	
Humana, Inc.	6	11,243	6	12,526	5	12,360	5	12,000	5	12,000	4	12,500	4	12,500	3	12,900	3	12,371	3	11,235	P Group health insurance/HMOs	
Baptist Healthcare System	7	9,030	7	9,666	8	7,346	7	8,143	9	6,159	7	6,786	10	4,995	9	5,116	11	5,339	11	4,854	N Hospital and health care facilities	
Walmart Inc.	8	8,600	8	7,500	9	6,650	8	6,650	0	-	0	-	0	-	0	-	0	-	0	-	P Grocery Retailer	
GE Appliances, a Haier company	9	8,100	10	7,100	11	6,000	10	6,000	10	6,000	10	6,000	9	6,000	7	6,000	6	6,230	8	6,000	P Appliance manufacturing	
University of Louisville	10	6,585	11	6,574	10	6,574	9	6,394	6	6,933	6	7,065	7	6,375	6	6,264	7	6,161	7	6,187	G Higher education	
Louisville-Jefferson County Metro Government	11	5,702	13	5,628	13	5,645	12	5,987	8	6,226	9	6,192	8	6,095	8	5,584	8	5,654	9	5,651	G City/County Government	
Amazon.com	12	5,700	12	5,700	12	5,700	13	5,700	7	6,500	8	6,500	6	6,500	7	6,000	-	-	-	-	P Logistics & Customer Service	
The Kroger Company	13	5,000	9	7,421	7	9,235	6	9,235	12	3,079	12	3,079	11	4,626	10	4,892	10	5,417	10	5,152	P Grocery Retailer	
Manna Inc.	14	2,300	14	2,325	15	2,300	16	2,300	14	2,300	14	2,600	12	3,120	13	2,400	16	2,250	-	-	P Food service provider	
Roman Catholic Archdiocese of Louisville	15	2,193	17	2,202	17	2,202	18	2,202	15	2,252	13	2,660	17	2,263	17	2,237	14	2,260	14	2,345	N Religious, educational, social services	
LG&E and KU Energy (formerly EON)	16	2,084	15	2,209	16	2,240	17	2,208	16	2,162	17	2,201	18	2,211	18	1,993	18	2,178	16	2,131	P Gas & Electric Utility	
Robley Rex VA Medical Center	17	2,084	18	2,002	19	1,922	19	1,876	18	1,816	21	1,800	21	1,900	19	1,800	20	1,703	18	1,799	N Hospital and health care facilities	
Bullitt County Public Schools	18	1,716	20	1,737	20	1,753	23	1,649	19	1,736	22	1,718	22	1,739	21	1,671	22	1,633	21	1,629	G Primary and secondary education	
Oldham County Public Schools	19	1,704	19	1,777	21	1,710	15	2,325	24	1,567	23	1,638	24	1,604	15	2,300	23	1,576	22	1,602	G Primary and secondary education	
Samtec Inc.	20	1,575	21	1,575	23	1,601	21	1,700	26	1,500	35	1,200	29	1,300	-	-	-	-	-	-	-	P Electronic connectors & microelectronics products
Rawlings Group	21	1,505	22	1,495	24	1,531	24	1,520	29	1,440	28	1,332	30	1,211	-	-	-	-	-	-	-	P Insurance subrogation
New Albany - Floyd County Schools	22	1,475	23	1,475	26	1,414	26	1,500	21	1,652	26	1,405	25	1,600	22	1,622	21	1,648	20	1,640	G Primary and secondary education	
Anthem, Inc.	23	1,400	0	-	31	1,245	30	1,320	32	1,269	34	1,238	29	1,300	26	1,350	32	1,139	37	1,100	P Health Insurance sales and services	
Churchill Downs Inc.	24	1,317	0	-	38	1,000	25	1,508	25	1,515	25	1,526	0	-	0	-	0	-	0	-	-	P Racing, gaming and online entertainment
Trilogy Health Services	25	1,271	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	-	P Senior Living Services
Material Handling Systems	26	1,205	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	-	P Conveyor and Automated Sortation Systems
JBS USA	27	1,200	26	1,165	32	1,200	35	1,200	34	1,200	37	1,189	34	1,180	-	-	-	-	-	-	-	P Pork Products
Spectrum (formerly Charter Communications)	27	1,200	25	1,200	14	2,330	14	2,330	13	2,400	15	2,400	33	1,200	35	1,131	34	1,200	-	-	-	P Call Center
Brown-Forman Corp.	29	1,166	27	1,149	28	1,300	31	1,300	30	1,300	31	1,304	29	1,300	31	1,266	31	1,256	32	1,244	P Distilled spirits manufacturing	
Seven Counties Services	30	1,153	31	1,072	0	-	32	1,266	31	1,284	27	1,340	36	1,165	34	1,168	33	1,129	36	1,111	N Health care provider	
Yum! Brands Inc. (formerly Tricon)	31	1,129	29	1,096	0	-	0	-	0	-	30	1,314	28	1,343	32	1,226	30	1,270	23	1,544	P Food service provider	
Faurecia	32	1,108	0	-	32	1,200	35	1,200	34	1,200	40	1,000	-	-	-	-	-	-	-	-	-	P Exhaust systems, interiors & seat systems
US Census Bureau	33	1,107	16	2,147	18	2,113	29	1,330	33	1,209	38	1,185	38	1,037	-	-	-	-	-	-	-	N Government
Greater Clark County, IN School Corp.	34	1,057	28	1,143	30	1,253	33	1,251	28	1,447	32	1,295	32	1,247	24	1,447	24	1,303	30	1,357	G Primary and secondary education	
Signature Healthcare	35	1,013	0	-	0	-	40	1,093	0	-	24	1,558	0	-	0	-	0	-	0	-	-	N Post-acute and long-term care provider
ADP Inc.	36	1,000	34	1,000	38	1,000	42	1,000	0	-	0	-	0	-	0	-	0	-	0	-	-	P Grocery Retailer
Shelby County Public Schools	36	1,000	34	1,000	0	-	0	-	0	-	40	1,000	0	-	0	-	0	-	0	-	-	G Primary and secondary education
Kindred Healthcare (formerly Vencor Inc.)	0	-	30	1,082	35	1,185	34	1,246	23	1,571	16	2,216	16	2,381	16	2,244	17	2,249	17	2,130	P Long-term health care, facilities	
BrightSpring Health Services	0	-	32	1,062	37	1,057	20	1,800	17	1,948	19	1,948	14	2,435	28	1,312	35	1,054	0	-	-	P Health care provider
Malone Workforce Solutions	0	-	33	1,020	27	1,400	37	1,182	-	-	-	-	-	-	-	-	-	-	-	-	-	P Grocery Retailer
Texas Roadhouse Inc.	0	-	25	1,452	25	1,452	26	1,500	26	1,500	29	1,320	35	1,179	-	-	-	-	-	-	-	P Food service provider
U.S. Postal Service	0	-	0	-	22	1,691	22	1,691	20	1,691	20	1,896	23	1,659	12	2,401	13	2,546	13	2,509	G Mail distribution	
Papa John's International	0	-	0	-	29	1,263	28	1,485	22	1,626	18	2,088	19	2,088	30	1,279	25	1,503	35	1,143	P Quick service restaurant	
Caesars Southern Indiana	0	-	0	-	32	1,200	38	1,135	38	1,160	33	1,239	31	1,252	29	1,303	29	1,404	26	1,418	P Gaming and entertainment resort	
Clark Memorial Hospital	0	-	0	-	36	1,063	41	1,011	39	1,060	0	-	33	1,225	33	1,225	30	1,270	0	-	-	P Health care provider
Martinsrea Heavy Stamping	0	-	0	-	0	-	39	1,100	0	-	0	-	0	-	0	-	0	-	0	-	-	P Grocery Retailer
LSC Communications (formerly Publisher's Printing)	0	-	0	-	0	-	0	-	34	1,200	35	1,200	27	1,400	25	1,413	28	1,432	24	1,516	P Trade, professional, special printing	
PNC Bank	0	-	0	-	0	-	0	-	37	1,175	39	1,175	39	1,500	23	1,569	0	-	0	-	-	P Financial Services
Mortenson Dental Partners	0	-	0	-	0	-	0	-	40	1,047	0	-	0	-	0	-	0	-	0	-	-	P Dental Services
Commonwealth of Kentucky	0	-	0	-	0	-	0	-	0	-	0	-	13	2,514	11	3,794	12	4,042	12	4,161	G General purpose government	
U.S. Federal Government	0	-	0	-	0	-	0	-	0	-	0	-	15	2,406	14	2,397	15	2,252	15	2,191	G General purpose government	
Floyd Memorial Hospital & Health Services	0	-	0	-	0	-	0	-	0	-	0	-	20	1,950	20	1,756	19	1,769	19	1,711	P Hospital and health services provider	
Securitas Security Services USA Inc.	0	-	0	-	0	-	0	-	0	-	0	-	0	-	27	1,328	26	1,476	25	-	-	P Security Services
Al J Schneider Co	0	-	0	-	0	-	0	-	0	-	40	1,000	37	1,047	37	1,000	36	1,050	0	-	-	P Hotel / Restaurants
American Commercial Lines	0	-	0	-	0	-	0	-	0	-	0	-	0	-	36	1,100	0	-	0	-	-	P Marine Transportation Service
Total employees		173,231		173,085		177,602		167,741		150,680		156,558		158,045		149,163		138,603		125,854		

P=for-profit organization N=not-for-profit organization G=governmental organization
Source: Business First of Louisville, KY, July 15, 2022

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
MISCELLANEOUS DEMOGRAPHIC INFORMATION

Fiscal Year	Population¹	Personal Income²	Unemployment Rate³	# of MSD Employees	Miles of Sewer Line
2013	756,832	\$ 33,314,513	5.4%	649	3,240
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	N/A	5.3%	648	3,507
2022	N/A	N/A	3.4%	674	3,589

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: Turkey Run



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